



2022 vegetable

RESOURCE GUIDE



Serving
farmers
since
1946

75

Years

NEW PRODUCTS FOR 2022



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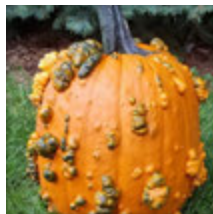
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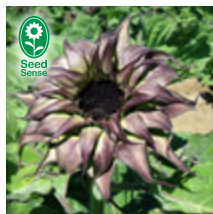
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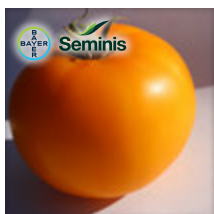
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Dear Grower,

Thank you for your business and the trust you place in us each year. I hope this season was a successful one for you. It's clear that many families have learned the value of buying fresh, quality produce from local growers, and they've also enjoyed preparing nutritious and tasty meals at home again. I'm confident that a good many households will continue this practice and that it will be good business for many of our customers.

When I reflect on our company's 75 years in the seed business, I'm reminded about the legacy my grandpa Sylvan and my dad Roger built. A legacy they left to the care of the 3rd generation and one that we take to heart. As stewards of their legacy, we know that we must continue to provide growers with the best varieties, and we must position those varieties in the right situations where they align with the grower's practices and marketplace. Our sales team has even, on occasion, referred growers to a competitor in those rare situations where we are unable to offer just the right variety for a grower's situation.

This means that our company does quite a bit of research and product development at our farm; activity that I expect will increase this next season. The process of evaluating new and experimental varieties against the current leaders is critical for us in bringing you the best, and we also learn where those varieties fit best. Which then leads us the introduction of new varieties in our catalog, and this year there are 36 new varieties in our lineup.

Among the new varieties, you'll discover several new releases out of our pumpkin breeding program – Giltedge, Quigley, Bannack and Garnet, all in our "gold" series and in the large and xtra large segments of our pumpkin lineup. And if you're a bit of a history buff, or just curious, you'll have to check out the link on page 104 to discover where these names came from.

Our family and employees are thankful for the opportunity we have to serve so many wonderful people, and on behalf of the entire team here at Rupp Seeds, thank you for your business.

Please let us know how we can serve you better as we partner together to help feed the world.

Sincerely,


Philip Rupp
President



We welcome the opportunity to be a part of your success. Our sales and service team is ready to assist you in planning for this coming season. Feel free to contact the salesman in your area if you need their assistance. If you live in an area without a salesman, please contact the office and a representative will assist you.

VEGETABLE CONSULTANTS



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INSIDE SALES REPRESENTATIVES



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Kristen, x7098



Maddie, x9013



Marie, x9011



Pete, x9003



Sarah, x7091

5 WAYS TO ORDER*

Phone: 1-800-700-1199
(Monday - Friday, 8 am - 5pm EST)

Fax: 419-337-5491

Mail: Rupp Seeds
17919 County Road B
Wauseon, OH 43567
(envelope provided in the back of the catalog)

Email: orders@ruppseeds.com

Online: Online ordering is arriving soon!
Scan the QR code or visit this link to
receive a notice when online ordering
is available. www.ruppseeds.com/GoLive



* Please pick only 1 method of ordering to avoid duplication of your order. (i.e. if faxing in your order, do not mail in a copy as well).

• Additional ordering information can be found on page 160.



SAVE WITH PAYMENT DISCOUNTS

We offer a cash discount program as an incentive for early payment of your seed order. Cash discounts are available for orders over \$250.00. See page 158 for details.

ZERO PERCENT FINANCING

Our premier John Deere financing program features 0% interest until December 2022 on orders placed before December 31st, 2021. Additional programs are available through the season. See page 159 for complete details.

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ICON KEY

Cruiser - Items treated with Cruiser seed treatment are marked with this symbol and highlighted in purple in the price tables.



Documents Required

- This color coded icon marks varieties that need signed documents / waivers in order for the product to be shipped. A page number and color will direct you to the document in the back of the book.



FarMore - Items treated with FarMore seed treatment are marked with this symbol and highlighted in green in the price tables.



Game Changers - An item marked as a Game Changer is one that is gaining some traction with growers either through early release trialing or as a result of giving a new product a try. These products have the potential to become tomorrow's All Stars and bring something special to the table. These are "must try" products in this crop type.



Grower Preferred All-Stars

- Items marked with this symbol are "All Stars". They have been and will continue to perform consistently well for many growers across a wide geography. Growers really can't go wrong by planting these selections.



High Tunnel - Items marked with this symbol are recommended for high tunnel and protective culture production.



New - Most often this is a new release, but it can also be new to our lineup and not new in the market. Progressive growers that are producing other similar varieties in this product category should consider giving this a try to see if it works for them.



Rupp Logo - Our logo marks those varieties that have come from our research and development group as well as products for which we have exclusive marketing rights.



Sort Order - This symbol marks the column used to sort the information presented in each product description table. Usually alphabetical by item name or sorted by days maturity.



Vendor / Brand logos contained within are properties of their respective trademark holders.

GLOSSARY

AAS - All America Selection winner.

Anthocyaninless - Recessive gene that blocks the expression of purple pigment.

Bitterfree - (cucumbers) The plant and fruit lack cucurbitacins, a chemical, which gives a bitter taste.

Bolting - When plant begins to produce flowers and set seed.

Concentrated Ripening/Set - (tomatoes) When 80-90% of the fruit ripen within a short period of time.

Confectionery - (sunflowers) Used for human consumption.

Days from transplant - This refers to maturity from when transplants are planted outside in the field. Time from seeding to transplant will need to be added to calculate overall maturity.

Determinate - Plant habit where vine will cease to grow once it reaches a particular size.

Dwarf Indeterminate - (tomatoes) Plant habit where vine central stem continues to grow in length, but lateral branches do not.

Expansion Rate - Under ideal conditions, the number of cups of popped corn for every cup of unpopped corn.

F1 - see Hybrid

F300 - FarMore® F300, an advanced fungicide seed treatment technology, delivers protection for a variety of small-seeded vegetable crops against a broad spectrum of seed and seedling diseases.

FI400 - FarMore® FI400 provides early-season protection to prevent or eliminate damage caused by cucumber beetles.

Green Shoulder (GS) - (tomatoes) The dark green shoulder on unripe fruit, often the last area of the fruit to ripen.

Gynocious - (cucumbers) Plant with only female flowers.

Heritage Varieties - Varieties marked heritage varieties are long standing products that have been used for generations. Mainly open pollinated (OP) varieties.

Heterosis - The improved or increased function of characteristics in a hybrid offspring. A hybrid exhibits heterosis when its traits demonstrate significant enhancement over those of its parent varieties.

Heterozygous - When the parents in a sweet corn hybrid are of different types, i.e. SU x SE, the hybrid is heterozygous. Heterozygous hybrids have better vigor in cooler soils.

Holding Ability - The period of time a fruit will maintain marketability once it has reached maturity.

Homozygous - When both parents in a sweet corn hybrid are of the same type, i.e. SE x SE, they are considered homozygous. Homozygous hybrids typically have higher sugar content.

Hybrid (F1) - Hybrid seed is produced from the cross between two genetically pure varieties, typically from the same species. Hybrids are common in agriculture, especially for crops that benefit from heterosis, such as corn and rice. Hybrids are created as a means to combine the positive and valuable characteristics of the parent varieties into a new hybrid variety. Seed production of a hybrid occurs by controlling the pollination between its parents, such as hand pollination in cucurbits or de-tasseling in corn.

Indeterminate - Plant habit where vine continues to grow.

M - Is a unit of measure that equals 1,000. Seed sold by seed count is priced in multiples of 1,000. For example 5M, 10M, 25M which stands for 5,000 seeds, 10,000 seeds and 25,000 seeds.

Monoecious - (cucumbers) Plant with both distinct male and female flowers.

Naked Seeded - No hull on the seed. Easier to eat than normal hulled seeds.

Open Pollination - Open pollination is pollination by insects, birds, wind, or other natural mechanisms. Seeds of open-pollinated plants will produce new generations of those plants; however, because the pollination is uncontrolled and the pollen source is unknown, open pollination may result in plants that vary widely in genetic traits.

Open Pollinated (OP) - A variety is said to be open pollinated when it is a non-hybrid variety, meaning that seed is produced via self-reproduction. Seed production of an open pollinated variety occurs using the plants natural pollination mechanism but in a controlled environment to prohibit the introduction of outside, unrelated pollen sources. These controls insure that the open pollinated variety stays genetically pure and true to type.

Parthenocarpic - (cucumbers) Plants that set fruit without pollination.

Pelleted - Seed coating that improves the shape, size, and uniformity of raw seeds for more accurate sowing by hand and precision-sowing by machine. Pellets are made of inert materials which dissolve as they absorb moisture, allowing immediate access to oxygen for fast, uniform seedling emergence.

Pendant - Refers to how the pepper hangs on the plant.

Pithy - Fibrous, course texture.

Pungent - Refers to heat level of hot peppers; pungent = hot.

PVP - Plant Variety Protection. Seed may not be reproduced for sale without permission of the originator.

Sieve - Diameter of green bean pod.

Transgenic - Genetically modified.

Uniform Ripening (UG) - Has the gene for uniform ripening of the fruit. Fruit are typically lighter green prior to ripening.

RECENTLY ASKED QUESTIONS

Do you offer any discounts that I would be eligible for?

Yes, we offer cash discounts on all seed orders over \$250.00. The cash discount is for orders paid for via check. You may prepay your seed order at anytime and we will add that months discount to your credit on account. The August discount is 10% and goes down a percentage each month through April. See page 158 for more details.

Are there financing options that allow me to buy my seed now and pay at a later date?

Yes, we do offer financing through John Deere Financial. The best plan is no-interest, no-payments until harvest 2022. See page 159 for other program options and details. If you are interested in obtaining credit through John Deere Financial you may fill out the credit application on page 173.

You offer more high quality varieties than most seed dealers. How do you decide which varieties to offer? And where do they all come from?

This edition of our catalog features over 1,000 varieties in over 43 vegetable crops. We consider most of these varieties as suitable for professional and commercial growers, while a few others are included because they're popular heritage varieties.

Deciding which varieties to offer is a challenging question and there are a number of factors that are considered, including:

- What market is a variety best suited for? For the shipper or fresh market? Or wholesale or retail trade?
- Does a new variety bring a game changing improvement over current varieties? Is it higher yielding? Does it produce more desirable, consistent or marketable fruit? Does produce from the variety offer any improvements in food quality or nutrition?
- Does the variety offer the grower any benefits in managing crop issues, weeds, insects or disease?

Many of these questions are answered in the product development trials we conduct every year on our farm. Our personal experience is important and our observations at the numerous vendor trials we visit also are a factor.

The reliability of the seed supplier is also important. Do they consistently have seed supply available? And is it high quality?

Our current vendor list is over 40 companies and includes:

American Takii, A.P. Whaley, Awald, Ball Horticulture Co, BHN, Bisek Gardens, Condor, Crookham, Croplan, De Ruiters, DP Seeds, Enza Zaden, Ernst Benary of America, Harris Moran, Harris Seeds, Hollar, Hybrid Seed Company, Illinois Foundation Seeds, Jersey Asparagus, Johnny's, Kimberly, Lark, PanAmerican Seed, Pure Line, Rispens, Rupp, Sakata, Schlessman, Seed Savers

Exchange, Seeds By Design, SeedSense, Seedway, Seminis, Seneca Vegetable Research, SPS Idaho, Stokes, Sugar Hill, Syngenta, The Wax Company, Tozer, Treasure Valley Seed, US Agriseeds, US Seedless, Vilmorin, and Wild West.

I am preparing for a food safety audit. Can you help? Is Rupp Seeds GAP certified?

Yes, Rupp Seeds is GAP certified. A copy of the certificate can be found on page 155.

In recent years there have been several occurrences of food borne illness. These situations have prompted both the government and industry to respond to insure a safe food supply. Development of Good Agricultural Practices (GAP) and Good Handling Practices (GHP) for the produce industry help minimize these outbreaks, and voluntary audits help to insure the practices are defined and in use.

The U.S. Food and Drug Administration's "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables" doesn't have specific guidance for seed companies. Even so, we recognize that many of our customers need our assurance that seeds are handled appropriately to minimize contamination.

We've consulted with food safety experts to understand what we can do to assist our customers with their audit preparations. They've recommended that we provide a Letter of Guarantee that briefly describes our practices and they've assured us this letter is acceptable in any food safety audit. We've included the letter in this catalog for your convenience. See page 156 for a copy.

Are all of your seeds treated?

Most of our seed is treated. We do have some varieties available untreated. These items are marked as untreated in the pricing tables. See the pricing table example below. Walker Deluxe is available untreated and has a 'U' at the end of the item number and the item number is red instead of black. When ordering, please put a "U" behind the item number to signify you are ordering untreated seeds. In addition, it's helpful to put "Untreated Seeds Only" on the top of your order form.

Pricing table example. "U" indicates untreated seed.

ASPARAGUS		M=1,000 seeds		
	100 Seeds	500 Seeds		
Priced per package				
Priced per 1,000 seeds in these package sizes			1M	5M
13007U Walker Deluxe ^{untreated}	13.70	57.05	99.20	86.25
			75.00	
Priced per package			1 oz.	4 oz.
13001 Mary Washington			5.00	10.50
				30.00

What are GMOs? What does GMO stand for? And why do they exist?

A GMO, or Genetically Modified Organism, is a plant or variety that was developed to include a desired gene or selection of genes from another plant or organism.

GMOs were developed to enable a plant with a built-in ability to resist herbicides, insects and diseases, helping farmers produce more while reducing their use of chemicals. Recent developments in science are also improving the plants water and nitrogen utilization, which enable it to produce a crop even when these nutrients are in short supply.

My customers occasionally ask me if I raise and sell GMO vegetables. Can you tell me which products in your catalog are GMO?

GMO varieties of corn, soybeans and cotton have been widely accepted by farmers in the US and internationally. GMO developments in vegetable crops, on the other hand, have been pretty limited, in large part due to the high cost of research and development for crops that aren't widely grown. Currently, the only GMO vegetables available in our catalog are sweet corn and summer squash.

Of the roughly 107 varieties of sweet corn, 18 are GMO: the Performance Series, Attribute, Attribute Plus, and Attribute II varieties listed on pages 32 - 34.

And of the 38 varieties of summer squash, 5 are GMO: Justice III, SV0914YG, Conqueror III, Destiny III, and XPT 1832 III, on pages 117 - 121.

Is there more information about GMOs that I can provide my customers if they are interested in learning more?

GMOAnswers.com is an excellent resource for anyone interested in learning more about GMOs. Visitors can ask questions and get answers from experts across a wide range of disciplines who will provide balanced, fact-based responses. These experts include conventional and organic farmers, agribusiness experts, scientists, academics, medical doctors and nutritionists from a wide range of studies.



BEANS

PLANTING

Plant green beans in soil temperatures of 65 degrees or greater. Planting depth should be ½" to 1". Row spacing should be 30" for hand-picking. There should be approximately 2" between plants. Some commercial growers are using 15" rows for late planted green beans that are going to be mechanically harvested.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Weed pressure and insect pressure are the hardest things to control in green beans. If conditions are wet, diseases are more prevalent.

HARVEST

Harvest green beans when 50% of the beans are 3 - 4 sieve.

STORAGE

Store beans at 40 - 45°F and 95% humidity.

RUPP USE GUIDELINES

Home Garden and Farm Market varieties are considered to be high quality (gourmet) for fresh use or processing. They are low in fiber and more tender. As with most home garden varieties, pods set over a longer period for extended harvest.

Shipping varieties contain fiber that slows wrinkling under long distance shipping or longer time between picking and use on the stand. They are normally less tender than Home Garden or Farm Market varieties. Shipping varieties have a more concentrated pod set for mechanical harvest.

DISEASE CODES

A - Anthracnose
BBS - Bacterial Brown Spot
BV - Common Bean Mosaic Virus
CTV - Curly Top Virus
HB - Halo Blight
N# - Bean Mosaic Virus race number
NLB - Northern Leaf Blight
PM - Powdery Mildew
R - Rust
WM - White Mold

COLOR CODES

BY - Bright Yellow
DG - Dark Green
DY - Dark Yellow
GR - Green Red
LG - Light Green
MDG - Medium Dark Green
MG - Medium Green
MLG - Medium Light Green
P - Purple
VDG - Very Dark Green
Y - Yellow

BEAN SIEVE SIZE

1 sieve - 7/32"
2 sieve - 5/16"
3 sieve - 11/32"
4 sieve - 3/8"
5 sieve - 7/16"



WALKER DELUXE



BA0999



BRONCO



DESPERADO



JADE II ★



LYNX



MOMENTUM



OUTLAW

**ORDERS
OVER \$250
ARE SHIPPED
FREE!**

FINANCING AVAILABLE
We offer a variety of financing options including 0% interest with no payments due until December 2022. **The best rates are available before 12/31/2021.** See page 159 for all of the details on how to take advantage of this payment option.

0%

JOHN DEERE FINANCIAL

ASPARAGUS		Features
13001	Mary Washington	An early, rust resistant selection that is heavy yielding. Used primarily for the home garden.
13007	Walker Deluxe ^{F1}	Tight headed spears with slightly purple bracts. Impressive yields. High disease tolerance. Used for fresh market and processing.

ASPARAGUS	M=1,000 seeds				
	100 Seeds	500 Seeds	1M	5M	15M
Priced per package					
Priced per 1,000 seeds in these package sizes					
13007U Walker Deluxe ^{untreated}	13.70	57.05	99.20	86.25	75.00
Priced per package					
13001 Mary Washington			1 oz.	4 oz.	1#
			5.00	10.50	30.00

BEANS		BUSH GREEN Fresh Market						Pricing on page 8
▲		Days	Pod Length	Pod Color	Seed Color	Use	Disease	Features
07147	BA0999	50	5 ½"	DG	White	FM, S	BBS, N	This early bean has a pod that develops very quickly at maturity. Sieve size distribution is 65% in the 3-4 range and 35% in the 5's. This bean will work really well as a rain gap filler.
07043	Bronco	58	5 ½"	DG	White	FM, S	BV ¹	High yielding. For market or shipping.
07033	Desperado	53	5 ½"	DG	White	FM, S	BV	Desperado is a robust variety that produces high yields of high-quality straight pods, quick to mature. Well adapted for heat and stress tolerance with strong consumer appeal.
★ 07155	Jade II	60	6 ½"	DG	White	FM, S	BV, CTV, R	Improvement to Jade with darker beans and better seed quality. Long, straight pods which grow in a less concentrated set.
07124	Lynx	55	6"	DG	White	S	BV, HB, R	A high quality shipper with straight, dark pods from Seminis.
07005	Momentum	56	5 ¾"	DG	White	FM, S	BV	An upright bush style variety. Produces a concentrated set of straight pods with outstanding yields and is widely adapted to most growing regions.
07024	Outlaw	57	5 ¼"	DG	White	FM, S	BV	Extremely straight, glossy pods. Pods resist breaking and bruising. Plant does not lodge. Versatile across all growing regions. Excellent seed quality and germination. Use as a Prevail replacement.

Additional Bush Green Beans can be found on the next page --->.

GROWER PREFERRED ALL-STARS ★ BEANS

Items marked with a gold star are "Grower Preferred All-Stars". Growers throughout the Midwest and North East have been successful with these varieties. If you're looking to get started with a new crop or make a change in the varieties you are using, you can trust that Grower Preferred products will do the job.



BEANS BUSH GREEN

If you are looking for a hand-pick bean with very long pods, **Jade** is the one for you. Jade has been a standard variety for some time and will provide good yields in all weather conditions.

Jade II is a newer version of Jade that has the same qualities you have come to expect from the original but with slightly darker and straight pods.

Dave Silveus
Vegetable Consultant

Sybaris is a green bean that has performed admirably over the past several seasons. This variety has proven itself to be one of the highest quality green beans on the market! The pods are a shiny, dark green color and the sieve size remains in the 3's and 4's. It will also hold longer in the field to give growers more flexibility at harvest time.

BEANS YELLOW

SV1003GF is a newer wax bean that delivers the same yields as Sunburst with a slightly darker yellow pod. It is quickly becoming a favorite of wax bean growers who are also looking for longer pod length. SV1003GF averages around 5 1/2" in length.

BEANS GREEN RUNNER

Volunteer Half Runner is a favorite for growers planting half runner beans. It has very long 6" pods that sets a lot of beans!

BEANS		BUSH GREEN Fresh Market						Pricing on page 8
		Days	Pod Length	Pod Color	Seed Color	Use	Disease	Features
★	07148 Sybaris	55	5 1/2"	VDG	White	FM, S	BV, R	Sets shiny, high quality fruit even in upper region of the plant.
	07056 Tema	55	5"	DG	Brown	FM	BV ¹	A very high yielding, fiberless variety for fresh market.
	07130 Valentino	56	5 1/2"	DG	White	S	BV, R	A shipper variety from Seminis that has performed very well in trials. It is similar to Bronco in maturity with darker colored pods.

BEANS BUSH GREEN Fresh Market		M=1,000 seeds				
Priced per 1,000 seeds in these package sizes		2M	10M	20M	80M	800M*
07147	BA0999 Cruiser	4.10	3.85	3.65	3.40	3.40
07043	Bronco Cruiser	4.55	3.55	3.30	3.10	2.85
07033	Desperado Cruiser	4.45	3.45	3.20	3.00	2.75
07155	Jade II Cruiser	3.85	3.60	3.40	3.15	3.15
07124	Lynx Cruiser	3.85	3.60	3.40	3.15	3.15
07005	Momentum Cruiser	4.55	3.55	3.30	3.10	2.85
07024	Outlaw Cruiser	4.40	3.40	3.15	2.95	2.70
07148	Sybaris Cruiser	5.00	4.00	3.75	3.55	3.30
07056	Tema Cruiser	4.95	3.95	3.70	3.50	3.25
07130	Valentino Cruiser	3.75	3.50	3.30	3.05	3.05

* Multiple packages may be used to fill orders for these quantities.

BEANS BUSH GREEN Heritage		Priced per pound in these package sizes				
		1#	5#	25#	50#*	500#*
07007U	Blue Lake 274 Untreated	4.60	3.60	3.35	3.20	3.05
07012U	Contender Untreated	4.50	3.50	3.25	3.10	2.95
07135	Jade	5.90	4.90	4.65	4.50	4.35
07016U	Provider Untreated	4.55	3.55	3.30	3.15	3.00
07048U	Royal Burgundy Untreated	4.65	3.65	3.40	3.25	3.10
07026U	Strike Untreated	4.55	3.55	3.30	3.15	3.00
07028U	Tenderette Untreated	4.50	3.50	3.25	3.10	2.95
07021U	Tendergreen Improved Untreated	4.55	3.55	3.30	3.15	3.00
07022U	Topcrop Untreated	4.55	3.55	3.30	3.15	3.00
Priced per 1,000 seeds in these package sizes		2M	10M	20M	80M	800M*
07015	Cabot Cruiser	5.45	4.45	4.20	4.00	3.75

* Multiple packages may be used to fill orders for these quantities.



Cruiser® seed treatment insecticide guards against a broad spectrum of early season sucking and chewing insect pests in beans and sweet corn. By protecting the crop from the start, growers can improve stand establishment, enhance plant vigor and increase yield potential. <http://www.syngenta-us.com/crop-protection/seed-treatment/products>



Cruiser® treated items are highlighted in purple in the price tables.

Look for this symbol in the product description tables marking Cruiser treated items.



SYBARIS ★



VALENTINO



CABOT



JADE ★



CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

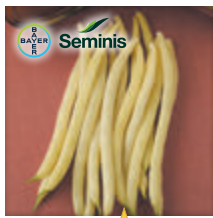
BEANS		BUSH GREEN Heritage Varieties - Home Garden					
▲		Days	Pod Length	Pod Color	Seed Color	Disease	Features
07007	Blue Lake 274	52	6"	DG	White	BV ¹	Popular garden variety.
07015	Cabot	55	5 - 6"	DG	White	BV, CTV, HB, R	Exceptionally smooth pod with desired dark green coloration. Very good disease tolerance.
07012	Contender	55	6 - 7"	MG	Mottled	BV ¹ , PM	Disease resistant variety for market or garden.
★ 07135	Jade	60	6 - 7"	DG	White	BV, CTV, R	Large, upright plants keep beans clean and straight. Heat tolerant and high yielding even when stressed by heat or cold.
07016	Provider	52	6"	MG	Brown	BV ¹ , N ¹⁵ , PM	An early home garden variety.
07048	Royal Burgundy	55	5 - 6"	P	Buff		Better bush type than Royalty with longer, straighter, smoother pods.
07026	Strike	55	5"	MG	White	BV ¹	A high yielding fresh market variety.
07028	Tenderette	60	5 - 6"	DG	White	BV ¹ , N ¹⁵	Excellent quality with slow seed development.
07021	Tendergreen Improved	53	5 - 6"	DG	Mottled	BV ¹	A more productive Tendergreen type.
07022	Topcrop	53	5 - 6"	MG	Brown		Canning or freezing type.

BEANS		BUSH GREEN FLAT						
▲		Days	Pod Length	Pod Color	Seed Color	Use	Disease	Features
<i>Fresh Market</i>								
07017	Roma II	58	5 ½"	MG	White	FM, HG	BV ¹ , N ¹⁵	Good flavored Romano type for home or market.
<i>Heritage Variety</i>								
07057	Greencrop	56	7 - 8"	MG	White	FM, HG, P	BV	Stringless, great flavor, flat, long podded Kty Wonder type. Tolerant to Common Bean Mosaic Virus.

BEANS BUSH GREEN FLAT				
<i>Priced per pound in these package sizes</i>				
	1#	5#	25#	50#
07057 Greencrop	4.75	3.75	3.45	3.25
07017U Roma II <small>Untreated</small>	4.80	3.80	3.50	3.30



SUNBURST



SV1003GF ★



BESWEET 292



BORSALINO

BEANS		YELLOW WAX						
▲		Days	Pod Length	Pod Shape	Pod Color	Seed Color	Disease	Features
<i>Fresh Market</i>								
08019	Sunburst	50	6"	Round	BY	White	BV, HB	A Seminis variety for local market or shipping. Long straight pods that are an attractive bright yellow. Concentrated set.
★	08005 SV1003GF	56	5 1/4"	Round	Y	White	BBS, BV	Has better color and a slightly longer pod than Gold Dust with a more upright plant. Consistent yielder.
<i>Heritage Varieties</i>								
08004	Cherokee	51	6"	Round	DY	Buff		A proven home garden variety.
08002	Golden Improved	50	5"	Round	Y	White		The most popular bush wax variety for home gardens.

BEANS		DRY SHELLING					
▲		Days	Seed Color	Bean Type	Plant Type	Disease	Features
09032	Cabernet	91	Dark red	Kidney	Determinate Bush	BV	Mid season Kidney Bean. High quality and yield, excellent dark red color.
09031	Etna	88	Red flecks on off white	Cranberry	Determinate Bush	BV	An early season Cranberry Bean. Large seeded and high yield potential.
09033	SV1893GH	102	White	Navy	Determinate Bush	BV	Main season, high yield, a high quality Navy bean.
09034	SV6139GR	90	Brown flecks on buff	Pinto	Indeterminate Short Vine	BV	Early maturing Pinto bean. Short vine on an upright plant, great quality and color.

BEANS		EDIBLE SOY				
▲		Days	Height	Bean Size	Seed Color	Features
Vegetable soybeans (edamame) from Rupp Genetics are in a class of their own for table use. They produce very large beans that are high in protein and sweet if picked and preserved in the proper stage. Used primarily as a shelled green bean with eating quality superior to limas and higher protein than either peas or limas. The best flavored of all food grade soybeans.						
09025	BeSweet 292	85	24"	1200/lb.	Yellow	The top commercial check variety for vegetable soybeans produced under license from AVRDC in Taiwan.

BEANS YELLOW WAX		M=1,000 seeds				
<i>Priced per pound in these package sizes</i>		1#	5#	25#	50#	500#
08004U	Cherokee <small>Untreated</small>	4.55	3.55	3.30	3.15	3.00
08002U	Golden Improved <small>Untreated</small>	4.55	3.55	3.30	3.15	3.00
<i>Priced per 1,000 seeds in these package sizes</i>		2M	10M	20M	80M	800M*
08019	Sunburst <small>Cruiser</small>	5.05	4.05	3.80	3.60	3.35
08005	SV1003GF <small>Cruiser</small>	5.10	4.10	3.85	3.65	3.40

* Multiple packages may be used to fill orders for these quantities.

BEANS DRY SHELLING		M=1,000 seeds			
<i>Priced per 1,000 seeds in these package sizes</i>		2M	10M	20M	40M
09020U	Alpena <small>Navy Untreated</small>	4.05	3.05		
09032U	Cabernet <small>Red Kidney Untreated</small>	4.70	3.70	3.45	3.25
09031U	Etna <small>Cranberry Untreated</small>	8.90	7.90	7.65	7.45
09033U	SV1893GH <small>Navy Untreated</small>	4.20	3.20	2.95	2.75
09034U	SV6139GR <small>Pinto Untreated</small>	4.40	3.40	3.15	2.95
<i>Priced per pound in these package sizes</i>		1#	5#	25#	50#
09005U	Pinto <small>Untreated</small>	4.40	3.40	3.15	3.00

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**ORDERS
OVER \$250
ARE SHIPPED
FREE!**



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

BEANS		FRENCH FILET						
▲		Days	Pod Length	Diameter	Pod Color	Seed Color	Disease	Features
08018	Borsalino <small>Baby Wax</small>	60	4"	1/4"	Y	White	A, BV	<i>A Vilmorin high quality baby wax bean with a deep gold color and a concentrated set for both hand or mechanical harvest. Sieve size 2 & 3.</i>
07089	Maxibel	60	7"	1/4"	DG	Black		<i>A selection from Vilmorin with improved pod color, stress tolerance and disease tolerance. It has straight pods and is slow to seed. Best when hand picked. Sieve size 2-3.</i>

BEANS		GREEN RUNNER						
▲		Days	Pod Length	Pod Shape	Pod Color	Seed Color	Disease	Features
07020	State Half Runner	60	4"	Oval	LG	White		<i>Longer and larger podded than White Half Runner.</i>
★ 07118	Volunteer Half Runner	60	6"	Oval	LG	White	BV, R	<i>A strain of Half Runner developed by the USDA breeder, Dr. Mullins, at the University of Tennessee. The commercial favorite.</i>
07023	White Half Runner	60	4 1/2"	Oval	LG	White		<i>Similar to Mountaineer Half Runner.</i>

BEANS		HORTICULTURAL <small>Heritage Varieties</small>						
▲		Days	Pod Length	Pod Shape	Pod Color	Seed Color	Use	Features
07039	Dwarf Horticultural Taylor	60	6"	Flat	GR	Buff Red	FM, HG	<i>Thick, flat pods used early as green snaps but primarily used as green shell. Semi-runner plants. Does well in cool climates.</i>
07031	French Horticultural	68	7"	Flat	GR	Buff Red	FM, HG	<i>This strain produces runners though seldom staked. Young beans are frozen; mature are shelled green or dried.</i>

BEANS EDIBLE SOY					
<i>Priced per pound in these package sizes</i>					
	1#	5#	25#	50#	
09025U BeSweet 292 <small>Untreated</small>	10.00	9.00	8.75	8.50	

BEANS GREEN RUNNER					
<i>Priced per pound in these package sizes</i>					
	1#	5#	25#	50#	
07020U State Half Runner <small>Untreated</small>	4.50	3.50	3.20	3.00	
07118 Volunteer Half Runner	4.65	3.65	3.35	3.15	
07023U White Half Runner <small>Untreated</small>	4.50	3.50	3.20	3.00	

BEANS FRENCH FILET					
<i>Priced per 1,000 seeds in these package sizes</i>					
	2M	10M	20M	100M	M=1,000 seeds
08018 Borsalino	5.60	4.85	4.60	4.35	
07089 Maxibel	7.95	7.20	6.95	6.70	

BEANS HORTICULTURAL					
<i>Priced per pound in these package sizes</i>					
	1#	5#	25#	50#	
07039U Dwarf Horticultural Taylor <small>Untreated</small>	4.55	3.55	3.25	3.05	
07031U French Horticultural <small>Untreated</small>	5.35	4.35	4.05	3.85	

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ORIENT WONDER



SEYCHELLES



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

BEANS		POLE Heritage Varieties					
▲		Days	Pod Length	Pod Shape	Pod Color	Seed Color	Features
10002	Blue Lake Pole	63	5 - 6"	Round	DG	White	Sets pods from the base to the top of the vine producing plenty for canning. Straight, smooth, 6-inch pods are crisp and stringless at all stages.
10008	Kentucky Blue ^{PVP}	58	7 - 10"	Round	MG	White	A Kentucky Wonder - Blue Lake combination with flavor similar to Kentucky Wonder but sweeter. Earlier than Kentucky Wonder. An AAS winner.
10001	Kentucky Wonder	65	7 - 8"	Flat Oval	MG	Buff	Most popular pole variety. Good for cut beans or dry shell use.
10004	Orient Wonder ^{Yard Long}	65	15 - 18"	Long Narrow	DG	White	Popular for specialty and ethnic markets. Superior to standard strains due to its ability to set in cooler climates.
10005	Seychelles	55	6"	Round	DG	White	Does well on a 5 to 6 foot trellis. Trimming growth above top of trellis is recommended to promote larger bush habit and pod set on lower part of stem.

BEANS		BUSH LIMA Heritage Varieties				
▲		Days	Height	Seeds per Pod	Seed Color / Shape	Features
11006	Dixie Speckled Butterpea	75	16 - 24"	3 - 4	Red Speckled / baby lima	Similar to White Dixie, a southern favorite.
11002	Fordhook 242	75	16 - 20"	3 - 4	Cream / thick and plump	Home garden and market. Freezer type.
11003	Henderson Bush	65	16"	3 - 4	White / thick and plump	Used primarily for canning and freezing. Home garden.
11004	Thorogreen Bush	65	15 - 16"	3 - 4	Light Green / small and flat	Home garden and processing.

BEANS		POLE LIMA Heritage Varieties				
▲		Days	Height	Seeds per Pod	Seed Color / Shape	Features
11501	King of the Garden	88	8 - 10'	4	Creamy White	Largest of all lima beans.

BEANS POLE					
Priced per pound in these package sizes					
	1#	5#	25#	50#	
10002U Blue Lake Pole ^{Untreated}	4.85	3.85	3.55	3.35	
10001U Kentucky Wonder ^{Untreated}	4.80	3.80	3.50	3.30	
10004U Orient Wonder ^{Yard Long Untreated}	38.50	37.50	37.20	37.00	
10005U Seychelles ^{Untreated}	8.90	7.90	7.60	7.40	
Priced per 1,000 seeds in these package sizes					
	2M	10M	20M	80M	
10008 Kentucky Blue	6.00	5.00	4.75	4.55	

BEANS BUSH LIMA					
Priced per pound in these package sizes					
	1#	5#	25#	50#	
11006U Dixie Speckled Butterpea ^{Untreated}	4.70	3.70	3.40	3.20	
11002U Fordhook 242 ^{Untreated}	4.95	3.95	3.65	3.45	
11003U Henderson Bush ^{Untreated}	4.70	3.70	3.40	3.20	
11004U Thorogreen Bush ^{Untreated}	4.70	3.70	3.40	3.20	

BEANS POLE LIMA					
Priced per pound in these package sizes					
	1#	5#	25#	50#	
11501U King of the Garden ^{Untreated}	4.85	3.85	3.55	3.35	

ONLINE VEGETABLE PRODUCTION RESOURCES

www.ruppseeds.com/MVPG

Purdue University's "Midwest Vegetable Production Guide for Commercial Growers" which includes spacing, fertilizing and harvesting information, as well as information on diseases, pest management and weed control.



www.ruppseeds.com/uoiVeg

University of Illinois Extension Vegetable Gardening Basics.



www.ruppseeds.com/MAVR

The 2020 / 2021 edition of the Mid-Atlantic Commercial Vegetable Production Recommendations.



www.ruppseeds.com/MSUipm

Michigan State University's guide for Integrated Pest Management in commercial vegetable production.



www.ruppseeds.com/OSUVeg

The Ohio State University Extension Vegetable Crops website with research reports on many crops. The site also includes a listing of vegetable team members by expertise and how to contact them.



www.ruppseeds.com/NCShort

North Carolina State University's Department of Horticulture Science website.



www.ruppseeds.com/PSUsoil

Penn State University offers soil test recommendations for commercial vegetables.



www.ruppseeds.com/PSUex

Penn State University's Department of Plant Pathology, Vegetable Disease Identification.



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RED ACE pg. 15

BEETS

PLANTING

Plant seed 1" apart and thin to 2" apart. Row spacing ranges from 15" - 24". Seed depth should be ¼" - ½" deep. Poor stands are often the result of planting too deeply or the soil's crusting after a heavy rain. The seedlings may emerge over a relatively long period of time, making a stand of different sizes and ages of seedlings.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

It is extremely important to thin beets because they are a multigerm seed meaning each seed will produce several plants. Beets that are thinned when they reach approximately 3" tall can be used as greens. Frequent and shallow cultivation is important to keep the soil loose around the growing beet to ensure uniform roots.

HARVEST

Beets can be harvested whenever they grow to the desired size. About 60 days are required for beets to reach 1½" in diameter, the size often used for cooking, pickling or canning.

STORAGE

Beets may be stored in a polyethylene bag in a refrigerator for several weeks. Cut off the tops of the beets one inch above the roots. Beets store the best at 32°F and 95% humidity. Do not freeze.



CAMARO



CHIOGGIA
GUARDSMARK





RED ACE



TOUCHSTONE
GOLD

Naturall™

Enhance root growth and increase seedling vigor for healthier plants and higher yields with Naturall™ for Vegetables.
See page 152 for rates and pricing.

BEETS		Days	Sugar	Features
Fresh Market				
14003	Camaro ^{F1}	50 - 55	15%	Good root quality, uniform size and shape. High marketable yield. Smooth skin, good internal and external color.
14105	Chioggia Guardsmark  	60	12-15%	Candy-striped beet with alternating rings of dark red and white that are unique and beautiful, making this variety a popular choice for specialty markets. Increased uniformity and bolt tolerance. A strain of the popular Italian heirloom.
14107	Lutz Green Leaf ^{Pink Stem}	63	7 - 9%	A top shaped beet with glossy, bright green leaves used for fine greens. Superior storage beet.
14011	Merlin ^{F1} 	63	12 - 15%	A beet that replaces Pacemaker III with very similar qualities but more producible seed.
14002	Red Ace ^{F1}  	53	12 - 15%	Early, sweet, red and resists zoning in hot weather. Excellent for garden, market or processing.
14106	Touchstone Gold  	55	12-15%	Offers higher germination rates, more uniform round roots and less zoning than standard golden types. Solid green tops are long, attractive, and quickly shade out weeds. Vibrant golden yellow flesh retains its color when cooked and is sweet and more mild than red beets.
Heritage Varieties				
14115	Bull's Blood	60	5 - 7%	An heirloom variety with deep red leaves, good flesh quality, and used primarily for its tops in baby greens mixes.
14104	Cylindra	60	5 - 7%	Unique, long cylindrical shaped beet, excellent for slicing. Up to 8" long and 1 3/4" in diameter.
14101	Detroit Dark Red	58	5 - 7%	A very popular, tender, dark red beet used by many home gardeners.
14102	Early Wonder	52	5 - 7%	A flattened, globe shaped, dark red beet. Sweet and tender.
14103	Ruby Queen	60	5 - 7%	An early, excellent quality beet for the gardener. Tender, fine grained and sweet.

BEETS	M=1,000 seeds			
	Priced per 1,000 seeds in these package sizes			
	5M	25M	250M	1,000M
14003 Camaro	1.14	1.05	0.99	0.95
14105 Chioggia Guardsmark ^{F300}	1.53	1.44	1.38	1.34
14011 Merlin ^{F300}	1.17	1.08	1.02	0.98
14002 Red Ace ^{F300}	1.17	1.08	1.02	0.98
14106 Touchstone Gold ^{F300}	2.74	2.65	2.59	2.55

Seed Size: 9 - 10 = 30,000 seeds per pound.

BEETS	M=1,000 seeds				
	Priced per package in these package sizes				
	1 oz.		4 oz.		
	1#	5#	50#		
14115U Bull's Blood ^{Untreated}	3.05	10.50	28.00	27.00	26.00
14112U Chioggia ^{Untreated}	3.10	10.70	28.50	27.50	26.50
14104U Cylindra ^{Untreated}	4.00	10.65	10.40	10.15	
14101U Detroit Dark Red ^{Untreated}	3.85	10.25	10.00	9.75	
14102U Early Wonder ^{Untreated}	3.85	10.25	10.00	9.75	
14107U Lutz Green Leaf ^{Untreated}	6.95	18.50	18.25	18.00	
14103U Ruby Queen ^{Untreated}	4.00	10.65	10.40	10.15	



EMERALD CROWN ★ pg. 17

SAKATA

BROCCOLI

PLANTING

For spring broccoli, plant in greenhouse in flats. Sow $\frac{1}{4}$ " to $\frac{1}{2}$ " deep. For fresh market broccoli, plant on 30" beds with trickle irrigation. On a 30" bed, plant two rows of broccoli. Plants should be 15" apart. When planting fall broccoli, count backward from the first fall frost in your area and add about 30 days from planting. This can be either started in a greenhouse or direct seeded into the field.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Use starter fertilizer for transplants and side-dress with nitrogen fertilizer when the plants are half grown. Provide ample soil moisture, especially as the heads develop. Scout fields for aphids and cabbage worms.

HARVEST

Harvest when the head is large and firm, with a compact cluster of small flower buds. The buds should not have bright yellow flowers showing. Look for bright green or purplish-green heads. Yellow flowers and enlarged buds are signs of over-maturity.

STORAGE

Store the broccoli, unwashed, in loose or perforated plastic bags in the vegetable crisper of the refrigerator. Broccoli left unrefrigerated quickly becomes fibrous and woody.

Wet broccoli quickly becomes limp and moldy in the refrigerator—so wash it just before using. Store fresh broccoli in the refrigerator for 3 - 5 days. Old broccoli may look fine, but it develops strong undesirable flavors. It tastes best and is highest in nutritional value when storage time is brief.

DISEASE CODES

BS - Black Speck
BR - Black Rot
DM - Downy Mildew
HS - Hollow Stem
PB - Club Root



EASTERN CROWN



GREEN MAGIC ★



HANCOCK



IMPERIAL ★



MILLENNIUM ★



SORRENTO

BROCCOLI		Days from Transplant***	Sowing Season	Head Size	Bead Size	Disease Code	Features
Fresh Market							
15009	Eastern Crown F1	74	Spring Summer	Medium	Small		<i>Eastern Crown is an outstanding variety for the East Coast. Small beads, blue-green head color and excellent heat tolerance. Perfect for the crown cut/short trim market (Asian cut). Performs well in long day length and moderate heat.</i>
★ 15051	Emerald Crown F1	78**	Spring	Medium	Medium Small	DM	<i>A Sakata variety specifically bred for high quality and high yield crown cuts. Very uniform, tight heads with beads that are blue green. Nice compliment to Green Magic.</i>
★ 15044	Green Magic F1	75	Spring	Medium	Medium Small	DM	<i>This summer type broccoli offers very good uniformity and holding ability. It is in the mid-early maturity class and has a wide adaptability. Has a semi-dome, tight head, with medium-small bead size and good plant habit.</i>
15001	Hancock F1	85	Spring Summer	Medium	Small		<i>A Seminis variety with raised heads for easier picking ability. Thin-stalked variety used for either crown cut or bunching use. Very good heat tolerance.</i>
★ 15049	Imperial F1	85*, **	Spring	Medium	Small	DM	<i>A Sakata variety that performs best during long day conditions. Good heat tolerance. Tight head with small, dark green beads.</i>
★ 15004	Millennium F1	88	Spring, Summer	Large	Extra Small		<i>A highly adaptable, crown cut type, yielding high-domed heads with very small beads and exceptionally uniform head maturity. It has a round shape, good heat tolerance and less side shoots. Is anthocyanin-free and has shown strong post-harvest color retention.</i>
15509	Sorrento Broccoli Raab	70	Spring, Fall	Large Florets			<i>Sorrento is a fast-growing, early maturing variety. Uniform large florets with blue-green narrow turnip-shape leaves. Tall upright plant, slow to bolt. A perfect variety for fresh market or home gardeners.</i>
Heritage Varieties							
15502	Waltham 29	95	Spring	Medium			<i>Good main heads with a heavy crop of side shoots.</i>

* Day length sensitive, earlier maturity when day length is longer.
 ** Requires warmer night time temperatures to mature, growth rate dramatically slows down under cold temperatures.
 *** Add 15-20 days for direct seeding.

BROCCOLI	M=1,000 seeds				
	1M	5M	25M	100M	500M*
15005 Durapak 16	7.80	7.20			
15009 Eastern Crown	10.35	9.75	9.40	9.00	8.80
15051 Emerald Crown	9.30	8.70	8.35	7.95	7.75
15044 Green Magic	8.15	7.55	7.20	6.80	6.60
15001 Hancock	8.25	7.65	7.30	6.90	6.70
15049 Imperial	8.85	8.25	7.90	7.50	7.30
15004 Millennium	9.85	9.25	8.90	8.50	8.30
Priced per package		1 oz.	4 oz.		
Priced per pound in these package sizes				1#	
15509 Sorrento Broccoli Raab	10.85	17.30	52.00		
15502 Waltham 29	4.15	6.60	19.75		

* Multiple packages may be used to fill orders for these quantities.

ALL-STARS ★ BROCCOLI

Emerald Crown is a perfect fit for 2nd pick spring and works for early fall harvest as well.

Green Magic is a great variety for early spring sowing.

Imperial has great heat tolerance and fits in the summer harvest slot.

Millennium is ideal for harvest in the fall to late fall time period.

Jeff Hess
Vegetable Consultant



CHURCHILL pg. 19

BRUSSELS SPROUTS

PLANTING

Start in the greenhouse and transplant in early to mid summer, when one would start long season cabbage. Seeds should be planted 4 - 5 weeks before transplanting. Allow 90 - 100 days for plants to mature. For summer harvest, you must plant transplants of an early, heat-resistant variety in very early spring. Sprouts maturing in hot weather or under dry conditions are more likely to develop bitterness. Fall production is the most desirable in a large portion of the country. Plant 24" - 36" apart in the row and 30" - 36" apart in rows.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Brussels are grown much like cole crops, cabbage and broccoli.

HARVEST

Harvest sprouts when buds form heads one to two inches in diameter. Pick sprouts when they are firm. Lower sprouts mature first.



CHURCHILL



RED BALL



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

See page 152 for rates and pricing.

BRUSSELS SPROUTS					
		Days	Sprout Size	Plant Size	Features
<i>Fresh Market</i>					
16006	Capitola ^{F1}	90	1 ½"	38"	<i>Known for uniform, high quality sprouts. Adaptable, being well suited to fresh market and processing. It is harvestable either by hand or machine. Produces heavy yields.</i>
16007	Churchill ^{F1}	80	1 - 1 ¼"	30"	<i>A first early variety, maturing late August to October. Produces good yields of tight, evenly spaced buttons with superb flavor.</i>
16002	Jade Cross Regular ^{F1}	85	¾ - 1"	28"	<i>Popular early maturing variety. Deep green sprouts are spaced closely on medium sized plants. High yield of firm, oval-shaped, medium sized sprouts. Holds well in adverse weather.</i>
16502	Red Ball	100	1"	38"	<i>Specialty variety producing red sprouts which improve in color after cold weather. Best red variety available.</i>
<i>Heritage Varieties</i>					
16501	Long Island Improved	90	¾ - 1"	24"	<i>Popular home garden variety. Medium green sprouts.</i>

BRUSSELS SPROUTS		M=1,000 seeds			
<i>Priced per package</i>		1 oz.	4 oz.	1#	
16501	Long Island Improved	3.45	6.85	20.50	
<i>Priced per 1,000 seeds in these package sizes</i>		1M	5M	25M	100M
16006	Capitola	20.90	20.25	19.95	19.50
16007	Churchill	13.55	12.90	12.60	12.15
16002	Jade Cross Regular	9.00	8.35	8.05	7.60
16502	Red Ball	5.00	4.35	4.05	3.60



GRAND VANTAGE ★ pg. 21

CABBAGE

PLANTING

Transplant early cabbage soon enough that it matures before the heat of summer. Planting two or three varieties with different maturities can provide harvest over a longer period of time. Late cabbage must be started during the heat of mid-summer, but it develops its main head during the cooling weather of fall. It may be transplanted or direct seeded. Plants should be planted 12" - 24" apart depending on variety and the desired head size. Sow cabbage seeds ¼" - ½" deep.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Use starter fertilizer when transplanting and side-dress with nitrogen after plants are half grown. Keep plants out of intense sunlight and heat of summer. Common problems are Yellow or Fusarium Wilt, as well as cabbage worms.

HARVEST

Cabbage can be harvested anytime after the head has formed. For highest yield, cut the cabbage heads when they are solid (firm to hand pressure) but before they crack or split. When heads are mature, a rain may cause heads to crack or split.

STORAGE

Fresh, uncut heads of cabbage can be stored in the refrigerator for up to two weeks. Cover loosely with a plastic bag or use perforated bags. Do not wash cabbage before storing; the extra moisture will hasten deterioration.

DISEASE CODES

ALS - Angular Leaf Spot
ALT - Alternaria Leaf Spot
BR - Black Rot
BS - Black Spec
CR - Crown Rot
DM - Downy Mildew
T - Thrips
TB - Tip Burn
YR - Yellows Resistant



FAST VANTAGE ★



BLUE DYNASTY



BLUE VANTAGE ★



XTREME VANTAGE



GRAND VANTAGE ★



STELLAR VANTAGE ★

CABBAGE		HYBRID					
		Days from Transplant*	Head Weight pounds	Head Type	Color	Disease Code	Features
★	17069 Fast Vantage	50	2 ½	Round	Medium Green		A very uniform hybrid that is slightly earlier than Headstart for the early cool season.
	17005 Stonehead	60	3 - 4	Round	Gray Green	TB	A popular, early hybrid for home garden or market. Solid, slow to burst heads.
	17021 Charmant	65	3 - 4	Round	Blue Green	TB, YR	Early, darker green, and slightly larger Stonehead type. Home garden, fresh market, and shipping.
	17097 Platinum Dynasty	70	3 - 4	Round	Blue Green	BR, TB, YR	A Seminis fresh market hybrid with excellent uniformity in the early main season time slot. Performs well in the East & Midwest both in the summer and fall.
	17091 Blue Dynasty	75	5	Round	Blue	BR, TB, YR	A very uniform, disease tolerant, good holding market cabbage from Seminis.
★	17022 Blue Vantage	80	3 - 4	Round	Blue Green	BR, BS, TB, YR	Early, main season hybrid, excellent appearance, disease tolerant and excess moisture tolerant. Excellent for fresh market or slaw.
	17048 Cheers	80	4 - 6	Round	Blue Green	BR, YR	A hybrid with uniform heads, larger wrapper leaves. Disease resistant. Compare to Blue Vantage.
	17011 Xtreme Vantage	80	5 - 6	Round	Blue Green	BR, TB, YR	Very good uniformity in field. Has a good disease package.
★	17116 Grand Vantage	85	5 - 6	Round	Blue Green	TB, YR ¹	An exciting fresh market variety with attractive green to blue-green color. Very round head 7 x 7", heavy weight, dense solid interior and short core. Tight wrapper leaves. Good holding ability and excellent yield.
★	17009 Stellar Vantage	85	5	Round	Blue Green	BR, YR ¹	Mid-late maturity with compact heads and short cores. Offers nice, dense heads and has good field-holding ability.

* Add 10-15 days for direct seeding.

ALL-STARS ★ CABBAGE



Jeff Hess
Vegetable Consultant

Fast Vantage Look no further for your early cool season planting.

Blue Vantage has a great disease package with moisture tolerance for the early/main season.

Grand Vantage is a great all around main season cabbage. Very good producer.

Stellar Vantage A later season variety which holds in the field very well.

CABBAGE Hybrid

M=1,000 seeds

	Priced per 1,000 seeds in these package sizes				
	1M	5M	25M	100M	500M*
17091 Blue Dynasty	6.70	6.10	5.50	4.90	4.80
17022 Blue Vantage	5.90	5.30	4.70	4.10	4.00
17021 Charmant	6.80	6.20	5.60	5.00	4.90
17048 Cheers	6.60	6.00	5.40	4.80	4.70
17085 Emblem	6.10	5.50	4.90	4.30	4.20
17069 Fast Vantage	6.80	6.20	5.60	5.00	4.90
17116 Grand Vantage	8.15	7.55	6.95	6.35	6.25
17097 Platinum Dynasty	6.80	6.20	5.60	5.00	4.90
17008 Primo Vantage	7.20	6.60	6.00	5.40	5.30
17009 Stellar Vantage	6.40	5.80	5.20	4.60	4.50
17005 Stonehead	6.30	5.70	5.10	4.50	4.40
17011 Xtreme Vantage	5.80	5.20	4.60	4.00	3.90

* Multiple packages may be used to fill orders for these quantities.



RED DYNASTY



SAVOY ACE IMPROVED



RUBY PERFECTION



TOY CHOY



CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

CABBAGE		SPECIALTY Hybrid					
		Days from Transplant*	Head Weight pounds	Head Type	Color	Disease Code	Features
17090	Red Dynasty	72	3 1/2 - 5	Flat Round	Red	BR, TB	A Seminis red cabbage with the right size for fresh market plus intermediate black rot resistance.
17004	Savoy Ace Improved	73	3 - 4	Flat Round	Dark Green		AAS winner. Superior quality savoy type with a medium large head.
17070	Red Jewel	75	3 - 5	Round	Purple Red	TB	Sakata hybrid that is widely adaptable with very good holding ability. Excellent uniformity and yield potential.
17003	Ruby Perfection	86	3 - 4	Round	Purple Red		Deepest red colored cabbage. Uniform 3 - 4 pound head for home garden or market.

* Add 10-15 days for direct seeding.

CABBAGE SPECIALTY Hybrid		M=1,000 seeds				
Priced per 1,000 seeds in these package sizes		1M	5M	25M	100M	500M
17082	Huron	12.50	11.90	11.30	10.70	10.60
17090	Red Dynasty	9.85	9.25	8.65	8.05	7.95
17070	Red Jewel	9.45	8.85	8.25	7.65	7.55
17003	Ruby Perfection	9.15	8.55	7.95	7.35	7.25
17004	Savoy Ace Improved	10.00	9.40	8.80	8.20	8.10
17041	Savoy King	10.00	9.40	8.80	8.20	8.10

CABBAGE CHINESE		M=1,000 seeds		
Priced per package		1 oz.	4 oz.	1#
18001	Michihli	3.10	7.25	14.50

Priced per 1,000 seeds in these package sizes		1M	5M	25M	100M
18010	Blues	3.80	3.20	2.90	2.30
18012	Monument	3.65	3.05	2.75	2.15
18017	Yuki	5.10	4.50	4.20	3.60

CABBAGE OP		M=1,000 seeds			
Priced per package		1 oz.	4 oz.	1#	
17509	Copenhagen Market	5.45	8.30	16.50	
17501U	Danish Ballhead <small>Untreated</small>	6.95	10.60	21.00	
17512	Early Flat Dutch Brunswick	5.65	8.55	17.00	
17503	Early Jersey Wakefield	5.05	7.70	15.25	
17502	Golden Acre	5.05	7.70	15.25	
17508	Late Flat Dutch	5.60	8.50	16.85	
17507	Red Acre	6.60	10.05	20.00	


CABBAGE CHINESE Pak-Choi		M=1,000 seeds			
Priced per package		1 oz.	4 oz.	1#	
18005	Pak Choi	4.25	10.00	20.00	

Priced per 1,000 seeds in these package sizes		1M	5M	25M	100M
49012	Joi Choi	4.45	3.85	3.55	2.95
49007	Mei Qing Choi	4.45	3.85	3.55	2.95
49013	Toy Choy	3.65	3.05	2.75	2.15

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CABBAGE		OP - Heritage Varieties					
		Days from Transplant*	Head Weight pounds	Head Type	Color	Disease Code	Features
17503	Early Jersey Wakefield	62	2 - 3	Pointed	Dark Green		<i>Excellent flavor makes it a popular variety for the home garden.</i>
17502	Golden Acre	63	3	Round	Green	YR	<i>The most popular early home garden variety.</i>
17509	Copenhagen Market	75	3 - 4	Round	Medium Green		<i>Uniform, good keeping variety suitable for home garden.</i>
17507	Red Acre	80	3	Round	Red		<i>Popular home garden variety.</i>
17512	Early Flat Dutch Brunswick	88	6 - 8	Flat Round	Dark Green		<i>Popular home garden variety.</i>
17501	Danish Ballhead	100	5 - 7	Round	Blue Green		<i>Excellent for all purposes, especially good for sauerkraut. Home garden.</i>
17508	Late Flat Dutch	105	Up to 30	Flat Round	Green		<i>Good storage variety and one of the best for sauerkraut. Home garden.</i>

* Add 10-15 days for direct seeding.

CABBAGE		CHINESE 					
		Days from Transplant*	Head Weight pounds	Head Type	Color	Disease Code	Features
<i>Fresh Market</i>							
18010	Blues ^{F1}	57	4 - 5	Napa	Green	ALS, BS, DM	<i>Extra slow bolting, high disease tolerance, superior performance in spring or early fall.</i>
18017	Yuki ^{F1}	67	4 - 5	Napa	Green	BS, CR, TB	<i>Yuki is a medium maturing, China Pride type hybrid. Good uniformity and size.</i>
18012	Monument ^{F1}	80	4	Michihli	Green		<i>Bright green, cylindrical shape with long shelf life.</i>
<i>Heritage Varieties</i>							
18001	Michihli	75	5 - 6	Michihli	Green		<i>Popular, well known variety used in the home garden for many years.</i>

* Add 10-15 days for direct seeding.

CABBAGE		CHINESE Pak-Choi				
		Days	Head Type	Color	Features	
49013	Toy Choi ^{F1}	30 - 35	Celery	White	<i>A compact hybrid Cantonese Pak Choi with thick, broad, milky white petioles and glossy, dark green leaves. Perfect for growers servicing Asian markets.</i>	
49007	Mei Qing Choi ^{F1}	35 - 40	Celery	Green	<i>The first hybrid green-petiole Pak Choi. More vigorous early growth. Smaller stalk than Joi Choi. More suitable for market, but somewhat more difficult to grow. Type known by both Japanese and Chinese.</i>	
49012	Joi Choi ^{F1}	35 - 40	Celery	White	<i>First hybrid white stem. Slower bolting and higher yielding than OP's. Popular with the Chinese market.</i>	
18005	Pak Choi	55	Celery	White	<i>The variety of white celery mustard popular in both China and the U.S. Sow in spring, summer and fall.</i>	



VIPER pg. 25

SAKATA

CARROTS

When deciding what variety of carrot to plant one must determine two things: "What is my target audience?" and "What kind of soil do I have?" Growers need to define if they are selling to fresh or storage markets. Most of the carrots available from Rupp are geared towards fresh market. If high tunnels or cold frames are used in your operation, you may want to consider carrots as part of your rotation due to their ability to resist cold weather.

There are five main types of carrots: Nantes, Chantenay, Baby, Emperor, and Danvers.

- Nantes are easily and widely adapted; straight cylindrical roots ranging 5" - 7" long. They tend to have a sweet flavor and crisp texture, but have a limited storage potential. Nantes are grown in loose sandy soils or in raised beds.
- Chantenay have conical roots with broad shoulders and rounded tips. They have a rich, sweet flavor and also possess a good storage potential. They are an excellent type to grow from summer to fall and are adapted to various soil types. They usually size up well in clay soils with high organic matter content.

- Baby carrots have a root less than 5" long with a crisp texture and are frequently quite sweet when mature. They also are grown in any well drained soil and can be used to separate different types of salad greens. They tend to have limited storage potential.
- Emperor are long with a tapered root shape, stocky shoulders and strong tops. They tend to have a fibrous texture and store well. This type of carrot sizes up best in deep, sandy loam.
- Danvers have a thick rooted cylindrical shape with a yellowish core. This type is mainly used for processing, juicing, and storage.

PLANTING

Carrots can be planted in soils as cool as 40°F with the ideal temperature ranging from 50 to 75°F. They take anywhere from 7 - 21 days to emerge from the soil depending on soil temperatures. Spring carrots are planted 2 - 3 weeks before the last frost. For fall harvest, plant carrots 10 - 12 weeks before the first frost. Seed carrots ¼" - ½" deep and 15" between rows. Using seed tapes or pelleted seed will help prevent over seeding.

See "Germination Chart" on page 153 for additional information on germination rate and

days to germination at various soil temperatures.

MANAGEMENT

Soil nutrients are very important. Test the soil to check for optimal levels. Also scout for insect and fungal infestations. Root quality is best when soil temperatures are 60 - 70°F. The shape of the root is determined within the first few weeks after germination when the new plant extends its taproot deep into the soil. Sometimes growers will mix radish seed with carrot seed to help with emergence. Radishes tend to have the ability to break through soil crusting which in turn helps the carrots emerge.

HARVEST

Fresh market carrots are harvested when they are ¾" - 1½" in diameter.

STORAGE

Store carrots at 32 - 34°F and at 98 - 100% humidity. Store clean carrots away from other fruits and vegetables.



BOLERO



ENTERPRISE



GOLD NUGGET



MUSICO



OLYMPUS



RAINBOW BLEND

CARROTS		Hybrid				
▲		Maturity	Size	Type	Interior	Features
19032	Bolero	Early	8"	Nantes	Orange	<i>Bolero is a proven variety year in and year out as a versatile nantes suited for bunching, slicing and baby nantes markets.</i>
19026	Enterprise	Early Main	12 - 14"	Imperator	Dark Orange	<i>A Seminis fresh processing cut and peel or slicing carrot with long, smooth, dark orange roots with a small core. Resists cracking. Strong top with good leaf blight tolerance.</i>
19014	Gold Nugget	Medium Early	7.5 - 8"	Nantes	Yellow	<i>Sweet flavor. Very uniform with high production. Medium vigor. Erected with a strong top and good aptitude for harvesting by top lifting.</i>
19006	Musico	Early	7 - 8"	Nantes	Dark Orange	<i>A uniform, cylindrical root with well-rounded tips at maturity. Strong attachment for harvest by lifting or bunching. Very good internal quality. A good replacement for Primo.</i>
19007	Olympus	Main	7 - 9"	Imperator	Dark Orange	<i>Outstanding for bunching. Great color combined with a smooth finish. Very crisp texture and excellent flavor. Classy hybrid with high yield potential.</i>
19009	Viper	Main	12 - 14"	Imperator / Cut & Peel	Bright Orange	<i>Was bred for higher density plant populations and maintains its long length to maximize yield for two inch pieces. Small, indistinctive core and incredible top strength with good stem attachment for easy harvesting. Combines a great flavor profile and very crisp texture.</i>

CARROTS		OP				
▲		Maturity	Size	Type	Interior	Features
19501	Chantenay Red Cored	Late	6 - 7"	Chantenay	Red / Orange	<i>An old favorite for processing.</i>
19502	Danver's 126	Late	7"	Danvers	Orange	<i>A strain selected for good interior color. A solid yielder even in heavy soils.</i>
19503	Imperator 58	Medium	7 - 9"	Imperator	Orange	<i>A long, fresh use type carrot for lighter soils.</i>
19505	Little Finger	Early	3 - 4"	Baby	Bright Orange	<i>Used for baby carrots.</i>
19506	Rainbow Blend	60	7 - 10"	Imperator	Red, White, Purple and Yellow	<i>Bring color to your CSA with this colorful mixture of four varieties for either baby or large carrots.</i>
19504	Scarlet Nantes	Early	5 - 6"	Nantes	Orange	<i>Fine qualities. May be used for fresh market, processing, or finger carrots.</i>

CARROTS Hybrid		M=1,000 seeds			
Priced per 1,000 seeds in these package sizes		10M	100M	1,000M	5,000M
19032	Bolero	1.41	1.06	1.01	0.98
19026	Enterprise	1.00	0.65	0.60	0.57
19014	Gold Nugget	1.39	1.04	0.99	0.96
19006P	Musico Pelleted	1.42	1.07	1.02	0.99
19007	Olympus	0.91	0.56	0.51	0.48
19009	Viper	0.93	0.58	0.53	0.50

CARROTS OP		Priced per package in these package sizes			
		1 oz.	4 oz.	1#	5#
19501U	Chantenay Red Cored Untreated	4.70	7.50	19.75	19.25
19502U	Danver's 126 Untreated	4.70	7.50	19.75	19.25
19503U	Imperator 58 Untreated	4.85	7.70	20.25	19.75
19505U	Little Finger Untreated	4.90	7.75	20.50	20.00
19506U	Rainbow Blend Untreated	24.50	39.75	103.00	102.50
19504U	Scarlet Nantes Untreated	4.70	7.50	19.75	19.25



TWISTER **NEW** pg. 27

CAULIFLOWER

PLANTING

Cauliflower is best started from transplants for both spring and fall crops. Do not transplant sooner than 2 - 3 weeks before the average frost free date in the spring. Cauliflower is more sensitive to the cold than its cabbage-family relatives. It is important to start cauliflower early enough that it matures before the heat of the summer, but not so early that it will be injured by the cold. Transplant autumn cauliflower and cabbage at the same time. Use starter fertilizer when transplanting. Start the transplants so that they grow actively until transplanting and never cease growth. Space transplants 18 - 24" apart in the row. Use wider spacing for fall plantings.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Cauliflower plants should be kept growing vigorously from the seedling stage through harvest. When the heads begin to form (shows 2 to 3" of white curd at the growing point), it is ready to blanch. Tie the outer leaves together over the center of the plant to protect the head from sunburn, to keep it from turning green and developing an off-flavor. When selecting cauliflower choose varieties that are self wrapping. This will help in the blanching process.

HARVEST

The curd develops rapidly under proper growing conditions. It grows 6 - 8" in diameter and is ready to harvest within 7 - 12 days after blanching begins. The mature heads should be compact, firm, and white. Harvest the heads by cutting the main stem. Leave a few green outer leaves attached to protect the heads. Cut the heads before they become over mature and develop a coarse "ricey" appearance. Once individual florets can be seen, quality deteriorates rapidly.



DEPURPLE



SYNERGY ★



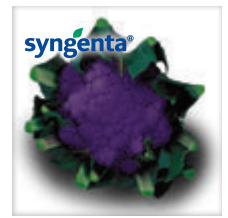
FLAME STAR



SHAKARIS ★



CHEDDAR



GRAFFITI

CAULIFLOWER		Days from Transplant	Head Type	Plant Size	Self Wrapping	Sowing Season	Features
★	20015 Minuteman F1	60	Deep Dome	Medium	Good	Spring	An early and widely adapted hybrid from Seminis that has performed well when harvested in the summer heat and early fall. Superior head quality.
	20001 Snow Crown F1	63	Semi Dome	Medium	Poor	Spring Summer	For spring or fall crops in the Midwest. Good uniformity, consistent performer.
	20005 Candid Charm F1	65	High Dome	Large Semi Erect	Good	Spring Summer	A second early, heavy yielding hybrid for spring sowing.
	20013 DePurple F1	68	Domed	Medium, Erect	Very Good	Spring, Summer	Lavender/pink variety that offers uniform maturity and consistent performance under a variety of environmental conditions. Ideal for the specialty color market.
	20020 Freedom F1	70	Domed	Large	Excellent	Spring Summer	A mid season hybrid from Seminis with more uniformity for harvest.
★	20009 Synergy F1	75 - 80	Domed	Medium	Excellent	Spring	An Enza variety especially suited for summer production. Will give good covering for nice white curds in the heat.
NEW	20003 Twister F1	75 - 80	Domed	Medium	Excellent	Spring, Summer	Twister is a tight, heavy-headed, white cauliflower with good internal wrap. It is mid-maturing with very uniform harvest. Twister seems to prefer heavier ground.
	20014 Flame Star F1	80	Semi Dome	Medium, Erect	Good	Spring, Summer	Beautiful semi-orange variety targeted to the specialty color market. Produces medium-size plant with high yields of smooth, dense, well-shaped heads. Versatile for fresh market or processing markets.
★	20006 Shakaris F1	80 - 85	Domed	Compact	Very Good	Spring Summer	Great for fresh market and processing. Consistent head size with abundant yield potential. Notable white curd.
	20501 Snowball Y Improved	82	Domed	Large	Poor	Spring Fall	Widely adapted, for bedding plants and home garden use.
	20021 Cheddar F1	85 - 90	Domed	Medium	Poor	Summer Only	A Seminis orange cauliflower that holds well in the field. Brighter when lightly cooked. A market attention getter.
	20025 Graffiti F1	85 - 90	Domed	Medium, Erect	Fair	Spring Summer	A unique deep purple hybrid from Syngenta which needs sunlight to obtain full color. Works well raw or steamed - add a small amount of lemon juice when cooking to retain the color.

CAULIFLOWER		M=1,000 seeds				
Priced per package		1 oz.	4 oz.	1#		
20501U	Snowball Y Improved Untreated	5.60	16.50	50.00		
Priced per package		250 Seeds				
Priced per 1,000 seeds in these package sizes		1M	5M	25M	100M	500M*
20005	Candid Charm	13.00	12.35	11.90	11.45	11.35
20021	Cheddar	22.25	68.45	67.45	66.45	65.45
20013	DePurple	23.05	70.90	69.90	68.90	67.90
20014	Flame Star	23.05	70.90	69.90	68.90	67.90
20020	Freedom	11.05	33.85	32.85	31.85	30.85
20025	Graffiti	23.05	70.90	69.90	68.90	67.90
20015	Minuteman	16.20	15.55	15.10	14.65	14.55
20006	Shakaris	18.00	17.35	16.90	16.45	16.35
20001	Snow Crown	12.30	11.65	11.20	10.75	10.65
20009	Synergy	18.40	17.75	17.30	16.85	16.75
20003	Twister	15.45	14.80	14.35	13.90	13.80

* Multiple packages may be used to fill orders for these quantities.

ALL-STARS ★ CAULIFLOWER

Minuteman A very nice, early variety that's perfect for summer harvest.

Synergy handles the heat very well for late summer harvest.

Shakaris is perfect for fall harvest and is also a fantastic self-wrapper.

Jeff Hess
Vegetable Consultant





HUDSON



VICTORIA



FLASH



GEORGIA OR SOUTHERN



TOP BUNCH 2.0



VATES

CELERY						
		Maturity	Color	Plant Height	Stalk Length	Features
21003	Hudson F1	Mid season	Dark Green	26"	14-16"	A tall, compact, high yielding celery with an excellent petiole count. Excellent fusarium tolerance. A popular mid-season variety.
21002	Tall Utah Celery 52-70R Improved	Medium	Medium Green	25"	14"	An improved 52-70, more refined, excellent yield and resists bolting under adverse conditions.
21001	Victoria F1	Early / main season	Medium Green	25"	14"	Tall with fleshy petioles. Quick growing with good standing ability and is slow to bolt in early plantings. Performs well under adverse spring conditions.

COLLARDS		
	Days	Features
22503	Flash F1	A vigorous, fancy, uniform, very slow bolting hybrid that offers growers an earlier Vates type.
22002	Georgia or Southern	A large, blue-green leaf variety very popular in the home garden.
22501	Top Bunch 2.0 F1	Early maturing variety that resembles Top Bunch with wavy, lightly savoyed leaves that regrow quickly after harvest.
22001	Vates	A popular non-heading, slow bolting collard with large blue-green leaves. Frost-resistant greens especially suited to the Mid-Atlantic region.

CELERY			
	M=1,000 seeds		
	1 oz.	4 oz.	1#
21002U Tall Utah Celery Untreated	6.35	18.75	60.00
Priced per 1,000 seeds in these package sizes			
	1M	10M	25M
21003P Hudson Pelleted	6.55	6.10	5.75
21001P Victoria Pelleted	6.55	6.10	5.75

COLLARDS				
	Priced per package		Priced per pound in these package sizes	
	1 oz.	4 oz.	1#	5#
22003 Champion			Crop Failure	
22503 Flash	35.45	101.25	300.00	299.00
22002U Georgia or Southern Untreated		5.25	17.00	16.75
22501 Top Bunch 2.0	36.30	103.65	307.00	306.00
22001 Vates		6.10	20.25	20.00

HIGH TUNNEL & PROTECTED CULTURE INDEX

B	K	P continued	T
Beets	Kale 69	Peppers Yellow	Tomato
Chiongia Guardsmark 15	Kohlrabi 70	Abay89	Cherry
Red Ace 15	M	Dicaprio89	Chocolate Sprinkles 139
Touchstone Gold. 15	Mustard 79	Miscellaneous Sweet.90	Gold Spark 139
C	P	R	Ruby Crush 139
Cabbage	Peppers	Radish 114	Sweet Canary 139
Chinese 23	Bell	S	Fresh Market
Cauliflower 27	Green to Red	Squash Summer Green	BHN-871 137
Collards 28	Sprinter.88	Kopana. 117	Carolina Gold 137
Cucumbers	Other Colors		Laguna Red 137
Protected Culture 55	Milena89		Mountain Spring. 137
G			Roadster 138
Greens. 63			STM2255 138
			Sunbrite 138
			Greenhouse 140
			Home Garden / Bedding
			Big Beef 135
			RuBee Dawn 136

HIGH TUNNEL PRODUCTION

A high tunnel is a naturally heated enclosed structure that is used to grow produce while extending the growing season and controlling agronomic conditions. Also known as “hoop houses”, high tunnels are typically constructed with tubular steel frames covered by plastic, and their use is rapidly gaining popularity across the Midwest and Northeast. High tunnels significantly increase the average daily temperature of the growing environment while protecting crops from wind, rain, snow, hail, insects and diseases.

A primary advantage of high tunnels over other protection systems is that they are large enough to allow crops to be grown to full maturity and allow sufficient space for cultivation, spraying, and harvesting with the tunnels intact. By extending the season, most crops grown within a high tunnel are harvested at least a month earlier or later than field grown crops, which will earn growers a premium in the marketplace.

Which crops are typically grown within a high tunnel?

Any crop where premiums for availability of early or late fresh produce is a good candidate for high tunnel production.

Crops which have an early premium such as tomatoes, peppers, cucumbers or salad greens are particularly suitable, with tomatoes being the #1 crop grown in high tunnels. We recommend choosing crops with a high yield potential and high value per unit in order to recoup your investment.

How many crops can be produced within a high tunnel per year?

At least three cropping cycles are realistic for high tunnels in most climates. Two warm season and one cool season crops within a 12 month period are feasible. With intercropping (the growing of two or more crops simultaneously), the combination of crops is almost infinite.

Planning for your high tunnel

High tunnel production carries with it a modest learning curve for growers experienced with open field production. There are several key factors that should be considered when planning to grow produce in a high tunnel.

Variety Selection

Choosing the right variety for your high tunnel is important. Varieties that perform well in the open field will not necessarily perform the same in a high tunnel.

While some growers have learned how to adapt their cropping practices in order to use open field varieties in high tunnels, going this path will require some trial and error. We have highlighted several varieties in our catalog that have a proven track record in high tunnel production.

Fertility

The proper nutrient program is important since you are dealing with crops that are demanding high input to produce above average yields. If you are planting in soil, take a soil test to see what nutrients need to be added. If you're using soil bags, make sure to keep them flushed so that the salt index does not get too high.

The first priority in your fertility program is to focus on building plant structure and then concentrate on the flowering and fruit production of the plant.

For more information on specific fertility needs we suggest contacting: ISP Technologies Inc. or Miller Chemical and Fertilizer LLC.

ISP Technologies Inc.
Gary Schafer: 785-760-0415
Ray Sawyer: 785-760-0993
www.ruppseeds.com/ISP/Tech



Pruning and Trellising

The training process begins as soon as the plants are planted in the soil medium. Building the structure and correct biomass of the plant is essential for optimal fruit production and disease prevention. This is one of the biggest learning curves when growing in the high tunnels because it depends on crop type and variety.

For example, growers that are growing indeterminate tomatoes will trellis their tomatoes on a one-leader system, whereas determinate varieties are trellised on a two-leader system. Pruning requirements will vary by variety depending on how vigorously that variety's plant grows. Determining the correct bio-mass of the plant for optimal fruit production is an ongoing learning curve. Consult with high tunnel crop advisors, as well as your seed rep, for advice on pruning practices for certain hybrids.

Pollination

A number of vegetable crops require pollinators such as bees to be present in order for pollination to take place and fruit to set. These crops include melons, some cucumbers and squash. If wild bees

are present, they may enter the high tunnel naturally. Planting cover crops such as hairy vetch, dill and alyssum around a high tunnel will help attract pollinators. If bees are not naturally present, many growers either hand-pollinate or purchase pollinators for release in the high tunnel. Contact Koppert Biological at 810-632-8750 or www.ruppseeds.com/KoppertUS if you need to purchase pollinators.



Some cucumber varieties that are targeted for high tunnel and greenhouse production are parthenocarpic, meaning that they will set fruit without pollination, and thus don't require pollinators. All the varieties listed in the cucumber protected culture section are parthenocarpic.

Air Circulation

Circulation is vital to suppress disease. Increased disease pressure comes with stagnant and humid air, which is prevalent in a high tunnel setting. Typically, high tunnels have sides that can be rolled up, but for vertical production, fans should be installed in the upper regions of the structure to provide complete air flow movement.

Pest Management and Scouting

There are certain diseases that should be scouted for on a regular basis such as: grey leaf mold (boytritus), white mold and powdery mildew. In addition, pests such as spider mites, thrips and white flies could also be present and should be included in the scouting plan. Check with your local extension agent or crop protection advisor for products that may help you control any identified disease and pest issues.

High tunnel production is growing and crop practices continue to develop as growers gain experience with production in protected culture environments. The knowledge and experience of our staff is also continuing to develop in this area and we look forward to providing support to our customers and learn from them as we grow together.

Look for this symbol in the product description tables marking items that work well in high tunnel / protected culture use.





OCTANE **NEW** pg. 44

CORN

PLANTING

Plant seeds 8 - 12 inches apart on 30 inch rows to achieve optimum yield. Seed depth should be $\frac{3}{4}$ " - $1\frac{1}{2}$ " depending on soil conditions, and genetic type. Plant when soil temperature is 60° F plus. Planting in blocks will also help increase uniformity in pollination. See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

SEEDING RATE

18,000 - 22,000 seeds per acre or one seed every 8 - 12 inches. To achieve this singulation use a finger or air seed delivery system.

MANAGEMENT

Be sure to read "Managing Insects in Sweet Corn" on page 41. Also take a look at our "Insect Scouting Resources" on page 41. Scout field every 7 days to check for insect, weed, and disease pressure. For identification of weeds, insects, and diseases consult your local extension office or view the Midwest Vegetable Production Guide. www.ruppseeds.com/MVPG

ISOLATION

For all high quality sweet corn varieties, maintaining an isolation is required to protect the high sugar and flavor characteristics of the sweet corn as cross pollination from other types of sweet corn or different types of corn will result in starchy kernels.

SE/Synergistic types and SH2/Improved Super Sweet types should be isolated both from each other and from other types of corn including field corn, popcorn, and ornamental corn.

An isolation can be achieved either by distance or by a difference in maturity. Preferable isolations would require 700 - 1000 feet distance from other corns, or 10 - 14 days between pollination.

RELATIVE MATURITY

Sweet corn maturities are publicized as days to relative maturity. This information comes from supplier data, as well as our trial observations in the Midwest. Prolonged excessive heat or cool temperatures can cause maturity dates to fluctuate to some degree. Monitor your crop through the growing season in order to pick at optimum freshness.

HARVEST

Harvest sweet corn when the end kernels of the ear feel developed. Approximately 21 - 25 days after half silk. Sample sweet corn to ensure quality.

STORAGE

Pre-cool cob temperature to 50°F. After pre-cooling store at 34°F and 95% humidity.

DISEASE CODES

MDM - Maize Dwarf Mosaic
NLB - Northern Leaf Blight
SLB - Southern Leaf Blight

DISEASE RATINGS

R - Resistant
M - Moderate Resistant
MS - Moderately Susceptible
S - Susceptible

USE RECOMMENDATIONS

FM - Fresh Market
HG - Home Garden
P - Processing
S - Shipping

GROWER PREFERRED ALL-STARS ★ CORN

PERFORMANCE SERIES

Anthem XR II (BC SH2 page 32) Enjoy all the benefits of Anthem XR and Anthem II, combined in one hybrid. Brings the best of both worlds; the rust protection offered by Anthem XR, in tandem with Anthem II's Roundup and BT Performance Series traits.

SV9010SA (BC SH2 page 32) is the Performance Series version of EX08767143. It has the same characteristics with the addition of Roundup herbicide resistance and European corn borer, earworm and fall army worm protection. Good variety for machine harvest.

SV9014SB (BC SYN page 32) is a great mid-season corn with good flavor and eating quality, nice husk package and tip cover. Good for roadside and local markets. It also has Roundup herbicide resistance and European corn borer, earworm and fall army worm protection.

ATTRIBUTE PLUS INSECT PROTECTED

Milky Way (WH SYN page 34) A conversion of WH 0809 and Avalon with Attribute Plus traits. This variety has glufosinate herbicide tolerance as well as increased protection to European corn borer, corn earworm, armyworm, and Western bean cutworm.

SH2 / IMPROVED SUPER SWEETS

Anthem XR (BC SH2 page 42) One of our most top performing varieties for its agronomics and eating quality. With its strong rust resistance and moderate resistance against NCLB, Anthem XR performs well in the early season and goes late into the season.

Enchanted (BC SH2 page 44) Strong vigor in the late season and performs well in adverse conditions, especially in drought conditions. Nice tall plant with high ear placement and good eating quality. Good variety for the maturity and late season.

Kickoff XR (BC SH2 page 42) Currently one of the earliest maturing higher eating quality SH2's on the market. Excellent cold soil vigor with agronomics to grow through the cold spring, producing a nice husk package, high yields, ear placement, and great eating quality for that first early market.

Nirvana (BC SH2 page 42) - For those looking for a tender, high eating quality sweetcorn, Nirvana is one that has raised the bar for eating quality for many of our customers. Good vigor with consistent plant type and quality.

Xanadu (BC SH2 page 42) An offshoot of the Nirvana series, retaining exceptional eating quality and consumer appeal while bringing in a stronger plant, higher ear placement and improved disease tolerance.

Xtra Tender 274A (BC SH2 page 42) has proven to be the best cold soil tolerant variety in the SH2 category. With excellent eating quality and flavor, it does well in roadside and local markets.

SH2 / IMPROVED SUPER SWEETS CONTINUED

7401 Imp (WH SH2 page 46) has been a trifecta hit with our growers. With its very tender kernel, high eating quality, strong and healthy plant type, excellent husk package and cover, this variety has had both roadside growers and shippers coming back for more.

Eden RMN (WH SH2 page 46) In trial after trial, it has proven itself to be exceptional on every level.

Glacial (WH SH2 page 46) has taken the white sweetcorn market by storm with its very high eating quality, tenderness, and ear size. Strong plant type and grows well through adverse conditions, producing a consistent plant type and ear size.

Takeoff MXR (Y SH2 page 48) provides incredible eating quality with an excellent husk package. Impressive ear shape and size for early maturity. Strong seedling vigor. Yellow version of Kickoff.

SYNERGISTIC

Allure (BC SYN page 39) is an excellent replacement for Kristine for a mid-season corn. Allure has the full package: good early vigor, nice husk package and excellent flavor.

Cappuccino (BC SYN page 39) a 73 day variety with great cold soil tolerance for first and second harvest. Strong disease package to hold up against NCLB and rust as well as being a good rain gap planting in the mid to late season with later maturing varieties while still holding your markets eating quality.

Montauk (BC SYN page 39) is a proven variety with high yields and excellent flavor. It's a farmer's market favorite for yield and customer satisfaction.

Providence (BC SYN page 40) is our #1 selling bi-color Synergistic. It's the roadside growers choice for consistent sweetness and overall quality.

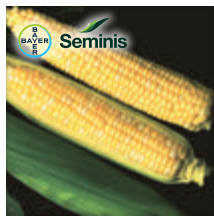
Illusion (WH SYN page 45) is an early season white variety to compare with Whiteout. It has great flavor and eating quality and does well on roadside markets.

Mirage (WH SYN page 45) is the white version of Essence, which makes this one of our highest eating quality white Synergistic sweet corns. Tall, strong, and healthy plant type with good flavor and field holding ability. Excellent, dark green husk package and good husk cover.

Honey Select (Y SYN page 47) is one of the highest eating quality yellow varieties on the market today.



Jeff Werner
Vegetable Consultant



TEMPTATION II



ANTHEM XR II ★



OBSESSION II



PASSION II



SV9010SA ★




DEVOTION II



















SV9012SD



SV9014SB ★



INOCULANT FOR SWEET CORN
 SabrEX™ root inoculant is available for sweet corn. Apply at a rate of .5 oz. per 50 pounds of seed. See page 152 for more information and pricing.

CORN		PERFORMANCE SERIES™										Can be sprayed with Roundup brand agricultural herbicide.
SE		Relative Maturity	Color	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features	
02138	Temptation II  	72	Bi-Color	7 1/2 - 8 x 1.9"	16 - 18	M	R	M	FM	**	Compare to Temptation. Has excellent cold soil tolerance for first or second early plantings.	
SH2												
★ 03132	Anthem XR II  	74	Bi-Color	8 x 1.8"	14 - 18	R			FM, S	****	Enjoy all the benefits of Anthem XR and Anthem II, combined in one hybrid. Brings the best of both worlds; the rust protection offered by Anthem XR, in tandem with Anthem II's Roundup and BT Performance Series traits.	
03080	Obsession II  	80	Bi-Color	8 - 8 1/2 x 1.8"	16 - 20	M	M	M	FM, S	***	Compare to Obsession. Straight SH2 type that eats very similar to many improved supersweets. High-end yields.	
03082	Passion II  	81	Yellow	8 x 1.7"	18 - 20	M	S	S	FM, S	***	Compare to Passion. High quality SH2 with excellent shipping ability. A yellow version of Obsession.	
★ 03084	SV9010SA  	81	Bi-Color	8 x 1.9"	18 - 20	R	M	M	FM, S	***	Compare to 7143. Improved version of Obsession with better rust package and husk package eye appeal.	
03098	Devotion II  	82	White	8 x 1.7"	16 - 18	-	M	-	FM, S	***	Compare to Devotion. White Obsession type.	
03086	SV9012SD  	83	Yellow	8 x 2"	18 - 20	R	S	S	FM, S	**	Compare to 1336. An improved Passion with better tip cover.	
Synergistic												
★ 04026	SV9014SB  	78	Bi-Color	7.8 x 1.9"	18 - 20	R	M	M	FM	****	Maintains the same great taste and eating quality of other high quality synergistic varieties.	

Performance Series™ sweet corn varieties are the only fresh market sweet corn products featuring the unique weed control benefits of Roundup WeatherMAX® and Roundup PowerMAX® agricultural herbicides. Be sure to read the label and confirm that the chemical you are spraying is 100% glyphosate with no other active ingredients.



EATING QUALITY RATING
 Rupp Seeds 5 Star rating system is used to help growers differentiate sweetcorn varieties within each genetic class for eating quality based on sweetness, tenderness and corn flavor. These ratings are an average of our sampling scores that are compiled from multiple locations across various growing regions.



Seminis® Performance Series™ sweet corn hybrids; another innovation that performs all season long.

Growing sweet corn might be something your family has done for generations. Or maybe it's the beginning of a new tradition. Either way, when you plant Seminis® Performance Series® sweet corn, you and your family will enjoy a great-tasting ear that you can eat fresh from the field. Performance Series® sweet corn contains the same great Roundup Ready® technology and protection from select above- and below-ground insect pests that row crop farmers are already familiar with.

Key Management Practices to Maximize Quality and Yield

- Scouting for Corn Earworm should begin prior to first silk & continue through harvest
- Use traps to monitor & count adult moths in the area
- Spray programs will be needed to maximize marketable yield

Additional information can be found in Bayer's Technology Use Guide found at the following link: www.ruppseeds.com/BayerTUG

Note: Performance Series sweet corn packages cannot be repackaged or resold. Customers need to be licensed and must be the operator/grower for all fields where the seed will be planted. Not available for purchase or use in certain counties of Oregon and Idaho.

Documents Required:



In order to purchase Performance Series sweet corn, you must have a valid Bayer Technology License. If you are licensed, please include your license number on the order form in the space provided.

If you are not licensed you may visit www.ruppseeds.com/Agcelerate or call 1-800-768-6387 ext. 3 to register or we can mail you a 2022 Bayer Technology/Stewardship Agreement to fill out prior to us shipping your seed. Allow 3 - 4 weeks for mailed application to be processed.

CORN PERFORMANCE SERIES™

M=1,000 seeds

Priced per 1,000 seeds
in these package sizes

25M 100M

SE		25M	100M
02138	Temptation II <small>Cruiser</small>	13.93	13.93
SH2			
03132	Anthem XR II <small>Cruiser</small>	15.81	15.81
03098	Devotion II <small>Cruiser</small>	15.30	15.30
03080	Obsession II <small>Cruiser</small>	15.96	15.96
03082	Passion II <small>Cruiser</small>	15.65	15.65
03084	SV9010SA <small>Cruiser</small>	15.97	15.97
03086	SV9012SD <small>Cruiser</small>	15.43	15.43
Synergistic			
04026	SV9014SB <small>Cruiser</small>	14.33	14.33



Cruiser® seed treatment insecticide guards against a broad spectrum of early season sucking and chewing insect pests in beans and sweet corn. By protecting the crop from the start, growers can improve stand establishment, enhance plant vigor and increase yield potential. <http://www.syngenta-us.com/crop-protection/seed-treatment/products>



Cruiser® treated items are highlighted in purple in the price tables.

Look for this symbol in the product description tables marking Cruiser treated items.

INSECT RESISTANCE // HERBICIDE TOLERANCE

	Seminis Performance Series™	Syngenta Attribute® I	Syngenta Attribute® Plus	Syngenta Attribute® II
Key Sweet Corn Pest				
European Corn Borer	E	E	E	E
Corn Earworm	VG*	F-G*	E*	E*
Fall Armyworm	E	G	E	E
Black Cutworm			VG	VG
Additional Above-Ground Pests				
Southwestern Corn Borer	x		x	x
Sugarcane Corn Borer	x		x	x
Common Stalk Corn Borer	x		x	x
Southern Cornstalk Corn Borer	x		x	x
Beet Armyworm			x	x
Dingy Cutworm			x	x
Western Bean Cutworm			x	x
Additional Below-Ground Pests				
Western Corn Rootworm	x			
Northern Corn Rootworm	x			
Mexican Rootworm	x			
Protein	Cry1A.105, Cry2Ab	Cry1Ab	Vip3A, Cry1Ab	Vip3A, Cry1Ab
Herbicide Tolerance	Glyphosate	Glufosinate	Glufosinate	Glufosinate

* Depending on ear worm population [flight counts] additional scouting and spraying may be needed. Learn more by reading "Managing Insects in Sweet Corn" on page 41.

Key: E= excellent, VG= very good, F-G= fair to good, G= good



BSS 0977



WH 0809



BC 0528



BC 0805



Patriarch



BSS 0761

CORN **ATTRIBUTE®** Insect Protection Can be sprayed with glufosinate herbicide.

		Relative Maturity	Color	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
<i>SH2</i>											
03137	BSS 0977	78	Bi-color	8 x 1.8"	14 - 16	R	M	M	S	**	<i>A mid-season fresh market shipper. Has an attractive ear with excellent tip fill, plus disease and ear worm control.</i>
<i>Synergistic</i>											
04018	WH 0809	80	White	8 1/2 x 1.9"	16	R	M	S	FM	***	<i>A white Triplesweet from Syngenta with good eating quality and disease protection. Avalon BT.</i>
04207	BC 0528	81	Bi-color	8 1/4 x 1.9"	16 - 18	-	-	-	FM, HG	****	<i>Bt version of Primus.</i>
04019	BC 0805	82	Bi-color	8 x 1.9"	16 - 18	R	S	S	FM	***	<i>A rust resistant, Bt version of Providence.</i>

Attribute® varieties are resistant to Liberty herbicides. They may be sprayed with conventional corn herbicides as well as Liberty (glufosinate) herbicides. Be sure to read the label and confirm that the chemical you are spraying is 100% glufosinate with no other active ingredients.

CORN **ATTRIBUTE® PLUS** Insect Protection Can be sprayed with glufosinate herbicide.

<i>SH2</i>											
03108	Patriarch	79	Bi-color	8 x 2"	16	R	-	-	FM, S	****	<i>Augmented supersweet variety with excellent adaptability. Possesses girthy ear with great tip fill. Robust Attribute Plus package.</i>
03101	BSS 0761	80	Bi-color	8 x 1.8"	16 - 18	-	-	-	FM, S	****	<i>Offers exceptional eating quality and is ideal for the high end shipper and local markets. Has built-in insect protection and tolerance to Liberty herbicide through the Attribute trait stack.</i>
<i>Synergistic</i>											
★ 04042	Milky Way	82	White	8 1/4 x 1.8"	16	R	-	-	FM, HG	***	<i>The next generation of market-leading TripleSweet varieties. Offers improved insect resistance and tolerance to Liberty herbicide through the Attribute Plus trait stack.</i>

Attribute® varieties are resistant to Liberty herbicides. They may be sprayed with conventional corn herbicides as well as Liberty (glufosinate) herbicides. Be sure to read the label and confirm that the chemical you are spraying is 100% glufosinate with no other active ingredients.

CORN **ATTRIBUTE® II** Insect Protection Can be sprayed with glufosinate and/or glyphosate herbicides.

<i>Synergistic</i>											
04055	Quick Trip	72	Bi-color	7.5 x 1.8"	14 - 16	-	-	-	FM	***	<i>A bi-color, TripleSweet type, Quick Trip boasts a dark green husk with nice flags. Maximum recommended planting population 20,000 per acre.</i>
04034	Aspire	80	Yellow	8 1/2 x 1.8"	14 - 16	R	-	-	FM, HG	***	<i>Crop Failure for 2022 Offers similar characteristics to GH 0851 with improved insect resistance through the Attribute II trait stack. This trait also provides tolerance to Liberty and Touchdown herbicides for added flexibility in weed management programs.</i>
04051	Pursuit										DISCONTINUED
04043	Remedy	82	Bi-color	8 1/2 x 1.9"	16	R	-	-	FM, HG	***	<i>Remedy is a BC 0805 type with improved insect resistance through the Attribute II trait stack, providing built-in control of key pests. This product is tolerant to glyphosate and glufosinate herbicides approved for application over the top of Attribute® II Sweet Corn.</i>

Agreement Needed: Under certain stress conditions, Remedy sweet corn may exhibit tassels and/or glumes growing out of the ear. An additional agreement needs to be signed for this variety. See page 172.

Attribute II® varieties may be sprayed with conventional corn herbicides or either Liberty (glufosinate) herbicides and glyphosate herbicides. Be sure to read the label and confirm that the chemical you are spraying is 100% glufosinate or 100% glyphosate with no other active ingredients.



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MILKY WAY★



QUICK TRIP



ASPIRE



REMEDY

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www.facebook.com/
ruppseedsinc/



syngenta[®]

Attribute[®]
Insect protection

Attribute[®] Plus
Trait stacks

Attribute II[®]
Insect protection

High Quality, Picture Perfect Ears

Attribute[®], Attribute Plus and Attribute II trait stacks from Syngenta are a viable crop strategy for sweet corn growers throughout the country. Commercially grown since 1998, Attribute sweet corn seeds provide a high level of above-ground protection against European corn borers and corn earworms throughout the growing season. With Attribute sweet corn, growers have another option for harvesting outstanding yields of high-quality sweet corn that meets market needs. When managed in accordance with the recommendations outlined in the stewardship agreement, Attribute sweet corn can be a valuable addition to your crop management strategy for many years to come.

Attribute Plus sweet corn seeds further extends the high-yielding potential for sweet corn growers with added Vip3A. This additional trait features greater spectrum of insect control providing a high level of above-ground protection against European corn borers and corn earworms. In addition to improved insect control, Attribute Plus also features tolerance to glufosinate herbicide for added field advantage.

The introduced Attribute II trait stack continues the Syngenta tradition of providing high performance traits to sweet corn growers, and now it has the added power of Vip3A – a unique mode of action proprietary to Syngenta. The combination of Vip3A with Cry1Ab, the protein found in Attribute sweet corn varieties, offers excellent control of key yield-robbing insects including European corn borer, corn earworm and fall armyworm and Western bean cutworm. Attribute II[®] varieties may be sprayed with conventional corn herbicides or either Liberty (glufosinate) herbicides and glyphosate herbicides.

Additional information on the Attribute products can be found at the following link: www.ruppseeds.com/Attribute

Attribute[®] is a registered trademark of a Syngenta Group Company. LibertyLink[®], Liberty[®] and the Water Droplet logo are registered trademarks of Bayer.

Documents Required:



If you purchase Attribute sweet corn, you are required by the EPA to fill out and sign a Stewardship Agreement for your farm. If you already have an Attribute license, please include your license number on your order form in the space provided.

The Attribute Grower Stewardship Agreement can be found on page 171. You may also obtain your Attribute license by visiting www.ruppseeds.com/Agcelerate or call 1-800-768-6387 ext. 3 to register.

CORN ATTRIBUTE [®] Insect Protection		M=1,000 seeds	
Priced per 1,000 seeds in these package sizes		25M	100M
SH2			
03137	BSS 0977 Bi-Color Cruiser	12.32	12.32
Synergistic			
04207	BC 0528 Bi-Color Cruiser	12.05	12.05
04019	BC 0805 Bi-Color Cruiser	11.60	11.60
04018	WH 0809 White Cruiser	11.49	11.49

CORN ATTRIBUTE II [®] Insect Protection		M=1,000 seeds	
Priced per 1,000 seeds in these package sizes		25M	100M
Synergistic			
04034	Aspire Yellow Cruiser		Crop Failure
04051	Pursuit Bi-Color		DISCONTINUED
04055	Quick Trip Bi-Color Cruiser	15.59	15.59
04043	Remedy Bi-Color Cruiser	15.56	15.56

CORN ATTRIBUTE PLUS [®] Insect Protection		M=1,000 seeds	
Priced per 1,000 seeds in these package sizes		25M	100M
SH2			
03101	BSS 0761 Bi-Color Cruiser	14.11	14.11
03108	Patriarch Bi-Color Cruiser	15.69	15.69
Synergistic			
04042	Milky Way White Cruiser	15.46	15.46



Cruiser[®] seed treatment insecticide guards against a broad spectrum of early season sucking and chewing insect pests in beans and sweet corn. By protecting the crop from the start, growers can improve stand establishment, enhance plant vigor and increase yield potential. www.ruppseeds.com/Cruiser



Cruiser[®] treated items are highlighted in purple in the price tables. Look for this symbol in the product description tables marking Cruiser treated items.

Sweet Corn Genetic Types

Sweet corn is one of the most popular vegetables grown in the United States. Sweet corn hybrids, like many vegetable varieties, have seen improvements that enhance eating quality in the areas of sugar content, flavor, tenderness and appearance. Commercial growers also experience benefits of these improved hybrids with higher yields, disease resistance, better plant structure, insect and herbicide resistance, etc.

Producing and preserving the eating quality potential of the hybrids is a key factor for the grower's success in his market. Knowing the genetic type of each hybrid is essential as the grower prepares a cropping plan. Each genetic type has some risks of cross pollination with other types, which can negatively impact eating quality in the crop produced. Maintaining an isolation between types or selecting hybrids within compatible genetic type groups will ensure that the eating quality of each hybrid has been preserved.

Our 2022 Vegetable Resource Guide includes over 100 sweet corn hybrids in the 6 genetic types shown here. Several of these types are related, so from a variety selection and crop planning perspective, we view them as 3 genetic type groups. Each group has slightly different recommendations for the other types they need to be isolated from. Please see the genetic type groups to the right for more information on the characteristics of each group and its isolation requirements.

ISOLATION

For all **high quality** sweet corn varieties, maintaining an isolation is required to protect the high sugar and flavor characteristics of the sweet corn as cross pollination from other types of sweet corn or different types of corn will result in starchy kernels.

SE/Synergistic types and SH2/Improved Super Sweet types should always be isolated both from each other and from other types of corn including field corn, popcorn, and ornamental corn.

An isolation can be achieved either by distance or by a difference in maturity. Preferable isolations would require 700 – 1000 feet distance from other corns, or 10 – 14 days between pollination.

Helping growers produce the best sweet corn for their markets has been a priority for us since we started in the vegetable business. These graphics are from a "Designer Genes" brochure we published in the early 1980s.



SU NORMAL

- Traditional sweet corn genotype (SU gene)
- Exceptional seed vigor and germination
- Strong, old fashion corn flavor
- One day window where sugars are at their peak before converting to starch

For best flavor, isolate from SH2 and Improved Super Sweet types and dent corn, popcorn, and ornamental corn.

SE

- Sugary enhancer (SE) gene
- Sweetness, flavor, and texture are improved over SU types
- Three day window where sugars are at their peak before converting to starch
- Typically used for freezing

SYNERGISTIC

- Tender kernels with higher sugars than SE
- Long shelf life than SE
- Approximately five days from when sugars are at their peak before converting to starch
- Great for local and roadside markets seeking the balance between that old fashion flavor and the high sugar corns.

For best flavor, isolate from SU, SH2, and Improved Super Sweet types and also dent corn, popcorn, and ornamental corn.

SH2

SH2 EXTRA SWEET

- Shrunken (SH2) gene raises the sugar levels and field holding ability.
- Increased shelf life improves ease of distribution
- Harder kernel gives a snap bite
- Less damage during harvest
- Ten day window where sugars are at their peak before converting to starch
- Needs warmer soils (65° F or higher) for germination

IMPROVED SUPER SWEETS

- A perfect blend of tender SE type kernel with the high sugar flavors of SH2
- Ten day window where sugars are at their peak before converting to starch
- Needs warmer soils (65° F or higher) for germination

For best eating quality, isolate from SU, SE, and Synergistic types as well as dent corn, popcorn, and ornamental corn.

EATING QUALITY RATING

Rupp Seeds 5 Star rating system is used to help growers differentiate sweetcorn varieties within each genetic class for eating quality based on sweetness, tenderness and corn flavor. These ratings are an average of our sampling scores that are compiled from multiple locations across various growing regions.

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SWEET CORN INDEX

BI-COLOR	Relative Maturity	Genetic Type	Page #
Vitality	65	Synergistic	39
Catalyst XR	66	Improved Super Sweets	42
Fastlane	67	SE	38
Latte	68	Synergistic	39
Kickoff XR	69	Improved Super Sweets	42
Solstice	70	Improved Super Sweets	42
Tempress	70	Synergistic	39
Hero XR	71	Improved Super Sweets	42
Ignition	72	Improved Super Sweets	42
Profit	72	Synergistic	39
Quick Trip	72	Synergistic	34
Signature XR	72	Improved Super Sweets	42
Temptation	72	SE	38
Temptation II	72	SE	32
Xtra Tender 2472 XR	72	Improved Super Sweets	42
Anthem XR	73	Improved Super Sweets	42
Cappuccino	73	Synergistic	39
Xtra Tender 20173	73	Improved Super Sweets	42
Anthem XR II	74	SH2	32
Xtra Tender 274A	74	Improved Super Sweets	42
Xanadu	74 - 75	Improved Super Sweets	42
Allure	75	Synergistic	39
Ambrosia	75	SE	38
Butter & Sugar	75	SU Normal	38
Caliber XR	75	Improved Super Sweets	42
Luscious	75	SE	38
Nirvana	75	Improved Super Sweets	42
Nectar	76	Synergistic	39
Tempo XR	76	Improved Super Sweets	43
American Dream	77	Improved Super Sweets	43
Cumberland	77	Improved Super Sweets	43
ACes	78	Improved Super Sweets	44
AP358	78	Improved Super Sweets	44
BSS 0977	78	SH2	34
Cadence XR	78	Improved Super Sweets	44
Crave	78	Improved Super Sweets	44
Essence	78	Synergistic	39
Octane	78	Improved Super Sweets	44
SV9014SB	78	Synergistic	32
Enchanted	79	Improved Super Sweets	44
Montauk	79	Synergistic	39
Obsession	79	SH2	44
Patriarch	79	SH2	34
7143 <small>EX08767143</small>	80	SH2	44
BSS 0761	80	SH2	34
Obsession II	80	SH2	32
Precious Gem	80	SE	38
BC 0528	81	Synergistic	34
Primus	81	Synergistic	39
SV9010SA	81	SH2	32
BC 0805	82	Synergistic	34
Jackpot	82	SE	38
Providence	82	Synergistic	40
Remedy	82	Synergistic	34
Serendipity	82	Synergistic	40

BI-COLOR	Relative Maturity	Genetic Type	Page #
Peaches & Cream EH	83	SE	38
Cameo	84	Synergistic	40
Delectable	84	SE	38
Honey & Cream	84	SU Normal	38

WHITE	Relative Maturity	Genetic Type	Page #
Leadoff MXR	69	Improved Super Sweets	46
Illusion	72	Synergistic	45
Freedom MXR	73	Improved Super Sweets	46
Whiteout	73	SE	45
Eden RMN	74	Improved Super Sweets	46
7401 Imp	75	Improved Super Sweets	46
Glacial	76	Improved Super Sweets	46
Mirage	78	Synergistic	45
SV1580SC	79	SH2	46
Mattapoisett	80	Synergistic	45
WH 0809	80	Synergistic	34
Avalon	82	Synergistic	45
Devotion II	82	SH2	32
Milky Way	82	Synergistic	34
Silver King	82	SE	45
Silver Queen	88	SU Normal	44

YELLOW	Relative Maturity	Genetic Type	Page #
Early Sunglow	62	SU Normal	46
Café	68	Synergistic	47
Takeoff MXR	69	Improved Super Sweets	48
Icon XR	72	Improved Super Sweets	48
Xtra Tender 1572	72	Improved Super Sweets	48
Inferno	74	Synergistic	47
Bodacious RM	75	SE	47
Gold Nuggets	75	SE	47
SS7403RY	75	Improved Super Sweets	48
Honey Select	79	Synergistic	47
Aspire	80	Synergistic	34
Kandy Korn EH	81	SE	47
Passion II	81	SH2	32
SC1336	81	SH2	48
SV9012SD	83	SH2	32
NK 199	84	SU Normal	46
Illini Xtra Sweet	85	SH2	48
Incredible R/M	85	SE	47
lochief	87	SU Normal	46



FASTLANE



TEMPTATION



LUSCIOUS TSW



PRECIOUS GEM



VITALITY




LATTE

CORN		BI-COLOR SU Normal					
		Relative Maturity	Ear Size length x diameter	Kernel Rows	Use	Eating Quality	Features
01102	Butter & Sugar	75	7 x 1.8"	14	HG	*	Home garden.
01103	Honey & Cream	84	7 x 1.7"	12 - 14	HG	*	Mid-season, home garden.





CORN BI-COLOR SU Normal		M=1,000 seeds				
Priced per pound in these package sizes		1#	5#	25#	50#	100#*
01102	Butter & Sugar	11.25	10.00	9.65	9.25	8.95
01103	Honey & Cream	11.80	10.55	10.20	9.80	9.50

* Multiple packages may be used to fill orders for these quantities.



INOCULANT FOR SWEET CORN

SabrEX™ root inoculant is available for sweet corn. Apply at a rate of .5 oz. per 50 pounds of seed. See page 152 for more information and pricing.

CORN		BI-COLOR SE									
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
02189	Fastlane 	67	14"	7 x 1.7"	14 - 16	M	S	S	FM, HG	**	A first early variety with good cold soil vigor, very attractive ear.
02137	Temptation 	72	18"	8 x 1.8"	16	S	S	S	FM	**	A Seminis product for the first early slot. Has excellent cold soil emergence.
02126	Ambrosia	75	20"	8 x 2"	16	S	R	M	FM, HG	***	A bi-color version of Bodacious with good vigor.
02178	Luscious 	75	15"	8 x 1.9"	16 - 18	M	M	M	FM, HG	***	A hybrid that produces an attractive blunt ear on an excellent plant package.
02144	Precious Gem 	80	20"	8 ½ x 2"	16 - 18	M	M	M	FM, HG	**	A tender, tasty hybrid with good ear appearance. An easy snapper with good disease tolerance.
02150	Jackpot	82	20"	8 ½ x 1.9"	16 - 18	R	M	M	FM, HG	**	A proven hybrid with good disease resistance and tip fill.
02109	Peaches & Cream EH	83	26"	8 x 1.8"	16 - 18	S	S	M	HG	**	A popular home garden hybrid.
02132	Delectable	84	26"	9 x 2.1"	18	M	M	M	FM, HG	****	Bi-color version of Incredible. Large ear, dark green husk.

CORN BI-COLOR SE		M=1,000 seeds				
Priced per pound in these package sizes		1#	5#	25#	50#	100#*
02126	Ambrosia	15.75	14.50	14.15	13.75	13.45
02132	Delectable	15.70	14.45	14.10	13.70	13.40
02150	Jackpot	14.90	13.65	13.30	12.90	12.60
02109	Peaches & Cream EH	13.20	11.95	11.60	11.20	10.90

CORN BI-COLOR SE		M=1,000 seeds				
Priced per 1,000 seeds in these package sizes		2.5M	10M	25M	100M	500M*
02167	Accord <small>Cruiser</small>	8.60	7.95	7.55	7.10	
02189	Fastlane <small>Cruiser</small>	9.20	8.55	8.15	7.70	7.60
02178	Luscious <small>Cruiser</small>	6.50	5.85	5.45	5.00	4.90
02144	Precious Gem <small>Cruiser</small>	7.30	6.65	6.25	5.80	5.70
02137	Temptation <small>Cruiser</small>	8.70	8.05	7.65	7.20	7.10

* Multiple packages may be used to fill orders for these quantities.

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TEMPTRESS



PROFIT



CAPPUCCINO



ALLURE



NECTAR



ESSENCE



MONTAUK



PRIMUS

**ORDERS
OVER \$250
ARE SHIPPED
FREE!**

EATING QUALITY RATING

Rupp Seeds 5 Star rating system is used to help growers differentiate sweetcorn varieties within each genetic class for eating quality based on sweetness, tenderness and corn flavor. These ratings are an average of our sampling scores that are compiled from multiple locations across various growing regions.

CORN		BI-COLOR Synergistic									Pricing on page 40	
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features	
04204	Vitality	65	18"	7 x 1.6"	14	S	M	S	FM	****	A Seminis hybrid with excellent plant and ear qualities, plus vigor to be a very good first early variety.	
04032	Latte	68	20"	7 1/2 - 8 x 1.7"	12 - 16	-	-	-	FM	**	First early variety with excellent ear length in this class. Very good eating corn with a dark green husk package.	
04049	Tempress	70	16"	7 3/4 x 2"	14 - 16	R	-	M	FM, HG	****	First "Quad Sweet" variety in our sweet corn lineup. Has an attractive ear with an eye-catching husk package. Moderately good cool soil emergence.	
04214	Profit	72	22"	8 x 1.8"	14	M	M	M	FM, HG	***	Proved itself in recent multiple locations as one of the year's favorites. Very large ears with attractive flags, good husk cover and tip fill. Great eating quality.	
04044	Cappuccino	73	17"	7 1/2 - 8 x 1.9"	16	M	M	M	FM, HG	***	Superb eating quality. Plant mid to late season or for rain gap filler. Excellent disease package.	
04009	Allure	75	25"	8 x 1.8"	16	R	R	R	FM, HG	****	A Seneca Vegetable Research hybrid with good early vigor. Nice husk package with great eating quality and flavor.	
04052	Nectar	76	18"	8 1/4 x 1.9"	14 - 16	-	-	MR	FM, HG	*****	Very good eating quality. Excellent ear size for roadside markets. High quality package includes dark husk color and flags. Stalk has solid standability.	
04039	Essence	78	18"	8 x 1.8"	16 - 18	M	M	M	FM	****	Excellent eating quality. High row count for a refined kernel. Compare to Providence with a few days earlier maturity.	
04021	Montauk	79	18"	8 x 1.8"	16 - 20	S	M	M	FM	****	A widely adapted hybrid with good vigor, high yields and excellent flavor.	
04210	Primus	81	18"	8 x 2"	14 - 16	M	M	S	FM	*****	A proven TripleSweet PLUS variety from Syngenta with approximately 15% higher sugar than Providence. Performs well under plastic and in late plantings.	

Additional Bi-Color Synergistic corn can be found on the next page -->.

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PROVIDENCE ★



SERENDIPITY



CAMEO



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

CORN		BI-COLOR Synergistic								Pricing on page 40	
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
★	04014 Providence	82	18"	8 1/2 x 1.9"	16 - 18	R	S	S	FM	****	A rust resistant version of Serendipity with excellent eating quality.
	04013 Serendipity	82	18"	8 x 1.9"	16 - 18	S	S	S	FM, HG	****	A variety with an added supersweet kick for extended shelf life and higher eating quality.
	04029 Cameo	84	18"	9 x 2.1"	18	M	M	M	FM	***	A synergistic version of Delectable with a tremendous boost in eating quality.

CORN BI-COLOR Synergistic		M=1,000 seeds				
Priced per 1,000 seeds in these package sizes		2.5M	10M	25M	100M	500M*
04009	Allure Cruiser	10.70	10.00	9.60	9.15	9.05
04029	Cameo Cruiser	9.70	9.00	8.60	8.15	8.05
04044	Cappuccino Cruiser	10.65	9.95	9.55	9.10	9.00
04039	Essence Cruiser	10.85	10.15	9.75	9.30	9.20
04032	Latte Cruiser	10.95	10.25	9.85	9.40	9.30
04021	Montauk Cruiser	11.40	10.70	10.30	9.85	9.75
04052	Nectar Cruiser	10.90	10.20	9.80	9.35	9.25
04210	Primus Cruiser	10.50	9.80	9.40	8.95	8.85
04214	Profit Cruiser	9.35	8.65	8.25	7.80	7.70
04014	Providence Cruiser	8.40	7.70	7.30	6.85	6.75
04013	Serendipity Cruiser	7.70	7.00	6.60	6.15	6.05
04049	Tempress Cruiser	10.15	9.45	9.05	8.60	8.50
04204	Vitality Cruiser	9.05	8.35	7.95	7.50	7.40

* Multiple packages may be used to fill orders for these quantities.

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MANAGING INSECTS IN SWEET CORN

Everyone enjoys insect free corn. Corn earworm is potentially the greatest threat to sweet corn production for our customers. 2021 once again proved challenging with high insect counts. We also heard from growers that pyrethroid insecticides such as Warrior and Mustang Max didn't provide the control they needed with corn earworm this past season, while Coragen, Lannate, and/or Radiant seemed to provide better control.

We have put together several "Insect Scouting Resources" on page 41 to help monitor and combat this profit robbing insect. As well as other Lepidoptera that can cause severe damage to sweet corn such as: European corn borer, fall army worm and Western bean cut worm.

MONITORING EUROPEAN CORN BORER AND CORN EARWORM

One of the keys to successfully managing European corn borers and corn earworms on sweet corn is to determine when the insects are active. European corn borers can be monitored effectively with blacklight traps and field observations, and corn earworms can be monitored with pheromone traps. When moths are being caught in the traps, it means they are laying eggs.

Corn borer eggs are laid on leaves, usually on the undersides, in the region of the ear. Larvae feed on the leaves and later may migrate to the ears (if present).

Corn earworm moths lay their eggs directly on green silks. The larvae that hatch from those eggs will follow the silks down into the tips of the ears.

Because these two insects' egg laying behavior differ, control strategies also differ. Corn borers can be controlled by spraying during the late whorl, tasselling, and silking stages. The migrating larvae should contact a lethal dose of insecticide while moving to the ear zone. Corn earworms must be controlled by directing sprays at the silks so larvae will immediately contact the insecticide after hatching.

For corn borers, treat during the late whorl stage if 20 percent or more of the plants show larval feeding. The presence of large numbers of moths in light traps also justifies treatment. One

application during the late whorl stage, followed by additional treatments every five days up until seven days of harvest, usually provides adequate control.

For corn earworms, treatment is justified if fresh green silks are present and moths are being caught in pheromone traps. In general, the higher the moth catches, the shorter the interval between sprays. If fewer than five moths are being caught per night, a five-day spray interval should be adequate. As moth catches approach 50 to 100 per night, a two- to three-day spray interval would be more appropriate. Determining the spray interval exactly depends on many factors, including how much damage you can tolerate, the crop's value, and the cost and effectiveness of the insecticide. Stop treating for corn earworms when 90 percent of the silks are brown.

Obviously, growers should not treat separately for these two pests. Some of the insecticides recommended here are effective against both species. Choose insecticides that are more effective against the particular pest that is most prevalent at the time of application. If both pests are present, choose an insecticide that will adequately control both.

INSECT PROTECTED VARIETIES

Insect protected sweet corn varieties such as Syngenta's Attribute, Attribute Plus, and Attribute II Insect Protected corn and the Performance Series from Seminis should be considered as they will allow the grower to decrease the number of sprays that need to be applied. While these products have a built in resistance to some insects, they do not eliminate the need for insect scouting and occasional spraying. Using these varieties in combination with a reduced spray program will lead to great results. The extra investment in seed cost pays off in reduced spray and fuel costs as well as less time in the fields, making insect protected varieties an interesting alternative.

Wire traps and lures are available from several sources. A quick search on-line will guide you to many retailers including Gempler's.

INSECT SCOUTING RESOURCES

www.ruppseeds.com/InsectForecast

Learn more about current corn insect pressure.



www.ruppseeds.com/PestWatch

Pest Watch is a great resource to track insect movements nationwide. They also have a complete library of fact sheets about all of the different pest found in vegetable production.



www.ruppseeds.com/NYSweetCorn

This is a link to the NY Sweet Corn Trap Network Report. It also contains a mountain of information on best management practices for sweet corn growers. They also have several fact sheets on individual pest as well as videos on how to set up and maintain your own Trap and Monitoring system.



SWEET CORN PRODUCTION RESOURCES

www.ruppseeds.com/SCPestID

This is a resource from the Great Lakes Vegetable Working Group in addition to some of the leading researchers in the vegetable industry. It helps identify profit taking weeds and insects, and discusses best management practices for sweet corn.



www.ruppseeds.com/UMassSC

This page from the University of Massachusetts offers information about multiple sweet corn pests and diseases.



www.ruppseeds.com/uoiScout

Developed by Rick Weinzierl this link goes into discussing the difference between traps and economics of scouting.





CATALYST XR



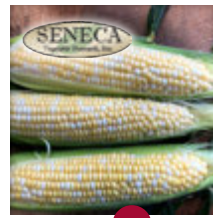
KICKOFF XR ★



SOLSTICE



HERO XR



IGNITION **NEW**



SIGNATURE XR

CORN

BI-COLOR SH2 Extra Sweet & Improved Super Sweets

Pricing on page 43

		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
03117	Catalyst XR	66	27"	7.5-8.25 x 1.6-1.8"	16-18	R	-	-	FM, S	**	Catalyst XR is the earliest supersweet on the market. Has admirable ear size, strong tip fill, as well as outstanding kernel color and sweetness. Perfect for early fresh market and shipping. Tolerant to HPPD/ALS.
★ 03038	Kickoff XR	69	28"	8 ¼ x 1.9"	16-18	M	-	MS	FM, S	****	Impeccable eating quality for early in the season. Very good white to yellow kernel contrast. Strong tip fill. Tolerant to HPPD/ALS.
03109	Solstice	70	20"	7.5 x 1.8"	16	-	-	M	FM	*****	Solstice is an early 70 day maturity. Has strong emergence, good ear size, a strong husk covered tip and exceptional tip fill. A quick snap for ease in picking and a short shank for packaging.
03037	Hero XR	71	23"	7 ¾ x 1.8"	14-16	R	-	MS	S	**	Excellent early variety with great husk protection. Kernels fill beautifully to form a very attractive ear early in the season. Tolerant to HPPD/ALS.
NEW 03233	Ignition	72	23"	8" x 1.8"	16-18	IR	IR	IR	FM, HG	****	Ignition is a new 72 day bi-color with strong cold soil emergence, a tender bite and consistent high yield potential with a high quality ear.
03215	Signature XR	72	27"	7.5-8.25 x 1.85-1.95"	16-18	R	-	-	FM	*****	Signature XR has phenomenal eating quality, an attractive husk, excellent holding ability in the field, strong husk cover, and great ear size make Signature XR the choice for quality driven fresh markets. Tolerant to HPPD/ALS.
03013	Xtra Tender 2472 XR	72	24"	8 ½ x 1.6"	14-16	R	S	S	FM, S	****	Rust resistant version of Xtra Tender 2170.
★ 03003	Anthem XR	73	24"	8 x 1.8"	16-20	R	M	M	FM, S	****	Excellent yield potential and better than average lodging tolerance. Superb eating quality. Great all season long.
03173	Xtra Tender 20173	73	24"	7 ½ x 2"	16	R	M	MS	FM	*****	Rust resistant version of Xtra Tender 2573. Tolerant to HPPD/ALS.
★ 03119	Xanadu	74-75	25"	8 x 1.75-2"	16-18	-	-	R	FM, HG	*****	Xanadu, being part of the Nirvana series, incorporates a stronger plant, higher ear placement and improved disease resistance while maintaining exceptional eating quality and consumer appeal.
★ 03174	Xtra Tender 274A	74	23"	8 x 2"	18-20	S	M	S	FM, HG	****	An IFSI bi-color hybrid with excellent cold soil vigor and fantastic eating quality. Has medium long husk protection. Tolerant to HPPD/ALS.
03091	Caliber XR	75	21"	8 ¼ x 1.8"	16-18	M	-	MS	FM	***	Superb eating quality with refined kernels for excellent texture. Plants are healthy and very clean for easier picking.
★ 03025	Nirvana	75	24"	8 x 1.8"	16	M	-	R	FM, HG	*****	Combination of great vigor and emergence along with fantastic flavor and texture.

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XTRA TENDER
2472 XR



ANTHEM XR ★



XTRA TENDER
20173



XTRA TENDER ★
274A



CALIBER XR



TEMPO XR **NEW**

UNIQUE TASTE & TEXTURE
From the Nirvana series of sweet corn from Crookham.

XANADU ★

NIRVANA ★

EDEN RMN **NEW** ★

CORN **BI-COLOR SH2 Extra Sweet & Improved Super Sweets** Pricing on page 43

			Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
NEW	03122	Tempo XR	76	26"	7-8 x 1.8-1.9"	16-20	R		MS	FM	***	<i>Tempo XR has excellent husk protection and consistent tip fill across varying environmental conditions. Tempo XR has a great ear size for mid-season roadside and fresh markets.</i>
	03058	American Dream	77	26"	7 ¼ x 1.9"	16-18	R	-	M	FM, HG	****	<i>Trim ear with extraordinary tip fill. Eats exceptionally well. Beautiful flag leaves for improved marketability. An AAS winner.</i>
	03102	Cumberland	77	30"	8 x 1.9"	16-18	R	-	-	FM, HG	***	<i>Prolific Harris Moran variety with attractive ear and husk package. Sweet flavor and fantastic texture. Ideally grown for retail stands and farm markets.</i>

Additional Bi-Color Improved Super Sweet corn can be found on the next page -->.

CORN BI-COLOR SH2 Extra Sweet & Improved Super Sweets

Priced per 1,000 seeds in these package sizes

	2.5M	10M	25M	100M	500M*
03199 7143 <small>EX 08767143 Cruiser</small>	10.85	10.15	9.75	9.30	9.20
03022 7902R <small>Cruiser</small>	7.90	7.20	6.80		
03023 ACes <small>2060 Cruiser</small>	8.05	7.35	6.95	6.50	6.40
03058 American Dream <small>Cruiser</small>	11.80	11.10	10.70	10.25	10.15
03003 Anthem XR <small>Cruiser</small>	11.40	10.70	10.30	9.85	9.75
03007 AP358 <small>Cruiser</small>	12.05	11.35	10.95	10.50	10.40
03218 Cadence XR <small>Cruiser</small>	11.55	10.85	10.45	10.00	9.90
03091 Caliber XR <small>Cruiser</small>	11.40	10.70	10.30	9.85	9.75
03117 Catalyst XR <small>Cruiser</small>	11.60	10.90	10.50	10.05	9.95
03216 Crave <small>Cruiser</small>	9.10	8.40	8.00	7.55	7.45
03102 Cumberland <small>Cruiser</small>	10.65	9.95	9.55	9.10	9.00
03039 Enchanted <small>Cruiser</small>	10.45	9.75	9.35	8.90	8.80
03037 Hero XR <small>Cruiser</small>	11.50	10.80	10.40	9.95	9.85
03103 Honey & Pearl	8.40	7.70	7.30	6.85	6.75
03033 Honor XR <small>Cruiser</small>	9.70	9.00	8.60	8.15	8.05
03233 Ignition <small>Cruiser</small>	10.90	10.20	9.80	9.35	9.25

CORN BI-COLOR SH2 Extra Sweet & Improved Super Sweets

Priced per 1,000 seeds in these package sizes

	2.5M	10M	25M	100M	500M*
03038 Kickoff XR <small>Cruiser</small>	11.80	11.10	10.70	10.25	10.15
03221 Nighthawk <small>Cruiser</small>	Crop Failure				
03025 Nirvana <small>Cruiser</small>	11.90	11.20	10.80	10.35	10.25
04015 Obsession <small>Cruiser</small>	10.35	9.65	9.25	8.80	8.70
03235 Octane <small>Cruiser</small>	10.90	10.20	9.80	9.35	9.25
03215 Signature XR <small>Cruiser</small>	11.85	11.15	10.75	10.30	10.20
03109 Solstice <small>Cruiser</small>	11.35	10.65	10.25	9.80	9.70
03035 Super Surprise <small>Cruiser</small>	11.20	10.50	10.10	9.65	9.55
03122 Tempo XR <small>Cruiser</small>	11.85	11.15	10.75	10.30	10.20
03119 Xanadu <small>Cruiser</small>	12.10	11.40	11.00	10.55	10.45
03174 Xtra Tender 274A <small>Cruiser</small>	11.15	10.45	10.05	9.60	9.50
03189 Xtra Tender 2171 <small>Cruiser</small>	10.80	10.10	9.70	9.25	9.15
03013 Xtra Tender 2472 XR <small>Cruiser</small>	10.65	9.95	9.55	9.10	9.00
03019 Xtra Tender 2475 <small>Cruiser</small>	11.20	10.50	10.10	9.65	9.55
03173 Xtra Tender 20173 <small>Cruiser</small>	11.65	10.95	10.55	10.10	10.00

* Multiple packages may be used to fill orders for these quantities.



AMERICAN DREAM



CUMBERLAND



ACES



AP358



CADENCE XR



CRAVE

CORN		BI-COLOR SH2 Extra Sweet & Improved Super Sweets										Pricing on page 43	
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features		
03023	ACes	78	28"	8 x 1.9"	16 - 18	R	R	MS	FM	****	No fear of getting lost in the shuffle, this variety has been smoking good in trials the past couple of years. High marks across the board. A game changer.		
03007	AP358	78	20"	8 x 1.9"	16-18	M	M	M	FM	****	Crookham variety that sets a new standard for eating quality in the improved SH2 category. The AP in the name refers to Augmented PLUS. With easy snap, good tip fill and attractive husk package.		
03218	Cadence XR	78	25"	7.5-8.25 x 1.9-2.1"	16 - 20	R	-	MS	FM, S	****	Cadence XR is a full season high eating quality hybrid with ideal ear size for roadside markets. Cadence XR has an attractive husk package with good flag leaves and resistance to common rust.		
03216	Crave	78	20"	8 x 1.8"	16-18	-	-	-	FM, HG	****	A Glacial bi-color type with a great husk package, large ear and excellent eating quality that customers will crave. Vibrant bi-color kernels, great husk length, color and flags. Medium tall plant.		
NEW 03235	Octane	78	26"	8 x 1.8"	16 - 18	IR	IR		FM, HG	****	A new 78 day outstanding quality sweet corn with extremely tender kernels and high sugars. Octane will hold on the plant for an extended period of time.		
★ 03039	Enchanted	79	28"	8 x 2"	18 - 20	M	M	M	FM, HG	****	Offers all the flavor and texture you would expect from an augmented farm market hybrid. Plump, sweet kernels.		
04015	Obsession	79	24"	8 x 2"	18 - 20	M	M	M	S	**	A super sweet type hybrid from Seminis with excellent eating quality.		
03199	7143 EX08767143	80	26"	8 x 1.9"	18 - 20	R	M	M	S	***	An improved version of Obsession that has a better rust package, eye appeal and eating quality.		

CORN		WHITE SU Normal									
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Use	Eating Quality	Features			
01202	Silver Queen	88	40"	8 x 1.8"	14 - 16	HG	*	The best eating older SU variety. Was the most popular white hybrid at one time.			

CORN WHITE SU Normal					
Priced per pound in these package sizes					
	1#	5#	25#	50#	100#*
01202 Silver Queen	12.85	11.60	11.25	10.85	10.55

* Multiple packages may be used to fill orders for these quantities.

EATING QUALITY RATING
Rupp Seeds 5 Star rating system is used to help growers differentiate sweetcorn varieties within each genetic class for eating quality based on sweetness, tenderness and corn flavor. These ratings are an average of our sampling scores that are compiled from multiple locations across various growing regions.

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OCTANE **NEW**



ENCHANTED ★



OBSSESSION



7143 EX08767143



WHITEOUT



SILVER KING



ILLUSION ★



MIRAGE ★



MATTAPOISETT



AVALON

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www.facebook.com/ruppsedsinc/

ORDERS OVER \$250 ARE SHIPPED FREE!

CORN		WHITE SE								Pricing on page 45	
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
02237	Whiteout	73	22"	8 x 1.8"	16	M	M	M	FM, HG	**	A hybrid with a sturdy, vigorous plant, classy ear conformation and package.
02231	Silver King	82	24"	8 x 1.9"	16 - 18	M	M	M	FM, HG	***	A Syngenta hybrid with improved eating quality and disease resistance. Has good tip fill and cover.

CORN		WHITE Synergistic									
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
★ 04011	Illusion	72	28"	7 1/2 x 1.8"	14 - 16	M	M	S	FM, HG	***	A large ear with great eating quality, amazing flag leaves, dark green husk and strong tip fill. A perfect combination for an early season white.
★ 04016	Mirage	78	18"	8 x 1.8"	16 - 18	M	M	M	FM	****	Excellent eating quality. High row count for a refined kernel. High yield potential. White version of Essence.
04501	Mattapoissett	80	18"	8 x 1.7"	16 - 18	M	M	M	FM, HG	****	A hybrid that has exhibited excellent plant type, ear and eating quality in our trials.
04017	Avalon	82	20"	8 x 1.9"	16 - 18	S	M	M	FM	***	A white version of Providence.

CORN WHITE SE		M=1,000 seeds				
Priced per pound in these package sizes		1#	5#	25#	50#	100#*
02231	Silver King	15.30	14.05	13.70	13.30	13.00
Priced per 1,000 seeds in these package sizes		2.5M	10M	25M	100M	500M*
02237	Whiteout <small>Cruiser</small>	8.80	8.10	7.70	7.25	7.15

* Multiple packages may be used to fill orders for these quantities.

CORN WHITE Synergistic		M=1,000 seeds				
Priced per 1,000 seeds in these package sizes		2.5M	10M	25M	100M	500M*
04017	Avalon <small>Cruiser</small>	8.35	7.65	7.25	6.80	6.70
04011	Illusion <small>Cruiser</small>	10.40	9.70	9.30	8.85	8.75
04501	Mattapoissett <small>Cruiser</small>	11.45	10.75	10.35	9.90	9.80
04016	Mirage <small>Cruiser</small>	9.95	9.25	8.85	8.40	8.30

* Multiple packages may be used to fill orders for these quantities.

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LEADOFF MXR **NEW**



FREEDOM MXR



EDEN RMN **NEW** ★



7401 IMP ★



GLACIAL ★



SV1580SC

CORN

WHITE SH2 Extra Sweet & Improved Super Sweets

			Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
NEW	03243	Leadoff MXR	69	23"	7 1/4-8 x 1.9-2"	16-18	R	-	M	FM, HG	****	Leadoff MXR is a first early hybrid with a high kernel row count and good kernel color. Has a great disease package and a very good husk protection. Leadoff the season right with this fresh market and roadside variety. Tolerant to HPPD/ALS.
	03204	Freedom MXR	73	19"	7 1/2-8 x 1.8"	16	R	-	M	FM, HG	***	Great ear size and appearance. High yield potential. Strong lodging tolerance. Attractive husk package.
NEW ★	03224	Eden RMN	74	26"	8 x 1.75-2"	16-18	R	-	R	FM, HG	*****	Eden RMN retains the incredible taste of Eden with some key improvements: a stronger disease package, slightly higher ear height, and a taller plant. Eden was known for generating strong customer loyalty and Eden RMN adds a new level of dependability for growers.
★	03049	7401 Imp	75	28"	8 x 1.8"	16-18	M	R	M	FM, HG	****	Bright kernel color. Good husk package. Fantastic flavor.
★	03100	Glacial	76	26"	8 x 1.9"	16-18	-	-	-	FM, P	*****	Has incredible white kernels that actually stay white! Very good tip fill and eating quality. Fine addition to a white corn planting program.
	03017	SV1580SC	79	24"	8 x 1.9"	18-20	R	M	M	S	**	A white version of 7143! One of the few late season whites that has a good disease package. A variety that can grow well in a wide range of conditions late in the growing season. Dual purpose for roadside and/or shipping.

CORN

YELLOW SU Normal

			Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Use	Eating Quality	Features
	01001	Early Sunglow	62	18"	7 x 1.7"	12-14	HG	*	Popular home garden variety.
	01009	NK 199	84	48"	8 x 2"	18-20	HG	*	Mid-season, easy silking, large ear.
	01012	lochief	87	36"	9 x 2"	14-16	HG	*	Mid-season home garden.

CORN WHITE SH2 Extra Sweet & Improved Super Sweets

		Priced per 1,000 seeds in these package sizes				
		2.5M	10M	25M	100M	500M*
03049	7401 Imp Cruiser	10.15	9.45	9.05	8.60	8.50
03224	Eden RMN Cruiser	11.55	10.85	10.45	10.00	9.90
03204	Freedom MXR Cruiser	11.75	11.05	10.65	10.20	10.10
03100	Glacial Cruiser	10.10	9.40	9.00	8.55	8.45
03243	Leadoff MXR Cruiser	11.80	11.10	10.70	10.25	10.15
03017	SV1580SC Cruiser	10.85	10.15	9.75	9.30	9.20
03222	Xtra Tender 372A Cruiser	10.80	10.10	9.70	9.25	9.15

* Multiple packages may be used to fill orders for these quantities.

CORN YELLOW SU Normal

		Priced per pound in these package sizes				
		1#	5#	25#	50#	100#*
01001	Early Sunglow	11.40	10.15	9.80	9.40	9.10
01012	lochief	10.80	9.55	9.20	8.80	8.50
01009	NK 199	11.05	9.80	9.45	9.05	8.75

* Multiple packages may be used to fill orders for these quantities.

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BODACIOUS RM



GOLD NUGGETS



INCREDIBLE R/M



CAFÉ



INFERNO



HONEY SELECT ★

CORN		YELLOW SE									
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
02055	Bodacious RM	75	20"	8 x 1.8"	18	R	M	M	FM, HG	***	A rust resistant Bodacious, same flavor, superior plant and yield. Give this a try.
02007	Gold Nuggets	75	24"	8 x 2"	20	M	M	M	FM, HG	****	The best eating SE, large eared, superior holding. Good for freezer corn.
02005	Kandy Korn EH	81	31"	8 x 1.8"	14 - 16	M	M	M	FM, HG	**	Popular, red husked, market hybrid.
02056	Incredible R/M	85	30"	9 x 2"	18	R	M	M	FM, HG	***	Rust resistant and MDM resistant Incredible.

CORN		YELLOW Synergistic									
		Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Use	Eating Quality	Features			
04045	Café	68	15"	7 1/2 - 8 x 1.7"	14	FM, HG	***	Yellow version of Latte.			
04008	Inferno	74	18"	8 1/4 x 1.8"	14 - 16	FM, HG	***	Has excellent husk cover with a dark green plant and flag leaves, creamy flavor with the right balance of texture.			
★ 04012	Honey Select	79	18"	8 1/2 x 2"	18 - 20	FM, HG	***	A Syngenta AAS winner with similar genetic type to Serendipity only yellow kernels. Easy to grow, good vigor, and high sugars.			

CORN YELLOW SE						
	Priced per pound in these package sizes					
	1#	5#	25#	50#	100#*	
02055 Bodacious RM	15.10	13.85	13.50	13.10	12.80	
02007 Gold Nuggets	15.40	14.15	13.80	13.40	13.10	
02056 Incredible R/M	15.00	13.75	13.40	13.00	12.70	
02005 Kandy Korn EH	13.25	12.00	11.65	11.25	10.95	

* Multiple packages may be used to fill orders for these quantities.

CORN YELLOW Synergistic						M=1,000 seeds
	Priced per 1,000 seeds in these package sizes					
	2.5M	10M	25M	100M	500M*	
04045 Café <small>Cruiser</small>	10.70	10.00	9.60	9.15	9.05	
04012 Honey Select <small>Cruiser</small>	6.90	6.20	5.80	5.35	5.25	
04008 Inferno <small>Cruiser</small>	9.60	8.90	8.50	8.05	7.95	

* Multiple packages may be used to fill orders for these quantities.



TAKEOFF MXR **NEW** ★



ICON XR **NEW**



XTRA TENDER
1572



SS7403RY



SC1336

CORN

YELLOW SH2 Extra Sweet & Improved Super Sweets

	Relative Maturity	Ear Height	Ear Size length x diameter	Kernel Rows	Rust	Stewart's	NLB	Use	Eating Quality	Features
NEW ★ 03223 Takeoff MXR	69	28"	8 x 1.9"	16 - 18	R	-	MS	FM, S	****	Takeoff MXR has an excellent disease package and seedling vigor for an early hybrid. Takeoff MXR has an impressive ear shape and size. Get an early Takeoff with this variety in fresh markets. Tolerant to HPPD/ALS.
NEW 03124 Icon XR	72	26"	8 x 1.9"	16 - 18	R	-	MS	FM	****	Icon has exceptional eating quality and is part of IFST's Reserve quality class. Excellent husk protection, ear length, and tip fill under stress. A perfect choice for high quality fresh markets and roadside stands. A yellow version of Signature XR. Tolerant to HPPD/ALS.
03031 Xtra Tender 1572	72	20"	7 1/2 - 8 x 1.9"	16 - 18	M	-	MS	FM, S	***	Very good eating quality with dark green husk package and excellent flags. Overall high quality hybrid for roadside or shipping. Yellow version of Anthem.
03041 SS7403RY	75	28"	8 x 2"	16 - 18	S	M	M	FM, S	***	Use in early plantings. High eating quality with very good husk protection and color.
03010 SC1336	81	22"	8 x 1.9"	18 - 20	M	M	M	FM, S	**	An improved Passion with better tip cover.
03006 Illini Xtra Sweet	85	17"	8 x 2"	18	M	M	M	HG	*	The original Supersweet.

CORN YELLOW SH2 Extra Sweet & Improved Super Sweets

	Priced per 1,000 seeds in these package sizes				
	2.5M	10M	25M	100M	500M*
03092 4974 VX Cruiser	11.10	10.40	10.00	9.55	9.45
03024 ACcentuate Cruiser	7.85	7.15			
03217 Bullet XR Cruiser	11.00	10.30	9.90	9.45	9.35
03124 Icon XR Cruiser	11.85	11.15	10.75	10.30	10.20
03006 Illini Xtra Sweet	7.65	6.95	6.55	6.10	6.00
03010 SC1336 Cruiser	10.85	10.15	9.75	9.30	9.20
03041 SS7403RY Cruiser	8.95	8.25	7.85	7.40	7.30
03223 Takeoff MXR Cruiser	11.80	11.10	10.70	10.25	10.15
03063 Vista XR Cruiser	11.10	10.40	10.00	9.55	9.45
03031 Xtra Tender 1572 Cruiser	11.75	11.05	10.65	10.20	10.10

* Multiple packages may be used to fill orders for these quantities.

CONTENTS SETTLE SHAKE CONTAINER WELL BEFORE MEASURING

SabrEx
ROOT INOCULANT
for CORN

Application rate: SabrEx for corn can be used for field corn, popcorn, sweet corn and sunflowers at a rate of 0.5 oz. per 50 lb. of seed.

Directions for use: Apply as a dry seed treatment prior to planting. Mix until uniform coverage is obtained.

Compatibility: SabrEx is compatible with many common fungicides and insecticides. For current compatibilities, contact your ABM representative or call 877-617-2461.

Product specifications: Contains proprietary and crop-specific combination of patent-pending strains of Trichoderma microorganism spores formulated with an 80/20 talc/graphite carrier.

Minimum specifications: 7x10⁷ cfu/gm.

CONTAINS LIVING ORGANISMS. STORE IN A COOL DRY PLACE OUT OF SUNLIGHT.

Made in the USA

Net Contents: 1 oz.

ADVANCED BIOLOGICAL MARKETING | P.O. Box 222 | Van Wert, OH 45891 | USA | 877.617.2461 | ABM1st.com

For details and pricing on SabrEx inoculant, see page 152.

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2021 SWEET CORN TRIAL REPORT

With the warmer spring, we were growing concerned that we were not going to get a good look at cold soil emergence. However, on April 19 we were provided a window to get out and plant 20 different SH2 varieties. When we planted, the soil temperature was 64.3 degrees. Then, three days later we were hit with 3" of snow making the soil temperature plummet to 48.8 degrees. A few newer varieties that stood out were **Solstice** (page 42), **Leadoff MXR** (46), **Eden RMN** (46), and **Ignition** (42). These four varieties growers need to keep an eye on and trial on their own farms. A few proven, consistent varieties that seem to come up in every conversation with growers when talking about first and second early sweet corns are **Xtra Tender 274A** (42), **Nirvana** (42), **Kickoff** (42), and **Tempress** (39) as a SY (synergistic).

Our main season trial consisted of 115 SY's and 397 SH2's. We also had 10 large block trials on the farm that consisted of multiple genetic types and colors. Then to top it off, we had 88 grower cooperator trials located throughout the Midwest, and Northeast.

In the SY plot we feel a few hybrids that have earned our trust to be on your operation are the following: **Tempress**, a very good emerging and very high quality, 70 day bicolor that will get through that cool spring planting. Another variety that teams well with Tempress for a main season corn would be **Allure** (39), a 75 day bicolor from Seneca Vegetable Research. It has the nice old fashion creamy corn flavor with a nice balance of sugar. Looking at the insect protected segment Syngenta is offering a new one called **Quick Trip** (34). We have seen it several times in trials and look forward to seeing how it preforms on growers fields this next year. The other one that has been a consistent stand by is **SV9014SB** (32) from Seminis.

The area where we have seen a lot of excitement would be the SH2 plot. We have several varieties that are gaining traction from us and growers. If you're wanting something that will stand out among your customer base you should check out **Solstice** (42). It has performed very well over the last few years, and we believe it would work well in your first

or second plantings. For your main season slot, we feel that **Nirvana** (42) and **Xanadu** (42) would be a nice fit. If you're wanting something that has great yield, you may want to take a look at **Signature XR** (42) from IFSI. Others that have consistently risen to the top are **AP358** (44), and **ACes** (44). One that we hear a lot about is **Crave** (44) and we believe it is a good corn, but it might be more of a high management corn.

In the white SH2 market, we believe **Eden RMN** and **Glacial** (46) will stand out. We received feedback from one grower in a very dominant bi-color region who was giving customers 10 ears of bicolor and 2 ears of Eden RMN. The customers were coming back asking for that white corn again. If you can get your customers to get beyond a different color scheme you will find these two can hold their ground in eating quality.

As far as yellow corn, one that seemed to rise to the top this year was **Icon XR** (48). Icon XR is a 72 day yellow from IFSI. One of our cooperators said it was just an all-around attractive ear. It was very comparable to Vision but had a better plant.

We also participate in university trials. We have found that Purdue and The Ohio State University do an excellent job at trialing. Follow the links to review their findings.

The Ohio State SH2 Trial

www.ruppseeds.com/OhioSH2C

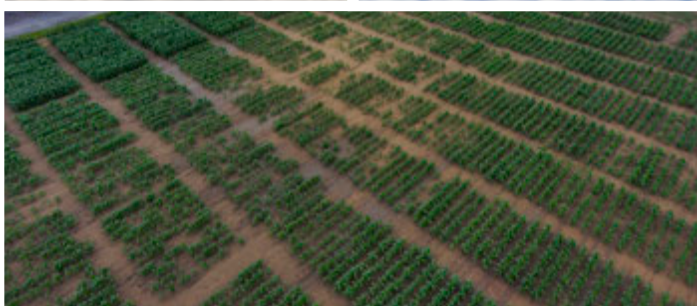


Purdue Supersweet Trial

www.ruppseeds.com/PurdueSSC



We have several experimental varieties that we are getting excited about and have a lot of promise. We look forward to seeing these hybrids again next summer.





R98114W pg. 51

POPCORN

EATING QUALITY

No popcorn varieties are hullless. Eating quality is a measurement of flavor, kernel tenderness and hulls that are thin and break and disperse during popping. Thicker hulled hybrids retain the hull in the popped product and tend to remain in your teeth after eating. Factors influencing popcorn quality include kernel moisture and expansion ratio, processing procedures, home storage and handling. Good popcorn should provide at least 98% popped kernels with well under 2% unpopped kernels. Proper care at the processing level helps to assure this.

EATING QUALITY RATING

Good to Poor

EXPANSION

Refers to the increase in volume of unpopped corn after it is popped. To illustrate, if a given volume of unpopped corn expanded to a 40 rating when popped, the volume increase was 40 times. All data is collected on the standard test popper.

LODGING

The percentage of stalks broken below the ear at harvest time.

MUSHROOM SHAPE

The popped shape that is the most desirable for manufacturing caramel corn etc. due to tougher more durable shape after popping. Always less desirable as eating corn.

YIELD

Pounds of shelled corn adjusted to 13.5% moisture.

STORAGE

To maintain the best quality popcorn, store at 13 - 14.5% moisture content.

CORN		ORNAMENTAL POPCORN	
▲	Days	Features	
06010 Firecracker	95	A miniature variety with a red stalk and good cold soil emergence. Plants are tall and strong with good tip cover and very little shank. High yields of 5" ears which can be used for both ornamental and popping purposes. Stalks are approximately 7.5 feet tall.	
06015 Little Boy Blue	100	A selection of small eared ornamental popcorn with 4" ears that are dark blue.	
06006 Little Indian	100	A popular variety with 4 - 5" multi-colored ears. Also very tender eating.	
05510 Seneca Mini Indian	105	A selection of miniature Indian corn with 5 - 6" ears. Attractive for ornamental uses.	
06005 Strawberry	100	A popular variety with strawberry shaped ears for either decoration or popping.	

CORN		POPCORN							
▲	Color	Days	Lodging	Yield per Acre	Expansion	Eating Quality	Mushroom	Features	
<i>Commercial Varieties</i>									
06039 R98114W ^{F1}	White	105	2%	5000 lbs. +	45	Good	0	An excellent eating-quality white popcorn that yields as well as many yellow hybrids. Strong stalks and roots help resist lodging. It provides high resistance to common rust and intermediate resistance to Goss' Wilt.	
06040 R997 ^{F1}	Yellow	105	2%	5000 lbs. +	46	Good	0	A mid-season butterfly popcorn. It has long cylinder - shaped ears with easy shelling large, orange kernels and improved stalk strength. It provides high resistance to Grey Leaf Spot and intermediate resistance to Common Rust, Northern Corn Leaf Blight, and Drought.	
06027 Ruby Red ^{F1}	Red	100	5%		38	Good	0	A true breeding, glossy burgundy red hybrid with no white kernels. Has stalk strength, yield and expansion equal to the best white hybrids. One of the best eating popcorns.	
06026 Shaman's Blue ^{F1}	Dark Blue	105	5%		43	Good	0	Dark blue popcorn hybrid. Has glossy dark blue kernels, large 8" ears, high expanding, and tender flakes. Good stalk strength.	
<i>Heritage Varieties</i>									
06003 Creame Puff	Yellow	105						A good popping quality, yellow hybrid that often produces two ears per stalk. Home garden.	
06004 Ipopop 12	Yellow	106	15%	3850 lbs.	38	Fair	15%	An old, small seeded commercial hybrid that was once the standard for eating quality.	
06007 Japanese Hulless	White	105						A popular OP selection of white popcorn, for home garden.	
06008 Purdue 410	Yellow	108	26%	3866 lbs.	40.8	Poor	4%	A large, mushroom shaped kernelled, yellow hybrid well suited for caramel corn and craft projects.	
06002 Snow Puff	White	100						An early, small eared hybrid with good eating qualities well suited for the home gardener.	

CORN ORNAMENTAL POPCORN						
	Priced per package	4 oz.				
		1#	5#	25#	50#	
06010 Firecracker		7.45	20.40	13.60	13.35	13.10
06016U Little Bow Peep ^{Untreated}		10.35	27.55			
06015U Little Boy Blue ^{Untreated}		10.35	27.55	27.00	26.50	25.50
06006 Little Indian		7.30	19.95	13.30	13.05	12.80
05510 Seneca Mini Indian		5.25	14.25	9.50	9.25	9.00
06005 Strawberry		5.75	15.70	10.45	10.20	9.95

CORN POPCORN					M=1,000 seeds
	Priced per 1,000 seeds in these package sizes	M=1,000 seeds			
		2.5M	10M	25M	100M
<i>Commercial Varieties</i>					
06039 R98114W ^{White}		4.30	3.80	3.55	3.30
06040 R997 ^{Yellow}		4.15	3.65	3.40	3.15
06027 Ruby Red		7.75	7.25	7.00	6.75
06026 Shaman's Blue		8.25	7.75	7.50	7.25
<i>Heritage Varieties</i>					
06003U Creame Puff ^{Untreated}		4.60	11.80	7.85	7.60
06004U Ipopop 12 ^{Untreated}		4.60	11.80	7.85	7.60
06007U Japanese Hulless ^{Untreated}		3.80	9.70	6.45	6.20
06008U Purdue 410 ^{Untreated}		4.60	11.80	7.85	7.60
06002U Snow Puff ^{Untreated}		4.60	11.80	7.85	7.60

* Multiple packages may be used to fill orders for these quantities.



AMERICAN WAY



EARTH TONES



FIESTA



INDIAN ART 104



INDIAN ART CRANBERRY



INDIAN ART RED FIRE

CORN

ORNAMENTAL CORN

	Days	Features
05535 American Way	115	A very large eared 10 - 13" variety that has become popular with fresh market growers.
05536 Earth Tones	105	Has marvelous shades of blue and green as well as traditional reds and oranges. Can be ground into cornmeal.
05507 Fiesta	100	A variety developed by the University of New Hampshire. Early maturing with 8" ears and kernels that are variegated and of many colors.
05104 Indian Art 104 ^{F1}	105	A mid season hybrid with excellent ear color and shape. Will perform well in the main and northern areas of the corn belt.
05108 Indian Art Cranberry ^{F1}	104	An ornamental hybrid with beautiful shades of pink, lavender to dark mauve. Good stalk strength with high yields. 10" ear.
05101 Indian Art Red Fire ^{F1}	105	Newest release in the "Indian Art" series. Comprehensive hybrid red stalk and red husk package. Kernels are deeper red when compared to Bloody Butcher. 8 - 10" ear.
GCE1010 Maze Corn Rupp XR E10-10 ^{F1}	110	Rupp XR E10-10 is a medium-tall hybrid from Rupp Seeds Grain and Forage Division with solid stalks that performs very well for farmers. An excellent choice for a long standing maze, 8 to 10 feet plant height. Can be harvested for grain once the maze is used.
GCD0661 RR Maze Corn Rupp XR D06-61 ^{F1}	106	Rupp XR D06-61 is a tall, 106 day Agrisure3120 E-Z Refuge dent corn hybrid from Rupp Seeds Grain and Forage Division. It stands well and is an excellent choice for a maze where you want the convenience of using glyphosate. Plants are 8 to 10 feet tall. It can be harvested for grain once the maze is used. XR D06-61 is an Agrisure Trait and requires a Syngenta License number in order to purchase. If you are not licensed, please call us to obtain a Syngenta Agreement or go to www.agcelerate.com .
GCA1293 Rupp Shock Corn XR A12-93 ^{F1}	112	We list this corn in our vegetable catalog for those that sell corn shocks for ornamental purposes. This hybrid is a tall plant and its plant health and standability are the best we have ever seen in any full season hybrid. Has loads of eye appeal both in the field or shock.
06021 Wampum	95	An early version of ornamental corn, with diverse colors and ears that range from 3 1/2 - 5 1/2" in length. Developed by Dr. Baggett, Oregon State University. Larger diameter ear than Little Indian.

See page 51 for Ornamental Popcorn
See page 82 for Ornamental Sorghum / Broomcorn

CORN ORNAMENTAL CORN

M=1,000 seeds

	Priced per package 4 oz.		Priced per pound in these package sizes			
			1#	5#	25#	50#*
05535 American Way	5.65	22.15	14.75	14.50	14.25	
05536U Earth Tones ^{Untreated}	6.70	26.25	17.50	17.25	17.00	
05507 Fiesta	4.05	15.75	10.50	10.25	10.00	
05104 Indian Art 104	6.90	27.00	18.00	17.75	17.50	
05108 Indian Art Cranberry	6.90	27.00	18.00	17.75	17.50	
05101 Indian Art Red Fire	7.10	27.75	18.50	18.25	18.00	
06021 Wampum	6.55	25.50	17.00	16.75	16.50	
	Priced per package		10M	25M	80M	
GCE1010 Maze Corn Rupp XR E10-10					220.00	
GCD0661 RR Maze Corn Rupp XR D06-61					305.00	
GCA1293 Rupp Shock Corn XR A12-93			43.75	87.50	237.00	

Maze and Shock corn prices include shipping.

* Multiple packages may be used to fill orders for these quantities.

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CALIENTE 119



CALIENTE 199



CALIENTE ROJO

GULF ANNUAL
RYEGRASS

HAIRY VETCH



PEN-A-TRATER

COVER CROPS

	Seeding Rate pounds / acre	Features
Biofumigants		
<i>Caliente Brand mustards used for green manure and biofumigation can improve soil quality and reduce your reliance on chemicals for disease, weed and nematode control. Systems which are currently in commercial use are: Summer planting in rotation for potatoes, onions, beans and peas as well as spring and fall planting in rotation for beans, carrots, lettuce and strawberries. Give us a call to discuss your specific crop rotation needs.</i>		
CBIO.99002 Caliente 119	10 - 12	<i>Improves soil health and productivity by increasing water penetration, reducing compaction, increasing water holding capacity, reducing wind erosion and increasing beneficial organisms. Also, when used correctly, it is a very effective soil fumigant. This mustard is planted in the spring.</i>
CBIO.99003 Caliente 199	9 - 11	<i>Produces excellent biomass with the highest "biofumigation" potential available. Excellent disease, weed, and nematode suppressions in many crops. This mustard is typically planted in the fall.</i>
CBIO.99006 Caliente Rojo	8 - 10	<i>Newest mustard release with purplish/red leaves and the highest glucosinolate production currently available. Vigorous growth with high leaf biomass and extensive root system. Good choice for organic or conventional growers with high disease and/or nematode pressure.</i>
CBIO.99001 Nemat Arugula	5 - 7	<i>Used as a catch crop for Root Knot and Cyst nematodes. Produces a moderate amount of biomass. Very cold and drought tolerant, capable of overwintering in some areas. Typically planted in the fall.</i>
Cover Crops		
CBWH.99004 Buckwheat	20 - 35	<i>Cover crop to hold soil in place or green manure for plowdown. Excellent smother crop for competing weeds. Able to pull unusable phosphorus from the subsoil and deposit in the top layer.</i>
CRYE.99006 Gulf Annual Ryegrass	12 - 20	<i>Rapid germinating and fast establishing plant used for ground cover or soil stabilization. Does not tolerate extreme heat or cold. Excellent transitional grass.</i>
CVET.99005 Hairy Vetch	15 - 20	<i>Winter hardy legume. Referred to as "King of Nitrogen Producers". Forms a dense cover that weeds find difficult to penetrate.</i>
CGAM.99007 PEN-A-TRATER	8 - 12	<i>Forage radish, either planted for a cover crop or included as part of a cover crop mixture, that opens the soil for moisture infiltration and root growth. Sequesters nitrates, suppresses weeds and may aid decomposition of stubborn corn residue. Seeding rate: drilling before August 15th 8-10 lbs/acre; between August 15th and September 1st 10-12 lbs/acre; broadcasting add 2 lbs per acre.</i>

COVER CROPS

	Priced per package	5#	25#	50#
Biofumigants				
CBIO.99002U Caliente 119 Untreated		50.00	152.50	280.00
CBIO.99003U Caliente 199 Untreated		52.50	165.00	305.00
CBIO.99006U Caliente Rojo Untreated		55.00	177.50	330.00
CBIO.99001U Nemat Arugula Untreated		65.00	227.50	430.00
Cover Crops				
CBWH.99004U Buckwheat Untreated		40.50	105.00	185.00
CRYE.99006U Gulf Annual Ryegrass Untreated		36.25	83.75	142.50
CVET.99005U Hairy Vetch Untreated		45.00	127.50	230.00
CGAM.99007U PEN-A-TRATER Untreated		45.50	130.00	235.00
Prices include shipping.				

CUCUMBERS

PLANTING

Direct seed ½" - 1" soils with 60°F+ temperatures. Row spacing should range from 30" - 36" apart. Space plants 12" apart in the row.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout fields weekly to make sure weed, insect, and disease pressure are kept in check.

HARVEST

Harvest every other day. Slicing cucumbers should be picked when diameter is approximately 2". Cucumbers should be approximately 7 - 8" long and have a smooth surface. Pickling cucumbers should be 3" long by 1" wide when ready to pick.

STORAGE

Store at 50 - 55° F and 90 - 95% humidity to ensure long shelf life.

DISEASE CODES

A - Anthracnose
ALS - Angular Leaf Spot
Cca - Corynespora Cassicola
Ccu - Cladosporium Cucumerium
CMV - Cucumber Mosaic Virus
CVYV - Cucumber Vein Yellowing Virus
DM - Downy Mildew
PM - Powdery Mildew
PRSV - Papaya Ringspot Virus
S - Cucumber Scab
TLS - Target Leaf Spot
WMV - Watermelon Mosaic Virus
ZYMV - Zucchini Yellow Mosaic Virus

COLOR CODES

DG - Dark Green
G - Green
MG - Medium Green
MDG - Medium Dark Green
VDG - Very Dark Green
W - White

HABIT TERMS

GY - Gynoecious
Refers to all female sex expression when grown under ideal environmental conditions. Various stresses can cause more male flowers.

MO - Monoecious
Refers to sex expression; having both male and female flowers on the same plant.

P - Parthenocarpic
Refers to the tendency of a plant to set fruit without pollination.

PF - Predominately Female
Refers to the blossoms produced by the plant as predominately female.





ALCAZAR ★



CORINTO



EXCELSIOR ★




KATRINA







CITADEL



EUREKA ★

CUCUMBERS		PROTECTED CULTURE Parthenocarpic 					
▲	Season	Plant	Length	Color	Disease	Features	
★ 23572 Alcazar F1	Spring /Autumn	Vigorous	8 - 9 "	DG	CVYV, PM	A dark green slicer with excellent shelf life. Well suited to cooler temperatures.	
23569 Camaro F1	Spring /Autumn	Vigorous	13 - 16"	DG	PM	Fruit exudes excellent color and shape. Has intermediate resistance to powdery mildew.	
23576 Corinto F1	Spring /Autumn	Vigorous	8 - 10"	DG	CMV, CVYV, PM	A very consistent dark green, cylindrical protective culture cucumber with a very low cull rate. Produces tight sets on a compact plant with excellent shelf life both on and off the plant.	
★ 23574 Excelsior F1	Spring /Autumn	Compact / Vigorous	4 - 5 "	DG	Cca, CMV, CVYV, PM	An excellent pickling variety for full-season production. Open, vigorous plant with medium to dark green fruit.	
23571 Katrina F1	Spring /Autumn	Compact / Vigorous	6 "	DG	Ccu, CMV, CVYV, PM	High quality small fruit that are extremely uniform. Early maturing fruit maintains high quality and production levels throughout the harvest season.	

CUCUMBERS		PICKLING						Pricing on page 57
▲	Days	Habit	Plant	L/D Ratio	Color: Spine-Fruit	Disease	Features	
23551 Bush Pickle	45	MO	Bush	2.9	-	CMV, S	A bush vine type with concentrated set. For home gardeners.	
23001 Calypso F1	51	GY	Compact	3.1	W-MDG	A, ALS, PM, S	Very productive, widely adaptable.	
23002 Carolina F1	52	GY	Compact	2.95	W-MG	A, ALS, CMV, PM, S	High yielder, good briner, blocky.	
23005 Citadel F1 	50	GY	Medium	3.1	W-DG	A, ALS, CMV, DM, PM, S	Industry-leading disease package includes intermediate resistance to Downy Mildew. Excellent option for machine harvest due to concentrated fruit set.	
★ 23014 Eureka F1 	53	MO	Compact	3.1	W-DG	A, ALS, CMV, PM, PRSV, S, WMV	A monoecious hybrid with unique disease tolerances. Compare with your current favorite.	
23101 SMR 58	56	MO	Vigorous	2.9	G	PM, S, TLS	Popular northern garden variety. Replaces Boston Pickling.	
23003 Supremo F1 	43	MO	Vigorous	3	W-DG	A, ALS, CMV, PM, PRSV, S, WMV, ZYMV	High quality dark green fruit with thick skin and a small seed cavity. Ideal for processing or fresh market. Can be staked or on the ground.	
23025 Vlasstar F1 	52	P	Vigorous	3	W-MDG	A, ALS, CMV, PM, S	A medium dark, blocky pickle that picks over a sustained multiple harvest.	

CUCUMBERS PROTECTED CULTURE				
	Priced per package	100 Seeds	500 Seeds	1000 Seeds
23572 Alcazar		28.10	93.55	155.90
23569U Camaro Untreated		114.30	381.00	635.00
23576 Corinto		32.30	107.60	179.30
23574 Excelsior		20.55	68.40	113.95
23571 Katrina		33.55	111.75	186.25



SUPREMO



BRISTOL ★



COBRA



DARLINGTON ★



SV4719CS

CUCUMBERS

SLICERS

▲	Days	Habit	Plant	L/D Ratio	Color	Disease	Features
★ 23512 Bristol ^{F1}	54	GY	Moderately Vigorous	8 ¼ x 2 ¼"	DG	A, ALS, CMV, DM, PM, PRSV, S, ZYMV	Early maturing, second generation hybrid with intermediate resistance to downy mildew plus multi-virus tolerance that delivers an improved disease package when compared to SV3462CS and SV4719CS. High number of fancy fruit that allows the grower to potentially experience higher marketable yields.
23523 Bush Crop	55	MO	Restricted	7 ½"	MG	S	An ideal variety for containers or small gardens.
23004 Cobra ^{F1}	60	GY	Vigorous	9.5 x 2"	DG	A, ALS, CMV, PM, PRSV, S, WMV, ZYMV	Productive hybrid with an excellent disease package and outstanding fruit quality. Can be used on open ground or plastic production. Holds its length well even during periods of stress.
★ 23568 Darlington ^{F1}	62	GY	Vigorous	8 - 9 x 2"	DG	A, ALS, CMV, PM, PRSV, S, TLS, WMV, ZYMV	A Seminis multi-virus tolerant variety that holds up well under foliar disease pressure. Consistent yield of select fruit that are straight and have excellent color. Maintains optimum length under Northeast conditions.
23503 Dasher II ^{F1}	58	GY	Vigorous	8 x 2 ¼"	VDG	A, CMV, PM, S	High yielding market hybrid.
23602 Marketmore 76	66	MO	Vigorous	8 - 9 x 2 ½"	VDG	CMV, PM, S	Garden variety.
23606 Spacemaster 80	60	MO	Determinate	7 ½ x 2 ½"	DG		Home garden and/or container.
23601 Straight Eight	60	MO	Vigorous	8 x 2 ½"	DG		Home garden slicer.
23581 SV4719CS ^{F1}	56	GY	Moderately Vigorous	8 x 2 ¼"	DG	A-1, ALS, DM, PM, S, ZYMV	An early gynococious slicer hybrid that features a vigorous vine and yields quality fruit that hold their uniform, dark green color well.

CUCUMBERS

BURPLESS SLICERS

▲	Days	Habit	Plant	L/D Ratio	Color	Disease	Features
23546 Burpless Bush ^{F1}	55	PF	Bush	10 - 12"	DG		A popular variety used by the bedding plant industry for the home gardener.
23506 Tasty Green ^{Burpless 26 F1}	55	MO	Vigorous	9 - 12"	DG	DM, PM	Very popular for the home garden.

Natural™ **VEGETABLE ROOT INOCULANT**
 Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

FarMore® FI400
 Cucurbits
 The early-season insect protection offered by FarMore Technology can prevent or eliminate damage caused by cucumber beetles.
www.ruppseeds.com/fi400
 FarMore® treated items are highlighted in green in the price tables. Look for this symbol in the product description tables marking FarMore treated items.

GROWER PREFERRED ALL-STARS ★ CUCUMBERS

HOT HOUSE

For a protected culture slicing cucumber variety, take a look at **Alcazar**. Not only is Alcazar exceptional for heated greenhouse production, it is also capable of handling cooler temperatures if you are using a hoophouse or high tunnel for a prolonged growing season. You can anticipate a high volume of super selects with Alcazar.

Searching for just the precise pickling cucumber variety to use in a greenhouse production this season? **Excelsior** may be just the variety you desire. At optimal harvesting length (4 - 5"), Excelsior has a tremendous pack out of high quality fruit. Even for your hard to satisfy patrons, Excelsior is something to be thrilled about.

PICKLING

Still continuing to rise, **Eureka** remains our #1 pickling variety, both in the number of customers that purchase and amount of seed sold. Eureka's high disease package and ideal length to diameter ratio provide an ideal product for grower and consumer alike. For tried and true, use Eureka.

SLICER

Bristol is an exciting up and coming downy mildew tolerant slicing hybrid. Bristol yields a high percentage of fancy grade fruit due to plant health from multi-virus tolerance and the latest commercial strain of downy mildew tolerance. Use Bristol in late season plantings when downy mildew pressure is the highest.

Remaining strong, with the highest percentage of purchasing customers in the slicing cucumber section, is **Darlington**. Plant health and fruit quality are two of Darlington's greatest assets. While some varieties wilt under disease pressure like downy mildew, Darlington seems to power through due to its vigorous plant. Darlington is a proven variety.



Pete Dinius
 Product Development

CUCUMBERS PICKLING		M=1,000 seeds			
Priced per package		1 oz.	4 oz.		
Priced per pound in these package sizes					
		1#	5#		
23551	Bush Pickle	9.40	26.85	67.90	67.40
23001	Calypso	4.85	13.85	35.00	34.50
23002	Carolina	4.85	13.85	35.00	34.50
23101U	SMR 58 <small>Untreated</small>		8.60	21.75	21.50

Priced per package		100 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	15M	75M*
23005	Citadel <small>FI400</small>	3.10	10.35	8.60	7.60 6.85
23014	Eureka <small>FI400</small>	3.60	15.30	13.55	12.55 11.80
23003	Supremo <small>FI400</small>	3.70	16.75	15.00	14.00 13.25
23025	Vlasstar <small>FI400</small>		8.90	7.15	6.15 5.40

* Multiple packages may be used to fill orders for these quantities.

CUCUMBERS SLICERS		M=1,000 seeds				
Priced per package		1/2 oz.	1 oz.	4 oz.		
Priced per pound in these package sizes						
		1#	5#	25#		
23523	Bush Crop	6.10	9.00	29.90	85.35	84.35 83.35
23602	Marketmore 76		4.75	10.75	29.25	28.75 28.25
23606U	Spacemaster 80 <small>Untreated</small>		4.30	9.75	26.50	26.00 25.50
23601U	Straight Eight <small>Untreated</small>		4.10	9.60	25.50	25.25 25.00

Priced per package		100 Seeds				
Priced per 1,000 seeds in these package sizes		1M	5M	15M	75M*	350M
23512	Bristol <small>FI400</small>	17.40	15.90	14.90	14.15	13.15
23004	Cobra <small>FI400</small>	19.85	18.35	17.35	16.60	15.60
23568	Darlington <small>FI400</small>	6.60	23.95	22.45	21.45	20.70 19.70
23503	Dasher II <small>FI400</small>	3.75	13.55	12.05	11.05	10.30 9.30
23581	SV4719CS <small>FI400</small>	16.50	15.00	14.00	13.25	12.25
23502	Brickyard <small>FI400</small>	17.45	15.95	14.95	14.20	13.20
23505	Raceway <small>FI400</small>	17.45	15.95	14.95	14.20	13.20

Special priced for bedding plants or market.

23564	Conquistador	34.25	32.75	31.75	31.00
23504	Potluck	9.45	34.25	32.75	31.75

* Multiple packages may be used to fill orders for these quantities.

CUCUMBERS BURPLESS SLICERS		M=1,000 seeds				
Priced per package		1/2 oz.	1 oz.	4 oz.		
Priced per pound in these package sizes						
		1#	5#	25#		
23546	Burpless Bush	8.35	12.30	39.95	117.50	116.50 115.50

Priced per package		100 Seeds		
Priced per 1,000 seeds in these package sizes		1M	5M	15M
23506	Tasty Green <small>Burpless 26</small>	4.00	14.75	25.45 23.70 22.70



FAIRY TALE



GAUDI



HANSEL



WHITE STAR

EGGPLANT

▲	Days	Plant Size	Fruit Shape	Color	Features
24001 Black Beauty	80	Large bush	Oval	Purple	Large fruited, home garden variety.
24505 Epic ^{F1}	64	36"	Oval	Purple Black	Commercial grower variety. Resistant to Tobacco Mosaic Virus.
24526 Fairy Tale ^{F1}	50	18 - 24"	Slender	Lavender	An AAS winner. Fruit are bright lavender, up to 5" long, good to eat, on a dwarf plant. Can be grown in pots, planters or on your patio.
24502 Gaudi ^{F1}	80	30 - 36"	Obovate	Deep Purple, Black	Gaudi has long oval shaped fruit with a bright green calyx. Usually the calyx is spineless, but under certain conditions a few small spines can develop. The fruit is firm and is grown on a medium-tall, upright strong growing bush. The variety can be grown indoor and outdoor with good results.
24525 Hansel ^{F1}	55	18"	Slender	Purple	AAS winning Japanese eggplant from Seminis. Fruit are dark glossy purple, born in finger-like clusters and have a bright green calyx. Yields are much higher than similar sized Little Fingers.
24522 Megal ^{F1}	60	36"	Elongated Oval	Purple Black	An early coloring Vilmorin Italian type hybrid that allows a smaller size harvest if desired. Fruit are 7 to 9" long by 3" around. Colors under cool conditions.
24520 Millionaire ^{F1}	55	22 - 26"	Slender	Brilliant Black	One of the best early, long Japanese eggplants.
24524 Nadia ^{F1}	70	24 - 30"	Oval Long	Black	An attractive purple black hybrid from Vilmorin. Fruit are 9" long by 4½" around. Colors early, sets under cool conditions with a durable plant for frequent pickings.
24521 Night Shadow ^{F1}	75	35"	Teardrop	Glossy Black	A Seminis hybrid with fruit that are large teardrop in shape; dark glossy black with a good blossom end scar.
24516 Santana ^{F1}	80	30"	Elongated Oval	Glossy Black Purple	A high yielding hybrid from Syngenta that performs where it matters most; yield, size and quality! One of the best for heat tolerance without fruit fading problems. Has reduced spines to prevent fruit scar.
24510 White Star ^{F1}	75	30 - 36"	Teardrop	White	Classic tapered teardrop shape. Creamy white fruit are smooth when mature. Approximately 5 to 7 inches in length with a diameter of 2 inches at top and 3.5 to 4 inches at bottom.

EGGPLANT

M=1,000 seeds

	Priced per package				
	1/4 oz.	1/2 oz.	1 oz.	4 oz.	1#
24001 Black Beauty			3.90	9.45	31.50
24503 Black Shine	28.25	49.10	78.50		
24520 Millionaire	30.05	52.20	83.50	251.05	

EGGPLANT

M=1,000 seeds

	Priced per package				
	500 Seeds				
	Priced per 1,000 seeds in these package sizes				
	1M	5M	25M	100M	
24505 Epic	6.80	10.85	9.75	9.35	8.80
24526 Fairy Tale	39.75	63.55	62.45	62.05	61.50
24502 Gaudi	16.60	26.55	25.45	25.05	24.50
24525 Hansel	39.75	63.55	62.45	62.05	61.50
24522 Megal	15.35	24.50	23.40	23.00	22.45
24524 Nadia	13.80	22.05	20.95	20.55	20.00
24521 Night Shadow	8.50	13.60	12.50	12.10	11.55
24516 Santana	9.55	15.25	14.15	13.75	13.20
24510 White Star	9.20	14.65	13.55	13.15	12.60

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 Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



JOHN DEERE FINANCIAL

0%

ENDIVE / ESCAROLE		CHICORY	
		Days	Features
<i>Endive - narrow, finely cut, curly leaves</i>			
25002	Fine Green Curled	80	A Heritage variety. Dark green, curled, finely cut leaves with a fleshy midrib. Plants average 15 - 17" across.
25005	Lorca	90	A Salad King type with large, deep, well blanched heads that are refined and uniform. Tip burn resistant.
25009	Tosca <small>Baby Endive</small>	45	A Tres Fine type with resistance to bolting. Especially good for very early planting.
25010	Tres Fine Maraichere	45	A finely cut, lovely green and very fine baby endive with outstanding flavor for the truly French gourmet salads. A petite, fern-like mound.
<i>Escarole - smooth, rounded, broad leaves</i>			
25001	Broadleaf Batavian	80	A Heritage variety. Dark green leaf, white midrib. Upright growth, creamy yellow hearts. Escarole type.

ENDIVE / ESCAROLE		CHICORY		M=1,000 seeds		
		Priced per package				
		1 oz.	4 oz.			
		Priced per pound in these package sizes		1#	5#	
25001U	Broadleaf Batavian <small>Untreated</small>	4.00	7.60	19.75	19.00	
25002U	Fine Green Curled <small>Untreated</small>	4.00	7.60	19.75	19.00	
		Priced per 1,000 seeds in these package sizes		10M	100M	400M
25005U	Lorca <small>Untreated</small>			1.00	0.95	0.85
25009U	Tosca <small>Untreated</small>			1.00	0.95	0.85
25010U	Tres Fine Maraichere <small>Untreated</small>			0.50	0.45	0.35
25011U	Twinkle <small>Untreated</small>			1.30		

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GIZMO  pg. 62

GOURDS

PLANTING

Direct seed in soils that are above 70° F. Plant gourds ½" - 1" deep. For a general rule of thumb, plant seed the depth of three times the thickness of the seed. Plant spacing varies depending on fruit size. For small and miniature gourds plant at approximately 5 - 10 sq. ft. per plant. For large gourds plant them at 30 sq. ft. per plant.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout fields every 7 days to ensure crop health. Look for insect, weed, and disease pressure. The first three weeks focus on weeds and insect pressure. Then focus on disease pressure. For weed, insect, and disease identification and treatments consult the Midwest Vegetable Production Guide: www.ruppseeds.com/MVPG or your local extension. Place pollinators in field to ensure maximum fruit set.





HARVEST

Harvest when fruit have developed deep vibrant color or when plants start to die down. Clean gourds of dirt, then dip them in a 5% chlorine solution to ensure long shelf life.

STORAGE

Place gourds in a dry place that will have good air circulation to prevent rotting.

GOURDS		LAGENARIA SICERARIA	
▲		Days	Features
26034	Birdhouse Martinhouse	100	A purified strain of the original birdhouse gourd. 10" diameter by 15" tall. Tan, smooth and hard shelled.
26002	Bushel	120	12 - 18" diameter with fruit weighing from 30 - 100 lbs. Excellent for arts and crafts when cured.
26016	Calabash Penguin	120	5" diameter, 12 - 15" long with a short curved neck. Fairly uniform shape.
26015	Caveman's Club Maranka	120	Club shaped fruit measures 15 - 18" long and approximately 6" in diameter. Makes a wrinkled, knobby bulb.
26035	Extra Long Handled Dipper	120	A dipper gourd with a 3 - 4' long handle. Grow on trellis for straight gourds.
26020	Italian Edible <small>Cucuzzi</small>	100	4 - 5" in diameter by 2 - 3' long, tapering toward stem end. Edible when young, becoming hard shelled at maturity.
26021	Large Bottle	120	A 5" in diameter by 12 - 14" fruit. Fruit will vary somewhat in size.
26033	Large Speckled Apple	120	A large true apple shaped gourd 4 - 5" in diameter and 6 - 7" tall. Great for table decorations.
26003	Luffa <small>Sponge</small>	130	8 - 12" long by 3 - 4" in diameter. After curing, peel outside shell to reveal the sponge.
26025	Miniature Bottle	100	A miniature sized bottle gourd, 2" in diameter by 4" long.
26004	Mixed Large Types	100 - 130	A new mix of large types that are favorites of Rupp growers including: Birdhouse Martinhouse, Calabash, Extra Long Handled Dipper, Large Bottle, Large Speckled Apple and Speckled Swan.
26031	Snake	120	A long, coiled gourd.
26027	Speckled Swan	100	A large, crookneck gourd whose tip looks like a swan's head; 14 - 18" long with a 6" base.

GOURDS		PEPO		Pricing on page 62
▲		Days	Features	
26501	Autumn Wings Large Swan 	100	A unique gourd of many colors with wings, warts, and the fruit shape of a swan gourd. Its bulb size is 2 ½ or 3" in diameter with a neck up to 12" long. A grand addition to our other fancy ornamental selections for the ornamental trade.	
26502	Autumn Wings Medium 	100	A unique gourd of many colors with the fruit shape of a spoon but with wings. Its bulb size is 2 ½ or 3" in diameter with a neck up to 6" long. A grand addition to our other fancy ornamental selections for the ornamental trade.	
26503	Autumn Wings Small 	100	A unique gourd of many colors with wings and fruit shape of a swan pear. Its bulb size is 2 ½ or 3" in diameter with a neck up to 4 - 5" long. Has great potential for the shipper if the wings can be protected from breakage.	
26510	Autumn Wings Blend 	100	A blend of 50% Autumn Wings Small, 25% Autumn Wings Medium, and 25% Autumn Wings Large.	

Additional Gourd descriptions and pricing can be found on the next page -->.

GOURDS LAGENARIA SICERARIA

	Priced per package		Priced per pound		Seeds /lb.
	1 oz.	4 oz.	1#	5#	
26034 Birdhouse Martinhouse	8.80	20.70	58.60	57.60	3,500
26034U Birdhouse Martinhouse <small>Untreated</small>	8.80	20.70	58.60	57.60	3,500
26002U Bushel <small>Untreated**</small>	12.75	30.00	85.00		1,800
26016 Calabash Penguin	9.95	23.30	66.00	65.00	2,500
26015 Caveman's Club Maranka	11.85	31.55	87.00	85.00	2,300
26035 Extra Long Handled Dipper	9.15	21.45	60.85	59.85	4,500
26020 Italian Edible	9.95	23.30	66.00	65.00	2,600
26021 Large Bottle	9.95	23.30	66.00	65.00	2,300
26033 Large Speckled Apple	10.20	23.90	67.75	66.75	2,400
26003 Luffa	11.10	26.10	73.95	72.95	5,200
26025 Miniature Bottle	10.65	25.05	71.00	70.00	5,000
26004 Mixed Large Types	10.20	24.00	67.95	66.95	2,400
26031 Snake	9.95	23.30	66.00	65.00	2,600
26027 Speckled Swan	9.15	21.45	60.85	59.85	2,200

** 15 seeds for \$5.00



The early-season insect protection offered by FarMore Technology can prevent or eliminate damage caused by cucumber beetles. Additionally, the insecticide component has shown a remarkable ability to improve plant vigor and growth under certain environmental conditions. This patented vigor effect leads to more advanced crop development and superior performance that is especially important when pumpkin crops are under stress. www.ruppseeds.com/fi400



FarMore[®] treated items are highlighted in the green in the price tables.

Look for this symbol in the product description tables marking FarMore treated items.



AUTUMN WINGS
LARGE SWAN



AUTUMN WINGS
MEDIUM



AUTUMN WINGS
BLEND



GALAXY OF STARS



GIZMO



GOBLIN EGGS

GOURDS

PEPO

Pricing on page 62

	Days	Features
26042 Galaxy of Stars	90 - 100	An exciting Rupp hybrid gourd mixture in the shape of a 5 point star in many colors that can be mechanically washed. A unique gourd for table decorations.
26009 Gizmo	90 - 100	A Rupp winged gourd mix, which is unique for its bush plant type, offers fruit with rich colors including dark green, orange, yellow, light green, and white. This hard-shelled variety yields fruit that are 3 - 5" tall by 6 - 8" wide at the tip of the wings. Is sure to be another great addition to your fall decoration lineup.
26039 Goblin Eggs	90 - 100	A Hollar product that produces a multitude of egg shaped gourds in a rainbow of colors and stripes. The logical replacement for Nest Egg gourd.
26012 Hoargarth	90	A distinctive orange and dark green gourd that will add texture to your fall displays. The wart covered fruit are 7" wide by 5" high and grow on an intermediate bush plant.
26043 Lunch Lady	110	A one-of-a-kind large warted gourd. It produces an array of shapes & colors with fruit sizes from 3-10 lbs, all hard shells with warts.
26026 Rupp Fancy Warted	100	A mixture of warted gourds with shapes like spoons, pears, and rounds; all warted and very colorful.
26005 Rupp Small Formula Blend	90 - 100	A blend of fancy small types with a few plain varieties. Includes Shenot Crown of Thorns, Rupp Fancy Warted and Small Spoon.
26013 Small Flat Striped	90	A green fruit with yellow stripes that is 3" in diameter by 2" high.
26011 Small Spoon	90	A bicolor yellow and green fruit that is shaped like a small club or dipper.

GOURDS PEPO

M=1,000 seeds Descriptions on page 61

	Priced per package		Priced per pound		Seeds /lb.
	1 oz.	4 oz.	1#	5#	
26043 Lunch Lady	19.65	46.20	134.80	131.80	3,300
26010 Pear Bi-Color	9.95	23.40	68.30	65.30	10,100
26026 Rupp Fancy Warted	14.00	32.85	95.80	92.80	8,600
26005 Rupp Small Formula Blend	10.30	24.15	70.45	67.45	9,300
26013 Small Flat Striped	9.95	23.40	68.30	65.30	9,700
26011 Small Spoon	9.95	23.40	68.30	65.30	11,000

GOURDS PEPO

M=1,000 seeds Descriptions on page 61

	Priced per package		Priced per 1,000 seeds			Seeds /lb.
	250 Seeds	1M	5M	25M		
26501 Autumn Wings Large Swan	8.35	23.90	22.90	21.90	7,300	
Autumn Wings Large Swan						
26501 ^{F1400}	10.35	29.75	28.75	27.75	7,300	
Autumn Wings Large Swan						
26501U ^{Untreated}	8.35	23.90	22.90	21.90	7,300	
26502 Autumn Wings Medium	8.35	23.90	22.90	21.90	8,000	
26502 Autumn Wings Medium ^{F1400}	10.35	29.75	28.75	27.75	8,000	
26502U Autumn Wings Medium ^{Untreated}	8.35	23.90	22.90	21.90	8,000	
26503 Autumn Wings Small	8.35	23.90	22.90	21.90	7,800	
26503 Autumn Wings Small ^{F1400}	10.35	29.75	28.75	27.75	7,800	
26503U Autumn Wings Small ^{Untreated}	8.35	23.90	22.90	21.90	7,800	
26510 Autumn Wings Blend	8.35	23.90	22.90	21.90	7,900	
26510 Autumn Wings Blend ^{F1400}	10.35	29.75	28.75	27.75	7,900	
26042 Galaxy of Stars	27.15	78.00	77.00	76.00	10,000	
26042 Galaxy of Stars ^{F1400}	29.15	83.85	82.85	81.85	10,000	
26042U Galaxy of Stars ^{Untreated}	27.15	78.00	77.00	76.00	10,000	
26009 Gizmo ^{F1400}	32.85	94.50	93.50	92.50	6,600	
26039 Goblin Eggs	32.45	93.30	92.30	91.30	14,200	
26012 Hoargarth ^{F1400}	32.55	93.65	92.65	91.65	3,500	
26041 Koshare Yellow	32.45	93.30			11,000	



HOARGARTH



LUNCH LADY



RUPP FANCY
WARTED



RUPP SMALL
FORMULA BLEND



FRESH PAK



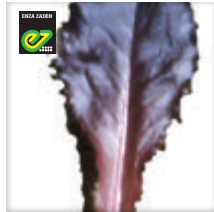
CELINET



BOLSACHICA



AEROSTAR



TAMARINDO



BLADE



DERONDA



MIZ AMERICA

GREENS		Pricing on page 64	
	Days	Features	
Asian			
49009 Mizuna Japanese Green	21 - baby, 40 - full	An oriental, non-pungent mustard with tender, narrow stems and deeply cut, fringed leaves.	
49006 Tatsoi Oriental Green	21 - 28 baby, 45 - 50 full	Spoon shaped, thick, very dark green leaves. Plants are a compact rosette growth.	
Baby Leaf - Beet			
14201 Fresh Pak	25 - 35	A perfect choice for baby leaf and spring mix growers. Nice dark green leaves paired with dark red petioles that make it stand out. Fresh Pak has a well-defined venation that runs throughout the leaf. It is a slow to moderate growing variety. High resistance to Downy Mildew race 1 and IR to Cercospora leaf spot.	
Baby Leaf Lettuce - Green Leaf			
30107 Celinet		Narrow-cutting surface with good leaf flexibility and attractive leaf fruit.	
Baby Leaf Lettuce - Green Oak Leaf			
30101 Bolsachica		Dark green oak leaf for baby leaf production with full Downy Mildew resistance. Nicely serrated, thick green leaves stand up straight and have a very small leaf attachment. Maintains a deep green tone. High resistance to Downy Mildew races: 1-26 and Lettuce Leaf Aphid race: 0.	
Baby Leaf Lettuce - Green Romaine			
30102 Aerostar		Mid-size dark green romaine with excellent disease resistance. A dual purpose variety that works well for medium size romaine heads or as a baby leaf. Dark green leaves are relatively smooth, heading up well all season long. High resistance to Downy Mildew races: 1-27. Intermediate resistance to Lettuce Mosaic Virus.	
Baby Leaf Lettuce - Red Leaf			
30104 Tamarindo		A red leaf baby leaf variety with improved texture and yield on an erect plant. High resistance to Downy Mildew races: 1-26 & 28.	
Baby Leaf Lettuce - Red Oak Leaf			
30106 Blade		Extremely upright, uniform, cherry-colored variety with good shelf life and field-holding ability.	
Baby Leaf Lettuce - Red Romaine			
30108 Deronda		Dark red variety for baby leaf. Thick-leaved with nice leaf structure. Real romaine shape.	
Baby Leaf - Mustard			
32100 Miz America <small>Baby Leaf Mustard</small>	20 - 25	A red mizuna hybrid with exceptionally uniform leaf color, shape and size. Maintains deep dark red color on both sides of the leaf even at a mature stage. An upright plant habit makes for easy harvesting. Has a pleasant, mild taste - not bitter or spicy.	

Additional Greens descriptions and pricing can be found on the next page -->.



SEASIDE



FIRE FRESH



RED GIANT
MUSTARD

FINANCING AVAILABLE

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0%



**JOHN DEERE
FINANCIAL**

GREENS		Pricing on page 64	
	Days	Features	
Baby Leaf - Spinach			
41006 Seaside		Very uniform baby leaf variety. Moderate growth rate and an upright plant habit. Smooth, thick, very dark green, spade-shaped leaf making it a perfect choice for baby leaf growers. Downy mildew resistance for growers who require a premium disease package.	
Baby Leaf - Swiss Chard			
43100 Fire Fresh		Bright red petioles and medium dark green leaves that make it a great choice for baby leaf or spring mix growers. Moderate to fast growth rate and an upright plant habit. Round to oval leaves that have a slight texture. Premium disease package.	
Gourmet			
25501 Grazia Wild Arugula	40	A popular, improved, wild Arugula selection that is very uniform with dark green leaves. It is slower bolting than standard arugula with the best shelf life of any other variety in the market.	
25504 Peppergrass Cress	10	A pungent flavor that brightens up salads or sandwiches. Easy to grow in flats or on your windowsill. Begin harvest when about 2" tall.	
25503 Rocket Arugula ^{Rugola}	40	Best in cool seasons. Imparts a rich, unmistakable flavor to salads.	
25507 Sorrel	60	A perennial green with an extremely lemony flavor. Used in salads, soups and sauces, especially with fish dishes. Favored in Europe.	
25505 Upland Cress	50	A cress that is much easier to grow than Watercress, but very similar. Plant is a 6 - 8" rosette and has a spicy flavor.	
Mustard			
25508 Red Giant Mustard	23 - baby, 45 - full	Thick, tender, fine flavored savoyed leaves with a purplish red color make this item a fine addition to your gourmet salad mixes. Very pungent when mature.	

GREENS	M=1,000 seeds			
	Priced per package	1 oz.	4 oz.	1#
Asian				
49009U Mizuna Japanese Green ^{Untreated}	3.70	8.30	23.70	
49006U Tatsoi Oriental Green ^{Untreated}	3.80	8.60	24.50	
Gourmet				
25504U Peppergrass Cress ^{Untreated}	2.70	6.05	17.25	
25503U Rocket Arugula ^{Rugola Untreated}	3.10	6.95	19.75	
25507U Sorrel ^{Untreated}	6.40	14.45	41.15	
25505U Upland Cress ^{Untreated}	2.80	6.30	17.90	
Mustard				
25508U Red Giant Mustard ^{Untreated}	4.40	10.00	28.50	
Priced per 1,000 seeds in these package sizes				
	25M	100M	500M*	
Gourmet				
25501 Grazia Wild Arugula	0.23	0.17	0.07	
Priced per 1,000 seeds in these package sizes				
	5M	100M	500M*	
Baby Leaf - Beet				
14201 Fresh Pak	0.66	0.60	0.50	
Baby Leaf Lettuce - Green Leaf				
30107U Celinet ^{Untreated}	0.80	0.70	0.60	

GREENS	M=1,000 seeds			
	Priced per 1,000 seeds in these package sizes	5M	100M	500M*
Baby Leaf Lettuce - Green Oak Leaf				
30101U Bolsachica ^{Untreated}	0.80	0.70	0.60	
Baby Leaf Lettuce - Green Romaine				
30102U Aerostar ^{Untreated}	0.80	0.70	0.60	
Baby Leaf Lettuce - Red Leaf				
30104U Tamarindo ^{Untreated}	0.80	0.70	0.60	
Baby Leaf Lettuce - Red Oak Leaf				
30106U Blade ^{Untreated}	0.80	0.70	0.60	
Baby Leaf Lettuce - Red Romaine				
30108U Deronda ^{Untreated}	0.80	0.70	0.60	
Baby Leaf - Mustard				
32100 Miz America	0.42	0.36	0.26	
Baby Leaf - Spinach				
41006 Seaside	0.56	0.50	0.40	
Baby Leaf - Swiss Chard				
43100 Fire Fresh	0.64	0.58	0.48	

* Multiple packages may be used to fill orders for these quantities.

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ELEONORA



EMILY



EVERLEAF EMERALD TOWERS **NEW**



EVERLEAF GENOVESE



GENOVESER



STARO

GROUND CHERRY

Features

26500 **Aunt Molly's Ground Cherry** Husk Tomato

That old, difficult-to-find heritage item cherished in pies, over ice cream, or in fresh fruit salads. The ½ - ¾" fruit are encased in a papery husk that turns brown when the fruit ripens. Grows on small vine on the ground.

GROUND CHERRY

Priced per package

100
Seeds

500
Seeds

1,000
Seeds

26500U **Aunt Molly's Ground Cherry** Untreated

3.65

5.60

8.00

HERBS

Pricing on page 67

Annual /
Perennial

Features

Basil

27023 **Cinnamon**

A

A cinnamon fragrance combined with basil's sweet essence. Leaves make a delicate flavored jelly, excellent tea, and adds a new flavor when used in your favorite recipes.

27003 **Eleonora**

A

Intermediate resistance to downy mildew. Big, lightly serrated leaves. For open field and in pots.

27035 **Emily**

A

A compact Genovese type basil with medium to large leaves. Because of improved shelf life Emily is recommended for summer production and year round in hot climates; works well in the field or greenhouse. Excellent performance against Fusarium.

NEW

27019 **Everleaf Emerald Towers**

A

Flowers up to 10 to 12 weeks later than standard basil. Well-branched variety with dark green, glossy foliage and short internodes. Makes a beautiful towering plant with huge harvest potential that stays tidy for many uses, including in-ground, container gardens and hydroponics. Traditional Genovese flavor is perfect for eating fresh in caprese salad or chopped fresh in recipes.

27006 **Everleaf Genovese**

A

The first basil bred for season-long performance and continual harvesting. Flowers up to 8 weeks later than standard basil. Compact, highly branched plant perfect for in-ground and potted plant production. Robust Genovese flavor, perfect for pesto and other sauces. Intermediate resistance to downy mildew and resistant to Fusarium.

27033 **Genoveser**

A

A special, high yielding strain, dark green, cup shaped selection, glossy leaf, recommended for field production.

27012 **Italian Large Leaf**

A

Leaves are broad, oval and crinkly with spicy flavor. Used in perfumes, Italian seasonings, and soups.

27017 **Lemon**

A

Pleasing citrus aroma, excellent in vinegars or with fish.

27018 **Purple**

A

Has a plant with intense purple leaves used for ornamental plantings and seasonings.

27040 **Rosie**

A

A selection with intensive red color, excellent aroma and quick growing. Recommended for field or greenhouse production.

27030 **Siam Queen**

A

An improved cultivar of ornamental and aromatic Thai basil. Has 3" leaves, distinctive purple stems, and is an eye-catching addition with flowers for an edible landscape accent. Has an exotic flavor.

Borage

27004 **Borage**

A

Flavor similar to cucumbers, used to flavor soups, salads, curries, fish and chicken dishes. Blue star shaped flower is also edible and an attractant to bees.

Catnip

27509 **Catnip**

P

A vigorous growing mint loved by cats. Grayish green leaves have a strong mint-like flavor.

Chervil

27005 **Chervil**

A

The fine cut, deep green leaves look like a delicate, lacy version of parsley. Flavor is a mild anise/parsley and goes well with fish, seafood, eggs or in salads. At its best fresh from the garden.

Additional Herbs can be found on the next page --->.



GREEN SLEEVES



MARJORAM, SWEET



OREGANO
VULGARE



GIGANTE D'ITALIA



SAGE



SUMMER SAVORY

HERBS

Pricing on page 67

	Annual / Perennial	Features
Chives		
27510 Garlic	P	Leaves add a mild, delicate but distinctive garlic flavor to your favorite dishes. Best when raw or briefly cooked. The pretty white flowers also add flavor and eye appeal.
27515 Nelly	P	A fine to medium thick shafted, dark blue green variety. Strong against diseases, thrip spots and leaf tips. For fresh market and industry uses.
27514 Staro	P	Extra thick, dark green leaved variety for all growing purposes. Excellent for forcing and pot growing as well as field production.
Coriander / Cilantro		
27002 Calypso	A	British bred coriander has excellent bolting resistance and can be cut back and allowed to re-grow at least 3 times throughout the summer due to its extremely low growing point. This quick growing annual herb is best grown for its delicious foliage that can be added to salads, curries and soups.
27013 Santo	A	A fast growing, yet slow bolting strain with very high yield. For Mexican and Oriental cooking. Monogerm seed.
Dill		
27007 Bouquet	A	A development from Mammoth Dill. Used in pickles and salad dressings. Adds zest to salads, soups, and vegetables.
27516 Green Sleeves	A	A very stable, fast growing, medium fine leaved variety of dark green dill for production of fresh bundles. Strong bolt resistance. 2 - 2 ½ feet tall.
Fennel		
27008 Fennel ^{Florence}	A	Anise like flavor is used to flavor eggs, fish and sauces. The celery stems, bulbs and foliage are used fresh or cooked.
Lavender		
27502 Lavender ^{Vera}	P	Great for dried flowers, perfuming linens, and repelling moths. Hardy.
Marjoram		
27009 Marjoram ^{Sweet}	A	Used fresh or dried for seasonings in salads, vegetables, meats, soups, eggs, peas and beans.
Oregano		
27503 Oregano ^{Vulgare}	P	Purple flowered. Seasons tomato sauces, fish, salad dressings and pizza.
Parsley additional Parsley on page 83		
35012 Gigante d'Italia	A	A plain, dark green, large leaf sized variety; very aromatic and high yielding with multiple cuts.
Peppermint		
27504 Peppermint	P	Leaves used as mint tea and as a meat garnish. In addition, the mint oil has many other uses.
Rosemary		
27505 Rosemary	P	Leaves are used in seasoning meats, sauces, and wonderful for potpourri.
Sage		
27506 Sage	P	Most widely used herb. Seasons poultry, sausage, etc.
Summer Savory		
27011 Summer Savory	A	Fresh or dried, used as seasonings in gravies and stews.
Thyme		
27508 German Winter	P	Excellent seasoning for soups, i.e. clam chowder, as well as poultry, stews, sauces, pickles and salads.

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SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



JOHN DEERE FINANCIAL

0%

HERBS FOR THE PROFESSIONAL

M=1,000 seeds

	Priced per package			Priced per pound in these package sizes		
	1/4 oz	1 oz.	4 oz.	1#	5#	25#
Basil						
27023U Cinnamon Untreated	3.10	9.40	27.60	73.50	72.50	
27012U Italian Large Leaf Untreated	2.75	3.45	9.75	26.00	25.00	24.00
27017U Lemon Untreated	3.05	9.70	28.50	76.00	75.00	
27018U Purple Untreated	3.15	9.95	29.25	78.00	77.00	
27030U Siam Queen Thai Untreated	6.45	20.55	60.40	161.00	160.00	
	Priced per 1,000 seeds in these package sizes					
	1M	5M	25M	100M		
27003 Eleonora	3.50	2.00	0.75	0.25		
27035 Emily	3.50	2.00	0.75	0.25		
Everleaf Emerald Towers						
27019	21.80	20.30	19.05	18.55		
27006 Everleaf Genovese	21.80	20.30	19.05	18.55		
27033 Genoveser	3.45	1.95	0.70	0.20		
27040 Rosie	3.55	2.05	0.80	0.30		
	Priced per package			Priced per pound in these package sizes		
	1/4 oz	1 oz.	4 oz.	1#	5#	25#
Borage						
27004U Borage Untreated	2.80	4.35	12.40	33.00	32.00	
Catnip						
27509U Catnip Untreated	3.00	7.05	20.65	55.00		
Chervil						
27005U Chervil Untreated		3.00	7.35	19.50	18.50	
Chives						
27510U Garlic Untreated	3.00	7.75	22.70	60.50	59.50	58.50
	Priced per 1,000 seeds in these package sizes					
	1M	5M	25M	100M		
27515 Nelly	3.55	2.05	0.80	0.30		
27514 Staro	3.55	2.05	0.80	0.30		

HERBS FOR THE PROFESSIONAL

M=1,000 seeds

	Priced per package			Priced per pound in these package sizes		
	1/4 oz	1 oz.	4 oz.	1#	5#	25#
Coriander / Cilantro						
27002U Calypso Untreated		2.80	3.80	9.95	8.95	7.95
27013 Santo		2.80	4.60	12.25	11.25	10.25
Dill						
27007U Bouquet Untreated		3.00	6.00	15.90	14.90	13.90
	Priced per 1,000 seeds in these package sizes					
	1M	5M	25M	100M		
27516 Green Sleeves	3.45	1.95	0.70	0.20		
	Priced per package			Priced per pound in these package sizes		
	1/4 oz	1 oz.	4 oz.	1#	5#	25#
Fennel						
27008U Fennel Florence Untreated		4.20	12.20	32.50	31.50	
Lavender						
27502U Lavender Vera Untreated	6.65	21.20	62.25	166.00	165.00	
Marjoram						
27009U Marjoram Sweet Untreated		10.35	30.40	81.00	80.00	
Oregano						
27503U Oregano Vulgare Untreated	6.65	21.20	62.25	166.00	165.00	
Parsley						
35012 Gigante d'Italia		4.65	6.30	18.00	17.00	16.00
Peppermint						
27504U Peppermint Untreated	18.00	57.55	169.15	451.00	450.00	
Rosemary						
27505U Rosemary Untreated	29.95	95.80	281.65	751.00	750.00	
Sage						
27506U Sage Untreated		11.55	33.70	89.75	88.75	
Summer Savory						
27011U Summer Savory Untreated		3.80	10.90	29.00	28.00	
	Priced per 1,000 seeds in these package sizes					
	1M	5M	25M	100M		
Thyme						
27508U German Winter Untreated	3.45	1.95	0.70	0.20		



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KALE

PLANTING

Plant rows 2' - 3' apart with plants 8" - 16" apart. Seeding rate should be approximately 2 to 4 pounds per acre. Preplant fertilizer should be 60 pounds per acre of nitrogen, 0 - 60 pounds of phosphorus, and 0 - 200 pounds of potassium per acre depending on soil test results.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Sidedress 30 - 60 pounds of nitrogen after transplants are established. Use crop rotation to help combat disease pressure. Scout fields for disease, mildew, and insects.

HARVEST

Kale can be harvested three ways: whole plant, bunched leaves, or "stripped" leaves. "Stripped" kale is pre-packaged for fresh market in all methods; yellow or damaged leaves must be removed before packing.

STORAGE

Leafy greens can be stored close to 32°F. At this temperature, they can be held for 10 - 14 days.



BLACK MAGIC



BLUE RIDGE



PIGEON PURPLE



PIGEON RED



PIGEON VICTORIA



PIGEON WHITE

KALE		Height	Features
Fresh Market			
28005	Black Magic	12 - 14"	Winter hardy Tuscan type with darker, savoyed leaves than conventional kales. Flavor improves with frost. Harvest early to use baby leaf as a savoyed brassica. Mature leaves grow as a rosette rather than on a true stem.
28504	Blue Ridge ^{F1}	12 - 14"	A superior quality kale that is slow to bolt and yields a highly frilled leaf suitable for both processing or fresh market bunching.
28006	Dwarf Green Curled Afro	12 - 14"	Good uniformity. It handles cold weather extremely well.
28503	Winterbor ^{F1}	18 - 24"	A Vates Blue Curled type with tall stems that allow easier stripping.
Heritage Varieties			
28001	Dwarf Blue Curled Scotch	12 - 14"	Tightly curled, dark blue color used many times for decoration of salad bars.
28004	Red Russian	24 - 36"	The most tender, mild flavored kale variety. Will wilt soon after harvest; should be cooled or consumed promptly.
28002	Siberian	12 - 15"	Very hardy, grown mostly in the South. Large coarse leaves with frilled edges. Bluish green.
Ornamental Flowering Varieties			
28505	Pigeon Purple Flowering Kale ^{F1}		A unique series of ornamental kales for the garden landscape and combination planters. Compact, dwarf plants with uniform, round shaped, solid heads and slightly waved leaves. Heads begin to show colors on the central leaves when the air temperature regularly drops below 55 - 60° F. Plant height 6 - 10 inches.
28506	Pigeon Red Flowering Kale ^{F1}		
28507	Pigeon Victoria Flowering Kale ^{F1}		
28508	Pigeon White Flowering Kale ^{F1}		

KALE		M=1,000 seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	25M	100M
28005	Black Magic	3.70	2.65	1.90	1.40
28504	Blue Ridge	10.05	9.00	8.25	7.75
28006U	Dwarf Green Curled Afro ^{Untreated}	3.70	2.65	1.90	1.40
28503	Winterbor	10.05	9.00	8.25	7.75
Priced per package 4 oz.					
Priced per pound in these package sizes		1#	5#	25#	
28001U	Dwarf Blue Curled Scotch ^{Untreated}	6.00	13.75	13.25	
28004U	Red Russian ^{Untreated}	13.15	29.25	28.75 28.50	
28002U	Siberian ^{Untreated}	5.65	13.00	12.50 12.25	
Priced per package		500 Seeds	1,000 Seeds		
Ornamental Flowering Kale					
28505U	Pigeon Purple Flowering Kale ^{Untreated}	12.00		19.00	
28506U	Pigeon Red Flowering Kale ^{Untreated}	12.00		19.00	
28507U	Pigeon Victoria Flowering Kale ^{Untreated}	12.00		19.00	
28508U	Pigeon White Flowering Kale ^{Untreated}	12.00		19.00	



KOLIBRI



QUICKSTAR



TADORNA



ALKINDUS



BARILLA



MERIDIAN **NEW**

KOHLRABI



	Days	Features
Fresh Market		
29001 Grand Duke Improved ^{F1}	55	AAS winner. Smooth, round bulbs, more uniform in adverse weather. Tolerant to black rot.
29002 Kolibri ^{F1}	45	Prettiest, most uniform purple variety available. 3" bulb with deep purple skin and crisp white flesh.
29004 Quickstar ^{F1}	49	A Sakata variety that is slow to bolt. Slightly broad dark green leaves. Extremely uniform fruit.
29005 Winner Improved ^{F1}	57	A medium early, higher yielding hybrid than Grand Duke with larger bulbs and later to pithiness.
Heritage Varieties		
29501 Early Purple Vienna	60	Reddish-purple colored bulb that is a slightly flattened globe, with tender white flesh.
29502 Early White Vienna	55	Similar in habit to Early Purple Vienna except medium green color.

LEEK

	Days	Features
30903 Large American Flag	85	Heritage Variety. Used for flavoring soups. 8 - 10" stems, mild flavor.
30908 Tadorna	100	An Enza variety that grows upright with a long white shaft and dark blue green foliage. Excellent quality for fall harvest, but can be over wintered where moderate winter conditions prevail. Good field holding ability and very easy to clean.

KOHLRABI

M=1,000 seeds

	Priced per package		Priced per 1,000 seeds in these package sizes	
	4 oz.	1#	1M	5#
29501U Early Purple Vienna ^{Untreated}	6.60	17.25	15.75	
29502U Early White Vienna ^{Untreated}	6.55	17.00	15.50	
	1M	5M	25M	100M
29001 Grand Duke Improved	5.55	5.00	4.50	4.00
29002 Kolibri	14.55	14.00	13.50	13.00
29004 Quickstar	8.35	7.80	7.30	6.80
29005 Winner Improved	5.70	5.15	4.65	4.15

LEEK

M=1,000 seeds

	Priced per package			Priced per 1,000 seeds in these package sizes
	1 oz.	4 oz.	1#	
30903U Large American Flag ^{Untreated}	3.60	12.95	34.50	
	1M	10M	100M	500M*
30908P Tadorna ^{Pelleted}	5.50	5.25	5.05	4.90

* Multiple packages may be used to fill orders for these quantities.

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SOMERSET



BERGAM'S GREEN



NEW RED FIRE



RED MIST



BREEN



ARROYO

LETTUCE		Features
Butterhead		
30309	Alkindus ^{Red}	A mid-sized variety with beautiful dark red color which is suitable for full season production.
30504	Barilla ^{Green}	A medium to dark green, thick-leaved lettuce with a strong base and good volume. It is strong against internal tipburn and appropriate for late spring and early autumn crops.
Iceberg		
NEW	30705 Meridian ^{Green}	Meridian is a pioneer! This variety is first to market with Fusarium Race 1 tolerance and offers the best tolerance commercially available in the iceberg category. Has performed well in trials in the Midwest and NE.
	30704 Somerset ^{Green}	A new summer Iceberg producing a flat round head with smooth ribs and great head protection. Somerset has good tolerance to tipburn and bolting.
Leaf		
30304	Bergam's Green ^{Green}	A non-heading, dark green variety.
30016	New Red Fire ^{Red}	The premier red lettuce for market growers. Superior appearance. Mosaic indexed.
30013	Red Mist ^{Red & Green}	Early variety with nice color contrast between red and green and high bolting tolerance. Also has moderate cold tolerance and strong tolerance to heat. Harvest summer to fall. Adapted for all major lettuce growing regions.
Romaine		
30214	Breen ^{Red}	A unique variety due to its brilliant purple-red exterior color and the interior green color. Top closes nicely, resulting in a perfect formed heart. Great tasting with excellent shelf life.
30211	Coastal Star ^{Green}	Taller and darker plant for spring and fall harvest. Early maturing and produces large and heavy heads.
Romaine Heart		
30203	Arroyo ^{Green}	A commercial introduction suitable for carton, fresh market and heart production. Shiny dark green. Broad seasonal adaptability.

LETTUCE EAZY LEAF	M=1,000 seeds	
Priced per 1,000 seeds in these package sizes	1M	10M
30404P Jeanine ^{Pelleted}	6.85	5.85

LETTUCE	M=1,000 seeds		
Priced per 1,000 seeds in these package sizes	5M	100M	500M
Butterhead			
30309P Alkindus ^{Primed/Pelleted}	5.70	5.35	5.10
30504P Barilla ^{Pelleted}	3.80	3.45	3.20
Iceberg			
30705P Meridian ^{Pelleted}	3.10	2.75	2.50
30704P Somerset ^{Pelleted}	2.50	2.15	1.90
Leaf			
30304P Bergam's Green ^{Primed/Pelleted}	2.30	1.95	1.70
30016P New Red Fire ^{Pelleted}	2.25	1.90	1.65
30016 New Red Fire	1.30	0.95	0.70
30013P Red Mist ^{Pelleted}	2.80	2.45	2.20
Romaine			
30214P Breen ^{Pelleted}	5.30	4.95	4.70
30211P Coastal Star ^{Pelleted}	2.15	1.80	1.55
Romaine Heart			
30203P Arroyo ^{Pelleted}	2.60	2.25	2.00



LETTUCE		BUTTERHEAD Heritage Varieties	
▲		Days	Features
30501	Bibb	60	Dark green with golden yellow interior. Small rosette 3 ½" in diameter.
30502	Buttercrunch	66	Similar fine flavor as Bibb, but more heat tolerant. Crisp, tender, sweet and slow to bolt.
30510	Merville de 4 Seasons	64	Large, ruby-tipped leaves surround tightly folded green hearts. Has crispy, fine flavor.
30034	Speckles	50	A red speckled green butterhead that originated from the Mennonites who brought it with them from Germany and Holland.
30503	Tom Thumb	65	Delicate, miniature butterheads. Perfect single serving size. Excellent flavor, crisp and sweet.

LETTUCE		CRISPHEAD Heritage Varieties	
▲		Days	Features
30702	Great Lakes Mesa 659		Widely planted. Popular under most northern conditions. Best either early or late season.
30701	Iceberg		Light green, medium sized heads that are solid. A popular variety for the home garden.

LETTUCE		LEAF Heritage Varieties	
▲		Days	Features
30004	Black Seeded Simpson		Compact with light green, frilled leaves, and crisp interior. Popular home garden variety.
30001	Chef's Delight Blend		A formula blend of leaf, butterhead, and romaine lettuces of many colors. For the home garden.
30005	Grand Rapids		Large, bright green leaves that are broad with wavy, curled edges. Popular home garden variety.
30036	Green Deer Tongue		An old Amish variety valued for its ruggedness and heavy production. Has sharply triangular leaves with straight edges.
30003	Green Ice		A favorite of many. Crisp, savoyed, fringed leaves are glossy green. Very slow to bolt.
30025	Lollo Rossa		A mild flavored, medium green with red edged leaves for garnishes. An unusual Italian lettuce.
30006	Oak Leaf		Leaves shaped similar to an Oak leaf. Withstands heat without becoming bitter.
30007	Prizehead		Loose curled, frilly outer leaves with inner leaves a medium green color, crisp and tender.
30027	Red Deer Tongue		Pretty, tongue-like, red blushed leaves with a plant that is larger than green Deer Tongue. Forms nice heads, great in cool weather. Amish heirloom.
30002	Red Sails		An AAS winner. Large, full, maroon tinged heads with wavy leaf margins.
30023	Red Salad Bowl		A burgundy red version of Salad Bowl. Delicate leaves form a full rosette.
30008	Salad Bowl		Similar in appearance to Oak Leaf, but leaves are lighter green and more deeply lobed. More heat resistant.
30014	Waldmanns Green ^{MT0}		Dark green variety used many times on salad bars. Excellent for market or garden.

LETTUCE		ROMAINE Heritage Varieties	
▲		Days	Features
30202	Cimmaron Red Cos		Unique dark red heading type for home garden or market.
30515	Freckles ^{Forellenschluss}		An Austrian heirloom, gorgeous with medium green leaves that are speckled with maroon. Holds well in the heat without bolting. Excellent flavor.
30201	Paris Island Cos		A tall, cylindrical plant with relatively firm heads. Hearts blanch white. Crisp, mild sweet flavor.

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LETTUCE BUTTERHEAD

		Priced per package		Priced per pound in these package sizes	
		1 oz.	4 oz.	1#	5#
30501U	Bibb Untreated		7.25	17.75	17.25
30502U	Buttercrunch Untreated		7.25	17.75	17.25
30510U	Merville de 4 Seasons Untreated		7.75	19.00	18.50
30034U	Speckles Untreated	5.10	16.30	45.50	45.00
30503U	Tom Thumb Untreated		7.45	18.25	17.75

LETTUCE CRISPHEAD

		Priced per package		Priced per pound in these package sizes	
		1 oz.	4 oz.	1#	5#
30702U	Great Lakes Mesa 659 Untreated	3.20	8.90	25.75	25.25
30701U	Iceberg Untreated		6.50	18.75	18.25

LETTUCE LEAF

		Priced per package		Priced per pound in these package sizes	
		1 oz.	4 oz.	1#	5#
30004U	Black Seeded Simpson Untreated		7.30	18.00	17.50
30001U	Chef's Delight Blend Untreated	6.85	18.10	50.50	50.00
30005U	Grand Rapids Untreated		7.10	17.50	17.00
30036U	Green Deer Tongue Untreated	5.50	14.50	40.50	40.00
30003U	Green Ice Untreated	5.30	13.95	39.00	38.50
30025U	Lollo Rossa Untreated	5.85	15.40	43.00	42.50
30006U	Oak Leaf Untreated		7.30	18.00	17.50
30007U	Prizehead Untreated		7.30	18.00	17.50
30027U	Red Deer Tongue Untreated	5.50	14.50	40.50	40.00
30002U	Red Sails Untreated	7.95	20.95	58.50	58.00
30023U	Red Salad Bowl Untreated		9.15	22.50	22.00
30008U	Salad Bowl Untreated		8.45	20.75	20.25
30014U	Waldmanns Green Untreated		7.00	17.25	16.75

LETTUCE ROMAINE

		Priced per package		Priced per pound in these package sizes	
		1 oz.	4 oz.	1#	5#
30202U	Cimmaron Red Cos Untreated	4.45	7.40	19.65	19.15
30515U	Freckles Untreated	17.75	28.05	79.00	78.50
30201U	Paris Island Cos Untreated	4.45	7.35	19.50	19.00

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



**JOHN DEERE
FINANCIAL**

0%



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line.

See page 158 for all of the details.

November7%
December6%
January5%
February4%
March3%
April2%

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THUNDERSTRUCK **NEW** pg. 76

MELONS

PLANTING

When direct seeding plant $\frac{1}{2}$ " - 1" deep. Soil temperature should be 75 - 85°F. Five to six feet is the recommended row spacing with 18 - 24 inches between plants. If starting with transplants sow 3 - 5 weeks prior to planting outside.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

To ensure high yield place pollinators near fields. A melon needs to be visited by a bee three times to ensure proper pollination. Scout every seven days for weed, insect, and disease pressure. Contact your local extension agent or consult the Midwest Vegetable Production Guide for identification and treatment options. www.ruppseeds.com/MVPG

HARVEST

Harvest 30 - 35 days after pollination. If shipping, pick at half slip. When picking for fresh market, pick at $\frac{3}{4}$ to full slip. Wash fruit in peroxyacetic acid (peroxide and acetic acid), as a non-chlorine sanitizing option.

STORAGE

Cool to at least 70°F and at 95% humidity. Shelf life is based on storage temperature. Do not cool below 32°F.

DISEASE CODES

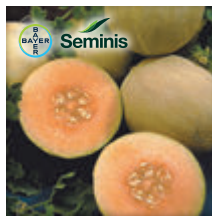
A - Anthracnose
DM - Downy Mildew
F - Fusarium
GSB - Gummy Stem Blight
PM - Powdery Mildew
PRSV - Papaya Ring Spot Virus
WMV - Watermelon Mosaic Virus
ZYMV - Zucchini Yellow Mosaic Virus



ACCOLADE



AFTERGLOW ★



AMBROSIA



APHRODITE ★



ASTOUND



ATHENA ★

MELONS		CANTALOUPE Hybrid					Pricing on page 77
▲		Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
	31015 Accolade	73	6	Medium Net / Light Sutures	Orange	F ^{0,1,2} , PM	Improved internal fruit quality for extended shelf life. Enhanced vine strength. Tight seed cavity with firm flesh.
★	31017 Afterglow	78	5 - 7	Medium Net / Deep Green Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	Late sutured melon with high Brix and firm flesh for extended holdability.
	31001 Ambrosia	86	4	Heavy Net / No Sutures	Salmon	PM	Very sweet home garden variety.
★	31071 Aphrodite	75	6 - 8	Coarse Net / Light Sutures	Salmon	F ^{0,1,2} , PM ^{1,2}	Today's standard for Eastern shipping melons. Larger and better holding ability than the former standard, Athena.
	31016 Astound	75	6	Medium Net / Light Sutures	Orange	F ^{0,1,2} , PM	Another new Syngenta release with improved flesh firmness. Very similar to Accolade while maturing approximately 2 days later.
★	31050 Athena	80	5 - 7	Medium Net / Light Sutures	Salmon	F ^{0,1,2} , PM ^{1,2}	Athena delivers the sweet flavor and texture consumers demand. Athena melons stay firm even when harvested at full slip.
	31077 Atlantis	75	6 - 8	Refined Net / Light Sutures	Deep Orange	F ^{0,1,2} , PM ^{1,2}	An Eastern melon with round oval shape, excellent interior quality, firm flesh and high sugar content. Works as a shipper or farm market.
★	31084 Avatar	75	7 - 9	Full Net	Orange	F ^{0,1,2} , PM ^{1,2}	Large Eastern shipper with medium open cavity. Firm, flavorful orange flesh. Exterior is light green and turns to a yellow-tan when fully ripe. Ideal for higher latitudes.
★	31014 Cleopatra	70	4 - 6	Medium Net / Light Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	Consistent early fruit set. Tight seed cavity and great quality for an early variety. Suitable for local delivery, roadside stands and fresh market. Great as a first early or to plant with Goddess.

Additional Cantaloupe Melons can be found on the next page -->.

GROWER PREFERRED ALL-STARS ★ MELONS

These melons continue to be the top performing varieties for growers. If you are looking to add melons to your operation you can't go wrong with these All-Stars.

CANTALOUPE

Afterglow is an extremely dependable half Tuscan melon with high sugars and firm flesh. Afterglow will keep your customers coming back for more.

The most widely grown melon in the North and Midwest is **Aphrodite**. It is still the standard for many of our growers. This melon yields with the best of them.

Athena is the most widely grown melon in the Eastern U.S. With its excellent disease tolerance and sought after quality, it is well known in the marketplace.

Flavor, size and yield have combined to make **Avatar** a favorite of many of our growers. For those of you who are looking for a large eastern type melon, this is one to try.

Cleopatra is similar to the popular Goddess variety with much better netting and a more consistent size. Include this 70 day melon in your program.

Shockwave is a long shelf life melon with high Brix and excellent flavor. It's color change at maturity will help indicate its peak quality at picking.

PERSONAL SIZED

If you are looking for a personal sized hybrid, look no further than **Sugar Cube**, with perhaps the best eating quality of any melon on the market (high Brix, firm flesh, great flavor). Sample this one at your market and it will sell itself. It is also just the right size for smaller households or the CSA box. This melon slips easily and will hold and ship without losing quality. The perfect personal sized melon!

Brad Paulson
Vegetable Consultant





ATLANTIS



AVATAR ★



CLEOPATRA ★



DAMARIS



GODDESS



INFINITE GOLD



MINERVA



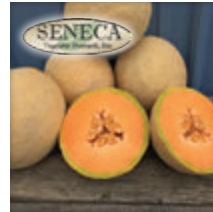
ORANGE SHERBET



SHOCKWAVE ★



SOLSTICE



SUGAR RUSH



SUN BLUSHED

MELONS CANTALOUPE Hybrid Pricing on page 77

▲	Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
31020 Damaris	78 - 80	5 - 6	Medium Net / No Sutures	Orange	F ⁰ , PM ^{2,3,5}	Damaris is an oval-shaped, extended shelf life melon with a solid disease package. Features a tight cavity with firm flesh.
31075 Goddess	68	5 - 6	Medium Net / Light Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	An extremely early Athena type with good disease tolerance and good holding ability.
31006 Infinite Gold	84	5 - 7	Heavy Net / No Sutures	Deep Orange	F ^{1,2} , PM ²	This melon has been bred for strong performance and long shelf life, without sacrificing great flavor and fruit quality. Offers strong vines, high yield potential, uniform size and shape.
31072 Minerva	77	7 - 8	Heavy Net / Light Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	A Syngenta melon, similar fruit type to Athena, slightly larger with thick, firm flesh.
31076 Orange Sherbet	80	7	Heavy Net / Deep Green Sutures	Bright Orange	F ^{1,2} , PM ²	A gourmet, Eastern cantaloupe with outstanding eating quality and high Brix that will ship.
★ 31009 Shockwave	85	4 - 6	Medium Net / No Sutures	Deep Orange	F ^{0,1,2} , PM ^{1,2}	Outstanding eating quality with an average Brix of 15%. Has firm flesh with a very small seed cavity. This melon has an extended holdability for a controlled pick. Slips when mature.
31085 Solstice	78	7 - 12	Heavy Net / Deep Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	A Seneca Vegetable Research release similar to old "Eastern" types. Has great sugar, flavor and yield. Very large fruit. Great disease package.
31018 Sugar Rush	75	4	Medium Net / No Sutures	Orange	F ^{0,1,2} , PM ^{1,2}	Quality meets size. This is the big brother to Sugar Cube. Productive plant and high Brix.
31019 Sun Blushed	82	4 - 6	Heavy Net / Light Sutures	Deep Orange	F ^{0,1} , PM	Extended shelf life (ESL) western type hybrid with excellent flavor. Firm and attractive flesh with extremely high Brix.
31021 Thunderstruck	80	5 - 7	Medium Net / No Sutures	Deep Orange	F ^{0,1,2} , PM ^{1,2}	A new melon from Seneca Vegetable Research with outstanding Eastern flavor and texture. Full slip, full color change with enhanced holding ability. Great sugar levels.
31083 Tirreno	83	4 - 6	Medium Net / Deep Green Sutures	Orange	F ^{1,2,5} , PM ^{1,2,3}	Possesses beautiful firm flesh and offers excellent holding ability. Also has shown tremendous plant health in the field for excellent yield potential. Very good eating quality.

MELONS MIXED/SPECIALTY Hybrid

▲	Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
31704 Ambassador	76	6 - 8	Heavy Net / Slight Sutures	Ivory / Green	F ^{0,1,2} , PM ^{1,2}	Larger than other galia melons with high Brix and enhanced fruit firmness for excellent storage ability. Ideal for main season when great tasting melons are desired.
31011 Earli-Dew	85	3 - 4	No Net / No Sutures	Lime Green	F	Early Honeydew type. Slips when mature.

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THUNDERSTRUCK **NEW**



TIRRENO



AMBASSADOR



SENSATION



SIGAL



SUPER NECTAR

MELONS		MIXED/SPECIALTY Hybrid					
		Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
31721	Lilly	85	6 - 8	Lightly Corrugated / Smooth	Light Orange	PM ^{1,2}	Very early Crenshaw hybrid with outstanding taste, high Brix (to 17%) and good yields. A trial pack of 10 different melons (50 seeds of each) which includes: all of the mixed/specialty plus some of the best cantaloupe varieties. Varieties are individually labeled and packed.
31700	Mixed Melon Pak						
31709	Passport	75	6	Light Net / Slight Sutures	Green		An early, large, Galia type melon with delightful flavor for market or home garden. Superb flavor and earliness sets this one apart.
31722	Sensation	85	5 ½ - 6	Light Net	Light Green to White early. White at maturity.	F, PM	A melon from Hollar with exceptional eating quality. Flesh is green and white, firm and sweet when picked early; white and soft when picked fully ripe.
31733	Sigal	60	6	Corky Net	Ivory / Green	PM ^{1,2}	An early, large Galia type melon with superb flavor.
31705	Super Nectar	90	5-6	No Net / No Sutures	Lime Green	F, PM	Excellent main season honeydew with smooth, dense flesh and savory flavor. Vine is vigorous and adds good cover and protection from sunburn. Good Brix and firmness.
31732	Tweety	70	4 - 6	Wrinkled Skin	Ivory / Green	A, F ^{1,2} , GSB	A sweet Canary melon with a small seed cavity and firm flesh. Very early for a Canary.

MELONS CANTALOUPE Hybrid		M=1,000 seeds				
Priced per package	100 Seeds	500 Seeds	Priced per 1,000 seeds in these package sizes			
			1M	5M	15M*	90M*
31015 Accolade ^{F300}	14.60	57.45	82.05	78.95	76.95	75.95
31017 Afterglow	10.90	42.80	61.10	58.00	56.00	55.00
31001 Ambrosia ^{F300}	12.60	49.60	70.80	67.70	65.70	64.70
31071 Aphrodite ^{F300}	13.10	51.55	73.60	70.50	68.50	67.50
31016 Astound ^{F300}	14.35	56.35	80.45	77.35	75.35	74.35
31050 Athena ^{F300}	13.40	52.60	75.10	72.00	70.00	69.00
31077 Atlantis ^{F300}	9.50	37.30	53.25	50.15	48.15	47.15
31084 Avatar ^{F300}	11.50	45.25	64.60	61.50	59.50	58.50
31014 Cleopatra	10.85	42.70	60.95	57.85	55.85	54.85
31020 Damaris ^{F300}	14.20	55.90	79.85	76.75	74.75	73.75
31075 Goddess	11.95	46.95	67.05	63.95	61.95	60.95
31006 Infinite Gold ^{F300}	20.75	81.65	116.60	113.50	111.50	110.50
31072 Minerva ^{F300}	11.55	45.35	64.75	61.65	59.65	58.65
31076 Orange Sherbet	9.60	37.60	53.65	50.55	48.55	47.55
31009 Shockwave	14.70	57.50	82.10	79.00	77.00	76.00
31085 Solstice	10.95	43.05	61.50	58.40	56.40	55.40
31018 Sugar Rush	12.30	48.35	69.05	65.95	63.95	62.95
31019 Sun Blushed	12.75	50.10	71.55	68.45	66.45	65.45
31021 Thunderstruck	12.30	48.35	69.05	65.95	63.95	62.95
31083 Tirreno	21.85	86.00	122.85	119.75	117.75	116.75

* Multiple packages may be used to fill orders for these quantities.

MELONS MIXED/SPECIALTY Hybrid		M=1,000 seeds			
Priced per package	100 Seeds	500 Seeds	Priced per 1,000 seeds in these package sizes		
			1M	5M	15M*
31704 Ambassador	11.35	45.00	64.25	61.15	59.15
31011 Earli-Dew ^{F300}	12.45	49.25	70.30	67.20	65.20
31721 Lilly	9.05	35.75	51.05	47.95	45.95
31700 Mixed Melon Pak	60.00		For 50 seeds		
31709 Passport	9.40	37.25	53.20	50.10	48.10
31722 Sensation	13.10	51.80	74.00	70.90	68.90
31733 Sigal	9.50	37.60	53.70	50.60	48.60
31705 Super Nectar	8.45	33.50	47.80	44.70	42.70
31732 Tweety	9.30	36.90	52.65	49.55	47.55

* Multiple packages may be used to fill orders for these quantities.



TWEETY



SUGAR CUBE ★



TASTY BITES



JAMBALAYA

ORDERS
OVER \$250
ARE SHIPPED
FREE!

MELONS		PERSONAL SIZE Hybrid				
▲	Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
★ 31078 Sugar Cube	80	2	Medium Net / Light Sutures	Deep Orange	F ^{0,1,2} , PM ^{1,2} , PRSV, WMV, ZYMV	<i>A personal size melon with deep orange flesh, amazing quality (14% Brix), with excellent shelf life. In addition, has the best disease resistance package. Fruit size is around 4".</i>
31727 Tasty Bites	75 - 80	1	Light Net / Light Suture	Orange	A, F ^{1,2,3} , PM	<i>A mini mixed melon developed through a Charantais Ananas cross. Characterized by its sweet (15% Brix) and strikingly unusual flavor, this mini melon can only be rated as gourmet and adds an attractive and unique touch to any table. Highly productive and can easily be grown and harvested.</i>

MELONS		OP Heritage Varieties				
▲	Days	Fruit Size pounds	Net / Sutures	Flesh Color	Disease	Features
<i>Cantaloupe</i>						
31502 Delicious 51	83	4 - 5	Medium Net	Orange		<i>Home garden variety.</i>
31503 Hales Best Jumbo	83	4 - 5	Well Netted	Salmon		<i>Good flavored, home garden melon.</i>
31506 Honey Rock	85	4 - 5	Coarse Net	Salmon	F	<i>Home garden melon with coarse flesh.</i>
31508 Iroquois	87	4 - 5	Coarse Net	Deep Orange	F	<i>Sweet flesh melon for garden or local market.</i>
<i>Mixed / Specialty</i>						
31511 Honey Dew Green Flesh	110	4 - 6	Smooth Skin	Green		<i>A popular light skinned, green fleshed melon.</i>

	MELONS PERSONAL SIZE Hybrid					M=1,000 seeds
	Priced per package		Priced per 1,000 seeds in these package sizes			
	100 Seeds	500 Seeds	1M	5M	15M*	
31078 Sugar Cube	12.05	47.65	68.05	64.95	62.95	
31727 Tasty Bites	10.35	40.95	58.45	55.35	53.35	

* Multiple packages may be used to fill orders for these quantities.

	MELONS OP				
	Priced per package		Priced per pound in these package sizes		
	1 oz.	4 oz.	1#	5#	
<i>Cantaloupe</i>					
31502U Delicious 51 Untreated	4.45	8.25	22.00	21.00	
31503 Hales Best Jumbo	5.00	9.30	24.75	23.75	
31506U Honey Rock Untreated	5.00	9.30	24.75	23.75	
31508U Iroquois Untreated	4.25	7.90	21.00	20.00	
<i>Mixed / Specialty</i>					
31511U Honey Dew Green Flesh Untreated	5.00	9.30	24.75	23.75	

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Naturall™ VEGETABLE ROOT INOCULANT
 Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



JOHN DEERE FINANCIAL

0%

MUSTARD			
	Days	Features	
Fresh Market			
32005 Savannah ^{F1 Mustard Spinach}	35	An early maturing, broadleaf, tendergreen mustard. Faster growing and slower bolting than OP's.	
Heritage Varieties			
32004 Florida Broadleaf	50	Large, semi-upright spreading leafy plant, round/oval serrated dark green leaves. Cream colored midribs.	
32001 Green Wave	45	Large upright plant, Southern Curled type, deeply frilled and finely cut leaves. Spicy flavor.	
32003 Southern Giant Curled	45	Large upright plant, large bright green leaves with crumpled frilled edges. Mild but mustard flavor.	

OKRA			
	Days	Features	
33005 Burgundy	60	AAS winner. Deep burgundy plants with yellow flowers provide ornamental value with tender pods.	
33002 Clemson Spineless	55	3 - 4' tall plants with 6 - 7" straight, slim, tapered pods on a spineless plant.	
33003 Dwarf Long Green Pod	55	2 - 3' tall plant with dark green, tender pods.	
33009 Jambalaya ^{F1}	50	Compact plant with small leaves. High yields with uniform fruit. Very early.	

MUSTARD					
	Priced per package	4 oz.			
	Priced per pound	1#	5#	50#	
	in these package sizes				
32004U Florida Broadleaf ^{Untreated}	6.65	11.75	11.25	10.75	
32001U Green Wave ^{Untreated}	7.30	12.95	12.45	11.95	
32005 Savannah	58.50	104.00	103.00	102.00	
32003U Southern Giant Curled ^{Untreated}	7.20	12.75	12.25	11.75	

OKRA					
	Priced per package	1 oz.	4 oz.		
	Priced per pound		1#	5#	
	in these package sizes				
33005U Burgundy ^{Untreated}	7.50	11.50	11.25		
33002U Clemson Spineless ^{Untreated}	5.60	8.60	8.35		
33003U Dwarf Long Green Pod ^{Untreated}	5.60	8.60	8.35		
33009 Jambalaya	16.00	47.35	149.00	148.00	



CANDY pg. 81

ONIONS

PLANTING

Onions are mostly direct seeded in the field, although some are transplanted as seedlings or sets. Transplants are sometimes used to improve bulb size, as well as to hasten maturity, or to avoid infection by some plant diseases, but this method of crop establishment is more expensive. Planting occurs from late March through early May. Between-row spacing varies considerably depending upon weed and foliar disease management, seeder capability, and harvesting equipment. In-row spacing also varies depending upon variety, desired bulb size, between row spacing, soil type, and other management considerations.

Bunching Onions - Direct seed in spring when the soil reaches 50°F. Plant seed ¼" deep and approximately ½" apart.

Bulb Onions/Short Day - Typically short day onions are direct seeded in the southern region of the United States. In order to grow short day onions in the northern region of the United States, the seed has to be sown in greenhouses and then transplanted into the field. Use pelleted seed if direct seeding to help achieve better singulation.

Bulb Onions/Intermediate Day - Direct seed intermediate day onions as soon as soil allows in April or early May. Sow seed 2" apart and thin to 3 - 4" apart for larger onions. Seeding depth should be approximately ¼" deep. If

transplanting seed in flats in late February to mid March, tops may be clipped to 5" tall. Use pelleted seed if direct seeding to help achieve better singulation.

Bulb Onions/Long Day - Direct seed long day onions as soon as soil allows in April or early May. Sow seed 2" apart and thin to 3 - 4" apart for larger onions. Seeding depth should be approximately ¼" deep. If transplanting seed in flats in late February to mid March, tops may be clipped to 5" tall. Use pelleted seed if direct seeding to help achieve better singulation. Plant long day onions in the northern latitudes.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

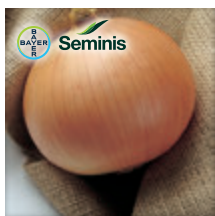
Keep onions well weeded with shallow cultivation. Onions are shallow rooted and grow best in moist soil; irrigation may be required. Keep direct seeded onions away from onion sets because onion sets are more prone to disease. Long day onions should be planted in northern latitudes because of daylight requirements for bulbing.

HARVEST

Onions are ready to harvest when tops approximately have 50 - 75% fallen over and the skins have dried. Pull the bulbs by hand or use equipment such as a potato digger or under-cutter to cut the roots and lift the bulbs. Wait until all the leaves are dead and dry. It is likely the outer skins will loosen. Pulling onions too green will make them difficult to cure and will affect storing them. Harvest when the weather is dry.

STORAGE

Cure onions at 65 - 85°F at 70% humidity. Curing decreases the incidence of neck rot, reduces water loss during storage, prevents microbial infection, and is desirable for development of good scale color. Curing can be done in the field, preferably when the weather is warm and dry. If it rains let them dry fully before handling. A greenhouse or hoop house also provides good conditions for curing. Temperatures in the 80's will enhance the bronze color in the skins. Sunshine is good as long as it is not too hot. Extreme sun can produce sunscald. Store onions out of the sun; exposure to light after curing will induce greening of outer scales. Optimum temperature for long term storage of onions is 32°F with 65 - 70% humidity. It is important to cool them down slowly. Using cool late summer and fall temperatures works great to cool onions down slowly.



CANDY



GREAT WESTERN



GREAT WHITE



RED CANYON



SPANISH
MEDALLION



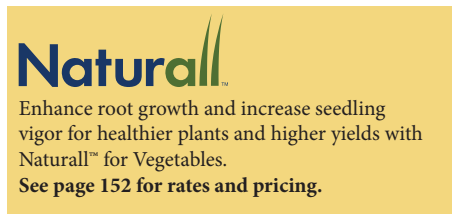
GENESIS



RED DEFENDER



SV4643NT



ISHIKURA IMPROVED
BUNCHING



RED BUNCHING

ONIONS		Pricing on page 82				
		Maturity	Color	Bulb Shape	Storage	Features
Bulb Onions / Intermediate Day						
34020	Candy ^{F1}	100	Yellow	Globe	Short	A mild flavored Seminis onion that will perform well when plants are transplanted for extra large to jumbo sizes. Short term storage only.
34004	Great Western ^{F1}	110	Yellow	Globe	Short	Can be grown in all intermediate growing areas. Has good firmness with good skin retention. It will cut a high percentage of single centers and can be direct seeded or transplanted. This variety has strong plant growth with sizes that range from colossal to jumbo.
34021	Great White ^{F1}	103	White	Globe	Medium	A White Spanish Class onion. Great yield potential for its maturity. Has attractive, luminescent white package with a high rate of single centers.
34016	Red Canyon ^{F1}	100	Red	Globe	Medium	Red Canyon is an early choice for intermediates. It has a solid and consistent globe shape and a bold red color. Dependable yields with a high percentage of single centers containing distinct red rings.
34039	Spanish Medallion ^{F1}	115	Yellow	Globe	Short	This Sweet Spanish type yellow onion is firm with excellent skin retention. It is globe to tall globe shape and jumbo to colossal in size. It is tolerant to pink root and fusarium basal rot.
Bulb Onions / Long Day						
34051	Genesis ^{F1}	100	Yellow	Globe	Medium	An early maturing hybrid that produces uniform globe shaped bulbs with golden brown coloring. Boasts good tolerance to both pink root and fusarium.
34045	Red Defender ^{F1}	125	Red	Globe	Long	Very dark red interior and exterior with uniform bulbs. Good for transplanting.
34000	SV4643NT ^{F1}	112	Red	Flattened Globe	Long	Bold red colored variety with excellent yield potential. Has both superb interior and exterior color. Stores very well.
34501	White Sweet Spanish	115	White	Sweet Spanish	Short	Popular white sweet onion variety for use in home garden or market. Large fruit, for fresh use. Does not store well.
34502	Yellow Sweet Spanish	115	Yellow	Sweet Spanish	Short	Popular yellow sweet onion variety for use in home garden or market. Large fruit, for fresh use. Does not store well.
Bunching Onions						
34503	Evergreen White Bunching	120	White			Very long, white stems of delicate flavor. Hardy, winters well for early spring bunching.
34510	Ishikura Improved Bunching	120	White			A Tokyo Long type with fancy, lengthy, white stalks. A good shipper.
34036	Red Bunching ^{F1} DPS 3047	55	Red			A red skinned, white fleshed bunching onion with an attractive deep color. This onion makes a striking presentation in the market.



BROOM CORN **NEW**
SORGHUM BLEND



RED DEER

Natural[™] VEGETABLE ROOT INOCULANT
 Natural[™] for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

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ORNAMENTAL		SORGHUM / BROOMCORN	
	Days	Features	
NEW 05538 Broom Corn Sorghum Blend	100-110	This seed is a combination of our Mixed Color Broom Corn and the Colored Uprights Sorghum seeds. Seed head colors vary from either gold, bronze, red, brown, burgundy or black. Maturities vary from 100-110 days. As the seed heads matures, the color will deepen and become heavier and shiny.	
05506 Red Deer	120	The original corn used for making brooms.	

ONIONS	Descriptions on page 81.	M=1,000 seeds		
		5M	25M	100M
	<i>Priced per 1,000 seeds in these package sizes</i>			
34020 Candy ^{F300}		4.40	3.65	2.70
34020P Candy ^{F300 Pelleted}		5.05	4.20	3.10
34046P Chianti ^{F300 Pelleted}		8.05	6.70	4.95
34051U Genesis ^{Untreated}		3.20	2.65	1.95
34004 Great Western		5.50	4.55	3.35
34021P Great White ^{F300 Pelleted}		7.40	6.15	4.55
34036 Red Bunching ^{DPS 3047}		6.90	5.75	4.25
34016P Red Canyon ^{F300 Pelleted}		6.90	5.75	4.25
34045 Red Defender		4.40	3.65	2.70
34039 Spanish Medallion ^{Pelleted}		5.65	4.70	3.45
34056 Sweet Harvest		4.60	3.80	2.80
34000 SV4643NT ^{F300}		5.95	4.95	3.65
	<i>Priced per package</i>	1 oz.	4 oz.	1#
34503 Evergreen White Bunching		5.70	15.00	37.50
34510 Ishikura Improved Bunching		5.40	14.30	35.70
34501 White Sweet Spanish		6.20	16.40	41.00
34502 Yellow Sweet Spanish		6.20	16.40	41.00

ORNAMENTAL SORGHUM / BROOMCORN				
	Priced per package	4 oz.	1#	5#
	<i>Priced per pound in these package sizes</i>			
05538U Broom Corn Sorghum Blend ^{Untreated}	12.75	36.60	34.50	
05506U Red Deer ^{Untreated}	12.75	36.60	34.50	

FarMore[®] F300
Onion

FarMore F300, an advanced fungicide seed treatment technology, delivers protection for a variety of small-seeded vegetable crops against a broad spectrum of seed and seedling diseases. With the active ingredients mefenoxam (Apron XL), fludioxonil (Maxim[®] 4FS) and azoxystrobin (Dynasty[®]), FarMore F300 enhances seedling emergence, plant stand establishment, plant health, early-season vigor and yield potential. www.ruppseeds.com/f300

FarMore[®] treated items are highlighted in green in the price tables.
 Look for this symbol in the product description tables marking FarMore treated items.

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PARSLEY

	Days	Features
35005 Forest Green	75	A curled, dark green variety with erect plants that are vigorous with good holding ability and regrowth.
35012 Gigante d'Italia	75	A plain, dark green, large leaf sized variety; very aromatic and high yielding with multiple cuts.
35010 Hamburg Rooted	90	Traditional variety grown for its tapered root which resembles a small parsnip. Roots used for flavoring.
35002 Italian Dark Green	75	Flat, heavy leaves for flavoring and seasoning. Home garden or processing.
35004 Moss Curled	75	Finely cut, deeply curled for garnishing, decoration. Commercial or home garden.

PARSNIPS

	Days	Features
36001 Harris Model	110	Smooth 12" by 3" roots with a minimum of side roots. White, tender interior and a fair sized core.
36002 Hollow Crown	105	Smooth 12" by 2 3/4" roots that are well tapered and of high quality.
36005 Javelin ^{F1}	110	A hybrid developed in Europe for the pre-pack market with high marketable yield in the desired size range. Roots have level crowns and wash easily. Superior quality and marketability vs. OP varieties.

PARSLEY

	Priced per package		Priced per pound in these package sizes		
	1 oz.	4 oz.	1#	5#	25#
35005U Forest Green Untreated	4.70	6.50	18.50		
35012 Gigante d'Italia	4.65	6.30	18.00	17.00	16.00
35010U Hamburg Rooted Untreated	5.25	7.30	20.75		
35002 Italian Dark Green	4.60	6.35	18.10		
35004U Moss Curled Untreated	4.70	6.50	18.50		

PARSNIPS

	Priced per package		Priced per pound in these package sizes		
	4 oz.	1#	5#	M=1,000 seeds	
36001U Harris Model Untreated	4.15	11.75	11.50		
36002U Hollow Crown Untreated	4.15	11.75	11.50		
Priced per 1,000 seeds in these package sizes		5M	50M	100M	500M
36005P Javelin Primed, Pelleted	4.95	4.40	4.15	3.80	

PEAS SOUTHERN

	Priced per pound in these package sizes			
	1#	5#	25#*	50#*
12501U Blackeye Cowpea Untreated	7.40	4.90	4.65	4.40
12514U Mississippi Purple Brown Crowder Untreated	7.40	4.90	4.65	4.40
12510U Mississippi Silver Brown Crowder Untreated	7.40	4.90	4.65	4.40
12515U Top Pick Brown Crowder Untreated	7.75	5.10	4.85	4.60
12513U Top Pick Pinkey Untreated	7.75	5.10	4.85	4.60

* Multiple packages may be used to fill orders for these quantities.

PEAS

	Priced per pound in these package sizes				
	1#	5#	25#	50#*	500#*
12021 Bolero	5.90	3.90	3.65	3.40	3.30
12009 Early Frosty	5.45	3.60	3.35	3.10	3.00
12012 Green Arrow	5.45	3.60	3.35	3.10	3.00
12016 Knight	5.55	3.65	3.40	3.15	3.05
12004 Laxton's Progress #9	5.60	3.70	3.45	3.20	3.10
12033 Legacy	5.90	3.90	3.65	3.40	3.30
12011 Lincoln	5.55	3.65	3.40	3.15	3.05
12007 Little Marvel	5.45	3.60	3.35	3.10	3.00
12003 Maestro	5.60	3.70	3.45	3.20	3.10
12008 PLS595	6.00	3.95	3.70	3.45	3.35
12035 Sabre	5.90	3.90	3.65	3.40	3.30
12019 Spring	5.90	3.90	3.65	3.40	3.30
12013 Wando	5.45	3.60	3.35	3.10	3.00

* Multiple packages may be used to fill orders for these quantities.

PEAS SNOW PEA

	Priced per pound in these package sizes				
	1#	5#	25#	50#*	500#*
12104 Mammoth Melting Sugar	5.55	3.65	3.40	3.15	3.05
12105 Oregon Giant	5.55	3.65	3.40	3.15	3.05
12102 Oregon Sugar Pod II	5.60	3.70	3.45	3.20	3.10


* Multiple packages may be used to fill orders for these quantities.

PEAS SUGAR SNAP

	Priced per pound in these package sizes				
	1#	5#	25#	50#*	500#*
12206 Cascadia	5.55	3.65	3.40	3.15	3.05
12201 Sugar Ann	6.15	4.05	3.80	3.55	3.45
12202 Sugar Snap	5.60	3.70	3.45	3.20	3.10
12209 Sugar Sprint	6.80	4.50	4.25	4.00	3.90
12207 Super Sugar Snap					Crop Failure

* Multiple packages may be used to fill orders for these quantities.



PLS595  pg. 85

 Purpure Seeds, Inc.

PEAS

PLANTING

Direct seed 1½" - 2" deep in soils that are at least 40° F. Plant in rows that are 30" - 36" apart and 1" - 2" between the plants.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout field for insect, weed, and disease pressure.

HARVEST

Harvest peas when ripe. In shelling peas, pods should be filled out and able to feel individual peas. Pea pods should be harvested before seed develops inside the pod.

STORAGE

After harvest store peas at 50 - 60°F with 95% humidity to ensure quality.

DISEASE CODES

MV - Enation Mosaic Virus
F - Fusarium
NW - Near Wilt
PM - Powdery Mildew
RR - Root Rot
W - Common Wilt Race 1
WP - Western Pea Streak Virus
YM - Bean Yellow Mosaic

PEAS		Pricing on page 83				
Days	Height	Pod Length	Peas per Pod	Disease	Features	
Fresh Market						
12021	Bolero ^{PVP}	68	29"	3"	7 - 9	High yielding, sweet, medium sized. Excellent for freezer.
12016	Knight	61	19"	4"	8	MV, PM, W, YM Disease resistant, vigorous.
12033	Legacy	67	26"	3 ½"	7 - 9	F, PM A Bolero replacement, one day earlier with resistance to Powdery Mildew.
12003	Maestro	61	18"	4"	9	MV, PM, W, YM Heavy crops, very disease resistant.
12008	PL5595	67	30"	3.6"	9 - 10	F, PM Fresh market or processor. High yields. Great taste.
12035	Sabre	65	24"	3 ½"	9 - 10	F, RR, PM Sabre is a normal vine type with long pods. The dark green berries produce wonderful yields of frozen, canned or fresh product.
12019	Spring ^{PVP}	55	22"	3"	6 - 7	Very early, excellent quality, dark green freezer pea.
Heritage Varieties						
12009	Early Frosty	63	28"	3 ½"	6	W High yielding and high quality.
12012	Green Arrow	68	28"	4"	9 - 11	F, PM Deep green peas, high pod set, disease resistant.
12004	Laxton's Progress #9	62	15"	4 ½"	7	Leading home garden variety. Fine flavor and quality.
12011	Lincoln	67	28"	3 ½"	7 - 8	W Older type home garden variety.
12007	Little Marvel	63	18"	3 ½"	7 - 8	W Fine quality, dwarf plant, dependable variety.
12013	Wando	70	19"	3.1"	5 - 6	Market or garden.

PEAS		SNOW PEA Flat Oriental		Pricing on page 83	
Days	Features				
12104	Mammoth Melting Sugar	74	54" tall vine, good for a trellis with 5" pods.		
12105	Oregon Giant	74	Unusually large pods on a 30" vine; pods are up to 5" long and 1" wide. Pods are dark green and tender, 20% larger than Oregon Sugar Pod II, with improved sweetness and disease resistance.		
12102	Oregon Sugar Pod II	68	30" vine with 4" pods, disease resistant.		

PEAS		SUGAR SNAP		Pricing on page 83	
Days	Features				
12206	Cascadia	67	A snap pea with unusually thick pod walls on a 30" vine. Pods remain tender and sweeter longer than other cultivars. Flavor improves until seeds are over mature. Has outstanding disease tolerance, eating quality and yielding ability.		
12201	Sugar Ann	60	Earliest and shortest snap pea. 18" vine. Can be shelled.		
12202	Sugar Snap	70	Original snap pea, AAS winner. Can be shelled. 6' tall vine.		
12209	Sugar Sprint	62	A variety from Syngenta which replaces Sugar Ann. Has resistance to powdery mildew and tolerant to Pea Enation Mosaic Virus. 3" sweet and stringless pods with a plant height of 26".		
12207	Super Sugar Snap	66	Crop Failure for 2022. A Syngenta variety that is similar to Sugar Snap with earlier maturity and better disease package. Is also 6 - 12" shorter than Sugar Snap.		

PEAS		SOUTHERN		Pricing on page 83	
Days	Features				
Fresh Market					
12514	Mississippi Purple Brown Crowder	69	A sister line replacement variety for Mississippi Shipper. It has a concentration of pods that are reddish purple at green shell stage. It is large seeded and shells very easily. A disease resistant variety.		
12510	Mississippi Silver Brown Crowder	65	A large-seeded Brown Crowder with pale green, silvery pods at the green shell stage. Low bushy plant, few runners. Pods are 6 - 6 ½", slightly curved.		
12515	Top Pick Brown Crowder	70	An upright bush type superior to the viney Mississippi Silver. Pods concentrated in top of plant. Pod color is a pale silvery green. Matures in approx. 50 - 57 days to green pea stage, pods will become a pale pink when ready to pick. Easy shelling. Good disease and virus tolerance.		
12513	Top Pick Pinkeye	70	A Pinkeye that is superior to all Pinkeye's with an upright growth characteristic.		
Heritage					
12501	Blackeye Cowpea	68	Blackeye for your home garden, fresh market or processing needs.		



REGULATOR **NEW** pg. 88

PEPPERS

PLANTING

Sow in the greenhouse 7 - 9 weeks before desired planting date. Allow plants to harden 7 days before transplanting. Plant transplants halfway between rootball and bottom leaves. This will help prevent lodging.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout every 7 days to ensure crop development. Consult the Midwest Vegetable Production Guide:

www.ruppseeds.com/MVPG or your local extension agent for identification and treatments.

HARVEST

Cut or break pepper off the plant but leave at least 1" of the stem attached to the pepper.

STORAGE

Clean and wax peppers. Pre-cool at 45°F. Store at 45 - 50°F with 90 - 95% humidity; this will ensure the longest shelf life.

DISEASE CODES

BLS - Bacterial Leaf Spot
CMV - Cucumber Mosaic Virus
PHY - Phytophthora Root Rot
PMV - Pepper Mottle Virus
PVY - Potato Virus Y
S - Stip
TEV - Tobacco Etch Virus
TMV - Tobacco Mosaic Virus
TSW - Tomato Spotted Wilt

USE RECOMMENDATIONS

FM - Fresh Market
P - Processing
PP - Place Pack



ARISTOTLE X3R[®] ★



AUTRY X10R[®]



BAYONET



MERCER



NINJA S10 X10R



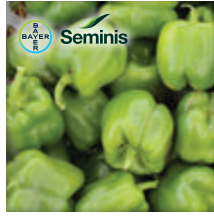
NITRO X10R



OUTSIDER



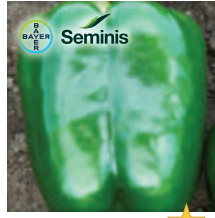
PALADIN



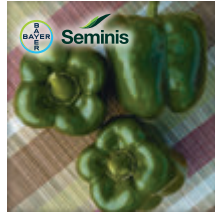
PLAYMAKER X10R[®]



PS9928302 X5R[®]



PS09941819 X5R[®] ★

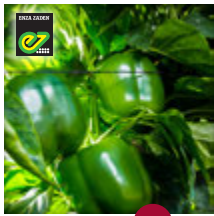


PS09979325 X5R[®]

PEPPERS | **BELL GREEN TO RED Hybrid** | Pricing on page 88

	Days	Flesh	Disease	Use	Features
★ 37125 Aristotle X3R™	72	Thick	BLS ^{1,2,3} , PVY, TMV	FM	A Seminis hybrid with heavy set, thick walls, excellent disease protection and enormous fruit size. 3 - 4 lobed. The industry standard.
37035 Autry with X10R [®]	75	Thick	BLS ⁰⁻¹⁰ , TMV, TSW	FM, PP	Color and uniformity are exceptional on this highly disease tolerant variety from Seminis. Plants produce high yields of firm, ideally-shaped fruit.
37001 Bayonet	72	Thick	BLS ^{1,2,3,4,5,7,8,9} , PHY, TMV	FM, PP	A Syngenta hybrid with large blocky fruit. Excellent fruit color, fruit firmness, shoulder appearance, fruit uniformity and wall thickness. High yield potential.
37006 Big Bertha	70	Thick	TMV	FM	Very large. Popular for home garden use.
37050 King Arthur	68	Thick	BLS ² , PVY, TEV, TMV	FM, P	Sets well in heat with large true blocky fruit. Very disease tolerant. Early main season. Quick to red. 3 - 4 lobe.
37065 Mercer	72	Thick	BLS ^{0-3,7,8} , PHY, TMV	FM, PP, P	Mercer is a widely adapted green-to-red bell pepper well suited for the North Eastern U.S. growing regions. The maturity is mid-early, with high yields of extra-large fruit with good quality. Plants are vigorous, sturdy, have good cover and have high yield potential. The fruit are firm, dark green and mature to a very attractive deep red color.
37060 Ninja S10 with X10R [®]	75	Medium Thick	TMV, BLS ⁰⁻¹⁰	FM, PP	Widely adapted variety suited where bacterial leaf spot is a concern. Very high yields of extra-large and jumbo fruit with good quality. Fruit are firm, turning from a glossy dark green to a beautiful mature red. The plants are mid strong and vigorous with good fruit setting ability.
37041 Nitro S10 with X10R	75	Thick	BLS ⁰⁻¹⁰ , PHY, TSW,	FM, PP	Nitro S10 [®] is a high quality, mid maturing hybrid suited for place pack. It is adapted to summer production in the northeast and suited for production where bacterial leaf spot is a concern. The fruit have good size uniformity and are smooth, firm, glossy dark green and mature to red color. Nitro S10 benefits from a nutritional management program that helps build a productive plant.
37036 Outsider	Early	Thick	BLS ¹⁻¹⁰ , TSW,	FM, PP	Outsider is the "box-filling pepper" that delivers great yield and quality. Produces early concentrated sets of jumbo and XL fruit. Strong disease and virus resistance package.
37089 Paladin	72	Thick	PHY, TMV	FM	The first phytophthora root rot resistant hybrid bell pepper from Syngenta. Fruit are in the large fruit class and are high quality. Has a medium tall plant.
37031 Playmaker with X10R [®]	75	Thick	BLS ⁰⁻¹⁰ , PHY	FM, PP	First commercial variety with intermediate resistance to BLS 0-10 and phytophthora blight. Bred and developed for the Northeast. Dark green, anthocyaninless fruits. High yield potential.
37156 PS 9928302 with X5R [®]	75	Thick	BLS ^{1,2,3,4,5} , TMV ^{1,2,3}	FM	A large robust plant, anthocyaninless, very large fruit, and dark green color.
★ 37161 PS 09941819 with X5R [®]	75	Thick	BLS ^{1,2,3,4,5} , PHY	FM	The largest sized pepper we carry. Produces a continuous set of large to extra-large, 3 and 4 lobed fruits on a small to medium sized plant. Fruits are anthocyaninless and appear to have good field tolerance for epidermal separation.
37010 PS 09979325 with X10R [®]	72	Thick	BLS ¹⁻¹⁰ , TMV	FM, PP	Early concentrated fruit set. Very dark green fruit. Prolific setting ability. High marks in recent trials.
37119 Red Knight X3R™	63	Thick	BLS ^{1,2,3} , PVY	P	A Seminis medium to large blocky hybrid. Early to red, like North Star, with resistance to BLS races 1, 2 and 3.

Additional Bell Peppers can be found on the next page -->.



REGULATOR **NEW**



SAILFISH X10R®



SPRINTER



TARPON X10R® ★



TURNPIKE X5R® ★

CASH DISCOUNTS
Cash discounts are a great way to add to your bottom line. See page 158 for details.

PEPPERS **BELL GREEN TO RED Hybrid** Pricing on page 88

	Days	Flesh	Disease	Use	Features
37118 Red Wonder	75	Thick	TMV	FM	<i>Especially suited for the bedding plant growers for home garden sales.</i>
NEW 37047 Regulator	73 - 75	Thick	BLS ¹⁻¹⁰ , TMV	FM, PP	<i>Regulator is an attractive, widely adaptable variety. This variety produces a high percentage of four lobed fruit and will maintain size throughout the growing season. The growing area for Regulator is the Eastern US, both in main season spring and fall. Regulator features a strong plant with good cover and a great fruit uniformity.</i>
37046 Sailfish with X10R®	Early	Thick	BLS ⁰⁻¹⁰ , PHY, TMV	FM, P	<i>An early red bell pepper for fresh market, with high-quality, blocky smooth fruit, and excellent red color.</i>
37014 Sprinter	Early	Medium Thick	TMV ⁰⁻³	FM, PP	<i>Produces quality yields of uniform fruit over a long harvest window. Compact plants. It sets fruit well under row cover. Strong against blossom-end rot and russetting. Turns red early.</i>
★ 37042 Tarpon with X10R®	Main	Thick	BLS ⁰⁻¹⁰ , PHY, TMV	FM, PP	<i>Tarpon is a main-season hybrid with X10R® technology and intermediate resistance to Phytophthora blight for the northeast and midwest United States and eastern Canada. Tarpon has a compact plant and produces dark green, smooth blocky fruits.</i>
★ 37023 Turnpike with X5R®	72	Thick	BLS ^{1,2,3,4,5,7,9} , PHY, TMV	FM	<i>Extra large sized fruit with massively thick walls. Provides industry leading potential for yield.</i>

PEPPERS BELL GREEN TO RED Hybrid			M=1,000 seeds			
Priced per package	100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes			1M	5M	25M	50M
37169 Archimedes F300	14.00	61.75	88.20	81.65	77.75	74.75
37125 Aristotle X3R™ F300	15.40	68.05	97.20	90.00	85.70	82.40
Aristotle X3R™						
37125P F300 Pelleted	15.60	69.00	98.55	91.25	86.90	83.55
37035 Autry	18.45	81.45	116.35	107.70	102.55	98.60
37001 Bayonet	9.60	42.35	60.45	55.95	53.25	51.20
37006 Big Bertha	9.50	41.90	59.80	55.35	52.70	50.65
37050 King Arthur	9.05	39.90	57.00	52.75	50.20	48.25
37065 Mercer F300	15.15	66.90	95.55	88.45	84.20	80.95
Ninja S10 with X10R						
37060P F300 Pelleted	15.40	67.95	97.05	89.85	85.55	82.25
37041 Nitro S10 F300	16.15	71.35	101.90	94.35	89.85	86.35
37036 Outsider	14.05	61.95	88.50	81.90	78.00	75.00
37089 Paladin	10.60	46.85	66.90	61.90	58.95	56.65
37031 Playmaker with X10R	16.70	73.70	105.25	97.45	92.80	89.20
PS 9928302 with X5R						
37156P F300 Pelleted	16.95	74.90	107.00	99.05	94.30	90.65
PS 09941819 with X5R						
37161P F300 Pelleted	16.40	72.40	103.40	95.70	91.10	87.55
PS 09979325 with X10R, F300 Pelleted						
37010P	17.05	75.40	107.65	99.65	94.90	91.25
37119 Red Knight X3R™	11.45	50.50	72.10	66.75	63.55	61.10
37118 Red Wonder	10.60	46.70	66.70	61.75	58.80	56.50
37118P Red Wonder Pelleted	10.75	47.50	67.85	62.80	59.80	57.50

PEPPERS BELL GREEN TO RED Hybrid			M=1,000 seeds			
Priced per package	100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes			1M	5M	25M	50M
37047 Regulator with X10R	15.90	70.25	100.30	92.85	88.40	85.00
37046 Sailfish with X10R	16.60	73.35	104.75	96.95	92.30	88.75
37014 Sprinter	48.85	216.10	308.65	285.75	272.10	261.60
37025 SV3255PB with X10R F300	17.90	79.10	113.00	104.60	99.60	95.75
37042P Tarpon with X10R F300 Pelleted	17.25	76.20	108.85	100.75	95.95	92.25
37023 Turnpike X5R™	16.35	72.25	103.15	95.50	90.95	87.45

* Multiple packages may be used to fill orders for these quantities.

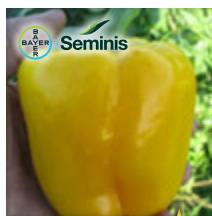
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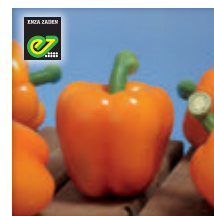


SVPB8415 X10R★

**ORDERS
OVER \$250
ARE SHIPPED
FREE!**



DELIRIO



MILENA

PEPPERS		BELL YELLOW Hybrid				
		Days	Flesh	Disease	Use	Features
37015	Abay	80	Medium Thick	BLS ¹⁻⁵	FM	Offers strong bacterial leaf spot resistance. Very strong plant with high yield potential. Outstanding coloration. Excellent firmness and fruit quality. Continuous setting.
37034	Dicaprio	80	Medium Thick	TMV ^{0,3} , TSW	FM	Good variety for high tunnels or unheated greenhouses from Enza Zaden.
37108	Early Sunsatation X3R	70	Thick	BLS ^{1,2,3} , PVY, TMV	FM	A Seminis hybrid with Bacterial Leaf Spot 1, 2 and 3 resistance. Is early with dark green blocky fruit turning golden and sweet at maturity. Maintains firmness in mature stage and has heat setting ability.
★ 37045	SVPB8415 X10R	73 Green / 83 Yellow	Thick	BLS ^{1,2,3} , PVY, TMV	FM	Offers fast color change from green to yellow. Very adaptable across many growing conditions in the eastern U.S.

PEPPERS		BELL OTHER COLORS Hybrid				
		Days	Flesh	Disease	Use	Features
37083	Bianca	66	Thick	TMV ⁰	FM	Bianca means white in Italian. Larger and whiter than competitive varieties. Very early and slow coloring from white to light red. 3 - 4 lobe.
37090	Delirio	68	Thick	TMV ⁰	FM, PP	An early maturing, medium to large blocky, dark green to vivid bright orange, sweet bell pepper. Good holding quality.
37013	Milena	Early	Thick	PVY, TMV ^{0,3} , TSW	FM, PP	Thick walls and uniform 3-4 lobed fruit. Peppers average ½ lb and 3" x 4" in size. Vigorous open plant habit with good yield and solid set, even under hot conditions. Plants average 28" tall and are upright and sturdy. Works well in the greenhouse, unheated tunnels or open field. Strong disease package.
37088	Tequila	68	Thick	TMV ⁰	FM	Larger and better quality than its other lilac competitors. Matures from lilac to a medium red color. 3 - 4 lobe.

PEPPERS BELL YELLOW Hybrid		M=1,000 seeds				
Priced per package		100 Seeds	500 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	25M	50M	
37015	Abay	14.80	65.35	93.30	86.35	79.00
37034	Dicaprio	72.30	319.75	456.75	422.90	387.25
37108	Early Sunsatation X3R	11.25	49.60	70.80	65.55	60.00
37045	SVPB8415 X10R	16.95	74.90	107.00	99.05	90.65

* Multiple packages may be used to fill orders for these quantities.

PEPPERS BELL OTHER COLORS Hybrid		M=1,000 seeds				
Priced per package		100 Seeds	500 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	25M	50M	
37083	Bianca	17.75	78.45	112.05	103.75	95.00
37090	Delirio	16.10	71.05	101.50	93.95	86.00
37013	Milena	49.65	219.65	313.75	290.50	266.00
37088	Tequila	18.15	80.15	114.45	105.95	97.00

* Multiple packages may be used to fill orders for these quantities.



CORNITO ARANCIA **NEW**



CORNITO GIALLO



CORNITO ROSSO



ORANOS



SWEETIE ORANGE



SWEETIE RED

PEPPERS		BELL OP Heritage Varieties				
▲	Days	Flesh	Color	Shape	Disease	Features
37225 Big Red	75	Thick	Green to Red	Large Blocky		An OP example of those expensive red peppers found in the super-markets today. Very sweet. 3 - 4 lobe.
37206 California Wonder 300	74	Thick	Green to Red	Jumbo Blocky	TMV	A well known Cal. Wonder type.
37228 Keystone Resistant Giant #3	74	Thick	Green to Red	Jumbo Blocky	TMV	Good market variety. 4 lobe.
37217 Purple Beauty	74	Thick	Purple	Medium Blocky	TMV	A purple pepper variety for specialty markets. 3 - 4 lobe.
37226 Sunbright	75	Thick	Green to Yellow	Large Blocky		A yellow sister to Big Red. Sweet. 5 x 7".

PEPPERS		MISCELLANEOUS SWEET Hybrid 🌱				
▲	Days	Flesh	Color	Shape	Disease	Features
<i>Super Sweet Cones</i>						
NEW 37199 Cornito Arancia	80		Orange	1 ½ x 5"		A half-size Corno di Toro type pepper. Very early and attractive. Grow and sell them individually, or as mixed colors, loose or in a clamshell. Exceptionally sweet, perfect for grilling and roasting.
37195 Cornito Giallo	80		Yellow	1 ½ x 5"		A half-size Corno di Toro type pepper. Very early and attractive. Grow and sell them individually, or as mixed colors, loose or in a clamshell. Exceptionally sweet, perfect for grilling and roasting.
37198 Cornito Rosso	80		Red	1 ½ x 5"		A half-size Corno di Toro type pepper. Very early and attractive. Grow and sell them individually, or as mixed colors, loose or in a clamshell. Exceptionally sweet, perfect for grilling and roasting.
37179 Conical Blend	70	Medium	Red, Orange, Yellow	1 ½ x 5"		A multi-colored blend of the three conical peppers, orange, red and yellow. Only available in 100 seed packs.
37174 Oranos	70	Medium	Orange	1 ½ x 7"	TMV ⁰	The most outstanding orange conical hybrid available! A very early variety that produces vigorous plants with fruit that are especially appreciated for their unique flavor and product presentation. Sets well in the heat.
<i>Miniature Sweet Cones - Snack Peppers 🌱</i>						
37190 Sweetie Orange	70 from transplant	Thick	Orange	2 ½ - 3" long		These peppers are extremely sweet and the perfect size for snacking. Uniform fruit feature an open seed cavity. They grow great in both open field and protected culture.
37194 Sweetie Purple	70 from transplant	Thick	Purple	2 ½ - 3" long		
37191 Sweetie Red	70 from transplant	Thick	Red	2 ½ - 3" long		
37192 Sweetie Yellow	70 from transplant	Thick	Yellow	2 ½ - 3" long		
37193 Sweetie Blend	70 from transplant	Thick	Orange, Purple, Red, Yellow	2 ½ - 3" long		A multi-colored blend of the four Sweetie Peppers. Only available in 100 seed packs.
37176 Yellow Sparkler	70	Medium	Yellow	1 x 3"	TMV ⁰	Sweet mini "snack" pepper with fantastic flavor. Two lobed fruit with very few seeds. Performs well in low to mid-tech protected culture as well as open field.



SWEETIE YELLOW



YELLOW SPARKLER

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



JOHN DEERE FINANCIAL

0%

GROWER PREFERRED ALL-STARS ★ PEPPERS

GREEN TO RED BELLS

Aristotle X3R[®] is the best overall performer with a consistent early set of large sized fruit. A favorite with many growers – a real money-maker!

If you are concerned about Phytophthora pressure, consider using **Turnpike X5R[®]**. It has one of the strongest tolerances of any bell pepper that we carry and the fruit quality is exceptional. It also provides the grower with X5R bacterial leaf spot resistance.

PS09941819 X5R[®] is the one for you if your customers are looking for a jumbo sized bell! It also has a very dark green color and X5R Bacterial Leaf Spot resistance.

Tarpon is a blocky bell pepper with X10R resistance to Bacterial Leaf Spot and Intermediate Resistance to Phytophthora. You will like the consistent size, shape, and dark green color.

OTHER COLORED BELLS

SVPB8415 is a yellow X10R bell pepper from Seminis that you need to try for your colored bell pepper mix. It turns from green to yellow quickly and has very high quality large size fruit.

SWEET BANANAS

SV3782PP X3R[®] has fruit quality similar to Ethem but it also has resistance to bacterial spot races 0-3, 7 and 8. Fruits are 8" x 1 1/2" and very smooth.

ANCHO / POBLANO

Tiburon has the quality your customers expect in this category. Pungency levels are milder and will work very well in Mexican dishes. Tiburon is a poblano (turns red).

HOT WAX BANANA

Inferno is the best all-around hot banana available. The yield is fantastic and the pungency is just what your customers expect.

JALAPEÑO

Mammoth is the jalapeno you are looking for if you want consistent large fruit size and medium heat levels. Mammoth has a continuous fruit set so you can expect very good yields throughout the growing season.

PS11435810 jalapeno has been a standard for many growers who are looking for larger fruit to compliment Mammoth. PS11435810 has lower heat level and does tend to check earlier for those customers who want that traditional mature jalapeno look.

A newer addition to our jalapeno lineup is **SV3198HJ X3R[®]**. It can be used for processing or fresh market. Fruits are long and cylindrical with pungency on the milder side at 1,000 Scovilles.



*Dave Silveus
Vegetable Consultant*

PEPPERS BELL OP

	<i>Priced per package</i>	1/2 oz.	1 oz.	4 oz.	1#
37225 Big Red		11.95	17.40	55.20	160.00
37206 California Wonder 300		7.10	10.35	32.80	95.00
37228U Keystone Resistant Giant #3 <small>Untreated</small>		6.75	9.80	31.05	90.00
37217 Purple Beauty		13.05	19.05	60.40	175.00
37226 Sunbright		13.05	19.05	60.40	175.00

PEPPERS MISCELLANEOUS SWEET Hybrid

M=1,000 seeds

	<i>Priced per package</i>	100 Seeds	500 Seeds				
	<i>Priced per 1,000 seeds in these package sizes</i>			1M	5M	25M	50M
Super Sweet Cones							
37173 Belcanto		37.00	163.50	233.55			
37199 Cornito Arancia		12.60	55.55	79.35	73.45	69.95	67.25
37195 Cornito Giallo		12.60	55.55	79.35	73.45	69.95	67.25
37198 Cornito Rosso		12.60	55.55	79.35	73.45	69.95	67.25
37179 Conical Blend		25.00					
37174 Oranos		37.60	166.25	237.50	219.90	209.40	201.30
Miniature Sweet Cones - Snack Peppers							
37190 Sweetie Orange		26.80	118.55	169.30	156.75	149.25	143.50
37194 Sweetie Purple		29.55	130.55	186.45	172.60	164.35	158.00
37191 Sweetie Red		26.80	118.55	169.30	156.75	149.25	143.50
37192 Sweetie Yellow		26.80	118.55	169.30	156.75	149.25	143.50
Sweetie Blend							
37193 <small>Orange, Purple, Red, Yellow</small>		32.50					
37176 Yellow Sparkler		12.15	53.70	76.70	71.00	67.60	65.00
Miniature Bell							
37105 Baby Block Yellow		17.50	77.25	110.35	102.15	97.25	93.50

* Multiple packages may be used to fill orders for these quantities.



DUCADO



LOLA



PAGEANT



PX11404796 X3R®



SV3782PP X3R® ★



PIMIENTO ELITE

PEPPERS		MISCELLANEOUS Hybrid				
		Days	Flesh	Color	Disease	Features
Banana						
37132	Ducado	65 - 70	Thick	Yellow to Red	BLS, TMV	Smooth, mostly straight fruit with brilliant yellow coloration turning to red at full maturity. Used for both fresh market and processing. Ideal where bacterial leaf spot is a concern.
37038	Lola	60 - 65	Thick	Light Green to Red	BLS ^{0-3,7,8} , TSWV	Widely adapted variety well suited where bacterial leaf spot or TSWV are a concern. High yield potential of large and extra-large fruit. Plants are medium strong and vigorous with good cover.
37098	Pageant	70	Thick	Yellow to Red	BLS ^{1,2,3}	A BLS resistant sweet banana pepper with superior fruit color and length. High yields of smooth fruit, 9 x 1 3/4".
37009	PX11404796 X3R®	75	Thick	Light Yellow to Red	BLS ^{1-3,7,8}	Excellent fruit color, wall thickness and fruit uniformity.
★ 37082	SV3782PP X3R®	70	Thick	Light Yellow to Red	BLS ^{0-3,7,8}	AKA Sweet Sunset, this variety has won the AAS. Used for 2nd early in the processing industry.
Cherry						
37120	Cherry Pick	68	Thick	Green to Red	TMV	A higher yielding, uniform, sweet cherry hybrid from Seminis. A more vigorous plant than the OP's.
Cubanelle						
37072	Aruba	64	Medium	Lime Green		A mild flavored, early, highly uniform Cubanelle hybrid from Syngenta that out-sizes competing varieties. Continuous setting for a long harvesting season, 7 1/2".
37021	Biscayne	65 - 70	Medium	Light Yellow		Cubanelle-type hybrid for fresh market. Large pendant fruit for frying, 2 lobed.
37005	Gypsy	60 - 65	Medium	Light Yellow to Red	TMV	AAS winner. Early, high yielding, good flavor.
37123	Key West X3R®	70	Thick	Light Green to Red	BLS ^{1,2,3}	A Seminis BLS resistant Cubanelle hybrid with large sized fruit. Compare to Biscayne, 6 1/2 x 2 1/2".
Pimiento						
37059	Pimiento Elite	72	Thick	Green to Red	TMV	A heart shaped hybrid sweet pepper. Fruit matures from green to red, measures 3" x 3" and tapers to a blunt end. High yield potential.

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Naturall™ VEGETABLE ROOT INOCULANT
 Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

PEPPERS		MISCELLANEOUS OP Heritage Varieties				
		Days	Flesh	Color	Shape	Features
37216	Cubanelle	65	Medium	Yellow to Green, Orange to Red	Banana	Frying type with attractive fruit for home garden or market.
37316	Red Baby ^{Bell}	60	Thick	Green to Red	Miniature Bell	A great tasting miniature bell (1 ¼" x 1 ¼") with great flavor. 3 lobe.
37209	Sweet Banana	77	Medium Thin	Yellow to Red	Banana	Popular garden variety, very productive.
37212	Sweet Cherry	78	Medium Thick	Green to Red	Round	Home garden or processing, pickling.

PEPPERS MISCELLANEOUS Hybrid		M=1,000 seeds				
	Priced per package	100 Seeds	500 Seeds			
	Priced per 1,000 seeds in these package sizes					
		1M	5M	25M	50M	
Banana						
37132	Ducado	9.25	40.85	58.35	54.00	49.40
37038	Lola	11.10	48.95	69.90	64.70	59.20
37098	Pageant	6.45	28.35	40.45	37.45	34.25
37009	PX11404796 X3R®	10.90	48.10	68.70	63.60	58.20
37166	Sopron	8.85	39.10	55.80	51.65	47.25
37082	SV3782PP X3R®	11.55	51.05	72.90	67.50	61.75
Cherry						
37120	Cherry Pick	9.65	42.50	60.70	56.20	51.40
Cubanelle						
37072	Aruba	8.85	39.15	55.90	51.75	47.35
37021	Biscayne	8.70	38.45	54.90	50.80	46.45
37005	Gypsy	7.35	32.40	46.25	42.80	39.15
37123	Key West X3R®	13.70	60.45	86.35	79.95	73.15
Pimiento						
37059	Pimiento Elite	6.80	30.05	42.90	39.70	36.30

* Multiple packages may be used to fill orders for these quantities.

PEPPERS MISCELLANEOUS OP Heritage Varieties		M=1,000 seeds				
	Priced per package	250 Seeds	500 Seeds			
	Priced per 1,000 seeds in these package sizes					
		1M	5M	50M		
37316	Red Baby ^{Bell}	5.00	6.75	9.00	6.00	5.00
	Priced per package	1/2 oz.	1 oz.	4 oz.		
	Priced per pound in these package sizes					
		1#	5#			
37216	Cubanelle	7.35	10.60	33.50	97.10	95.00
37209	Sweet Banana	5.25	7.60	24.10	69.80	68.25
37212	Sweet Cherry	7.70	11.15	35.30	102.20	100.00

* Multiple packages may be used to fill orders for these quantities.



SARGENTO **NEW** pg. 95

HOT PEPPER TYPES

ANAHEIM

(Hatch - New Mexican) chili. Fruit range from 4 - 12" long and 2" wide, green to red at maturity, but also may be yellow, orange to brown. Many different varieties abound. Range from sweet to hot. Use green as fresh, canned or frozen. Mature are usually dried and ground into chili powder or paprika if sweet. Also used in salsas.

ANCHO

(Poblano) The fruit are heart shaped, pointed, thin walled with an indented stem attachment. Immature fruit are dark green with mature fruit being either red or brown. Fruit are 3 - 4" long and about 2" wide and are mildly pungent. The pepper of choice to make chili rellenos.

CAYENNE

Mature red fruit are 5 - 10" long and wrinkled. Irregular in shape, highly pungent, often used as dried, ground powder. Also used fresh in salads, sauces and dishes.

CHERRY

Like the name suggests, round or slightly flattened, green to red, hot or sweet. Similar use to wax pepper.

CHINENSE

(Habanero-Scotch Bonnet- Bahamian-Jamaican) In this species, diversity is enormous. Popular in Jamaica, Yucatan and Brazil. Very, very hot and persistent, but aromatic. Fruit are 1 - 2½" long and 1 - 2" wide. Green to variable mature colors of yellow, orange, red or white. Use dried as a spice, fresh or processed. Plant starts slower than most other pepper types.

GHOST

Subconical to conical shape measuring 2.5 to 3.5 inches in length. Approximately three times hotter than typical habaneros. Red is the most common color at maturity, with orange, yellow and chocolate as rarer varieties.

JALAPEÑO

Fruit are thick walled, conical shaped, dark green when immature turning red at maturity and most cultivars are highly pungent. Fruit may show cracking or corkiness which is a desirable trait in Mexico. Length vary widely. Use canned, pickled, salsas or fresh. When dried, by smoking, they are called chipotle.

ORNAMENTALS

Peppers classified as ornamentals do not carry a characteristic that makes them in-edible. They are individuals from the many groups previously listed that happen to have leaves and fruit that are particularly attractive and give them ornamental value.

PASILLA

Pod length is 6 - 12" long and 1 - 2" wide. Fruit color is dark green, turning brown at maturity. Usually dried before use in moles and salsas.

RED CHILI

Fruit are 2½" long by ½" wide, green when immature changing to red at maturity. Fruit have thin walls, taper to a point and are used for drying, processing and sauce. Hot!

SERRANO

Fruit are ½" wide and 2 - 3" long. Medium walls and shaped similar to Jalapeño and is the pepper of choice in Salsa Verde and other southwestern relishes.

THAI HOT

Green fruit to red at maturity, very hot, tiny 3/8" wide by 1" long fruit. Popular in oriental markets.

WAX

Yellow when immature, orange-red at maturity. Can be pungent or non-pungent. Vary from 2 - 8" long and about 2" wide. Use pickled or fresh in salads and relishes.



CHARGER



SPITFIRE



CARRANZA



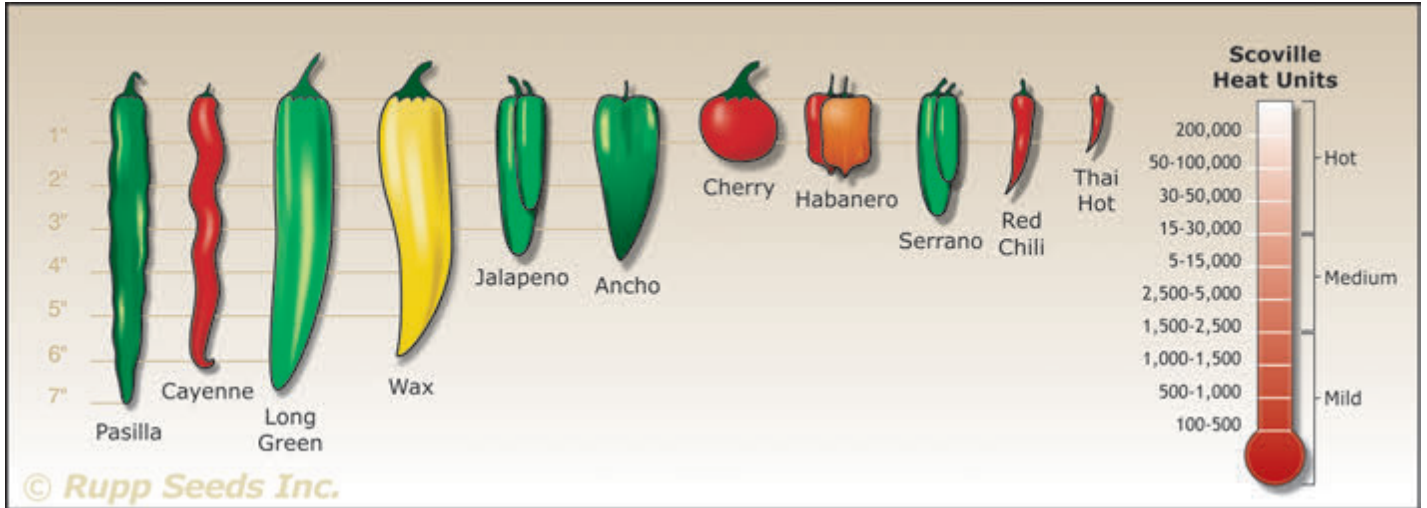
SAN ARDO



SARGENTO **NEW**



TIBURON ★



PEPPERS		HOT Hybrid			Pricing on pages 97 & 98			
		Days	Flesh	Color	Relative Scoville Rating	Disease	Use	Features
Anaheim								
37412	Charger	75	Thick	Green to Deep Red	1,000 to 2,000	TSW	FM	The leader in Anaheims with large, smooth, two lobed fruit. Vigorous, erect plant with excellent foliage cover protecting the fruit.
37462	Spitfire			Green to Red	90 to 130	PHY	FM	Only known Anaheim hybrid with phytophthora resistance. Large fruit size.
Ancho								
37463	Carranza			Dark Green to Red	200 to 300		FM	Selected for its performance in heat. Main use is for fresh when green and dried when red.
37447	San Ardo	75	Thick	Dark Green	1,500 to 4,000	TMV	FM	A great choice for ancho producers. A vigorous plant that offers excellent cover for its dark green fruit. Multiple branches allow for higher yields per plant.
NEW	37457 Sargento	80-85	Thick	Glossy Dark Green to Red	350 to 1,750	PHY	FM	An extra-large fruited poblano (Ancho) with very good quality that is suited for multiple harvests. The fruit are mid-long tapering, firm, straight, and have a high percentage of two lobes. Intermediate resistance to phytophthora. Suited for the fresh and drying market.
★	37455 Tiburón	73	Thick	Very Dark Green to Red	250 to 1,500		FM	A true poblano producing excellent yields of extra large fruit for stuffing (chile rellenos) or drying; continuous fruit set.
Cayenne								
37458	Arapaho <small>Cheyenne</small>	70	Thick	Light Green to Red	2,000 to 4,000		FM, P	A cayenne with large, long, narrow fruit. Produces high yields of early maturing fruit; compact plant. Medium pungency.
37413	Mesilla	70	Thick	Green to Brilliant Red	2,000 to 4,000	PVY, TEV, TMV	FM, P	A large thick cayenne hybrid with superior disease resistance and higher yields than OP's.

Additional Hot Peppers can be found on the next page -->.



ARAPAHO



BOMBITA



TIME BOMB



KABAL



REY PAKAL



BLAZING BANANA



INFERNO ★



JEDI **NEW**



MAMMOTH ★



PS11435810 ★



SV3198HJ X3R® ★



SV8066HJ X3R®

PEPPERS

HOT Hybrid

Pricing on pages 97 & 98

	Days	Flesh	Color	Relative Scoville Rating	Disease	Use	Features
Hot Cherry							
37467 Bombita	68		Green to Red	-	-	FM, P	Bombita is the perfect shape, 1.25-1.5" average, for pickling, stuffing and processing. Great tasting, hot, and easy to pick.
37417 Time Bomb	65		Green to Red	1,000	TMV	FM, P	Produces red, hot cherry peppers with a light smoky flavor. Fruit is 1.6 x 1.6". Has light heat and are great pickled, processed or chopped into salsas.
Habanero							
37423 Kabal	95	Thin	Green to Orange	300,000		FM	High yielding variety with a vigorous, healthy plant that has a continuous set throughout harvest. Fruit average 1.5 - 2 inches in length with typical habanero shape.
37432 Rey Pakal	135	Thin	Green to Red	200,000	CMV	FM	Vigorous plant that provides for prolonged, high yielding harvests. Demonstrates the ability to reach full maturity with exposure to less than optimal heat units.
Hot Wax							
37422 Blazing Banana	60 - 70	Thick	Yellow to Red	6,000 to 6,500	BLS ^{1,2,3}	FM, P	Outstanding early maturing variety that displays a strong branched plant with excellent fruit coverage. Fruit size of 9 x 1.75 - 2".
★ 37408 Inferno	60 - 65	Medium	Yellow to Red	2,500 to 4,500		FM, P	A pendant, hot banana type for fresh market or pickling. Very productive and uniform.
Jalapeño							
NEW 37476 Jedi	70-75	Thick	Dark Green	2500-3600	BLS ^{1,2,3}	FM, P	Jedi combines jumbo fruit size with main season maturity while exhibiting outstanding quality and exceptional yield. The fruits are firm and very uniform, showing excellent tolerance to checking / cracking.
★ 37448 Mammoth	72	Very Thick	Dark Green	3,000 to 5,000	PVY, TMV	FM, P	Produces high quality, uniform, dark green fruit making it ideal for fresh and processing. Truly "mammoth" in size, this jumbo jalapeño is very adaptable for the most discerning markets. Superior yields complement its excellent fruit quality. Continuous set provides for extended harvest window.
★ 37401 PS 11435810	60	Very Thick	Dark Green to Red	1,800 to 2,500	BLS ^{0,3,7,8}	FM, P	Jumbo, blocky, dark green fruit for fresh market. Continuous setting ability. Good yields and high quality.



TALON



TZOTZIL

Natural

See page 152 for rates and pricing.

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.

0%



JOHN DEERE FINANCIAL

PEPPERS		HOT Hybrid						Pricing on pages 97 & 98	
	Days	Flesh	Color	Relative Scoville Rating	Disease	Use	Features		
<i>Jalapeño continued</i>									
★ 37410	SV3198HJ X3R®	68	Thick	Dark Green to Red	750 to 1,000	BLS 0,3,7,8	FM, P	Hot nacho jalapeño with concentrated set of long, cylindrical fruit. Slow to check.	
37419	SV8066HJ X3R®	74	Thick	Dark Green to Red	0	BLS 0-3, 7,8	FM, P	Offers jalapeño flavor with no heat. Great for blending with hot jalapeños to customize heat level of salsa or hot sauce.	
37451	Talon	75-80	Thick	Dark Green to Red	3,500 to 6,000	BLS ^{1,2,3}	FM, P	Consistently produces high yields of fruit that are tolerant to anthocyanin and cracking. Vigorous plant. Very adaptable.	
37430	Tzotzil	60	Very Thick	Dark Green to Red	750 to 1,000	BLS 0,3,7,8, PHY	FM, P	Phytophthora tolerant version of PS 11435810. Fruit may be a little longer and slightly more narrow than the 5810.	

Additional Hot Peppers can be found on the next page -->

PEPPERS HOT Hybrid		M=1,000 seeds					
Priced per package	100 Seeds	500 Seeds	Priced per 1,000 seeds in these package sizes				
			1M	5M	25M	50M	
Anaheim							
37412	Charger	13.00	57.45	82.05	75.95	72.30	69.50
37462	Spitfire	10.40	45.90	65.55	60.65	57.75	55.50
Ancho							
37463	Carranza	9.40	41.50	59.25	54.85	52.20	50.15
37447	San Ardo	7.90	34.75	49.60	45.90	43.70	42.00
37457	Sargento	10.25	45.15	64.50	59.70	56.85	54.65
37455	Tiburón F300	7.15	31.55	45.05	41.70	39.70	38.15
37425	Trident F300	9.95	43.95	62.75	58.10	55.30	53.15
Cayenne							
37458	Arapaho ^{Cheyenne}	10.15	44.70	63.80	59.05	56.20	54.00
37413	Mesilla	10.05	44.25	63.20	58.50	55.70	53.55
Hot Cherry							
37467	Bombita	15.20	67.10	95.85	88.75	84.50	81.25
37417	Time Bomb	12.45	54.95	78.45	72.60	69.10	66.40
Habanero							
37423	Kabal	12.15	53.70	76.70	71.00	67.60	65.00
37432	Rey Pakal	12.15	53.70	76.70	71.00	67.60	65.00
37466	Rey Kawiil ^{USAP 10074}	12.15	53.70	76.70	71.00	67.60	65.00

PEPPERS HOT Hybrid		M=1,000 seeds					
Priced per package	100 Seeds	500 Seeds	Priced per 1,000 seeds in these package sizes				
			1M	5M	25M	50M	
Hot Wax							
37422	Blazing Banana	10.70	47.15	67.30	62.30	59.30	57.00
37408	Inferno	9.70	42.85	61.20	56.65	53.95	51.85
Jalapeño							
37436	Ballpark	7.50	33.05	47.20	43.70	41.60	40.00
37460	Compadre	9.95	43.95	62.75	58.10	55.30	53.15
37450	El Jefe	6.60	29.05	41.50	38.40	36.55	35.10
37476	Jedi	10.30	45.50	64.95	60.10	57.20	55.00
37448	Mammoth	10.60	46.70	66.70	61.75	58.80	56.50
37401	PS 11435810	10.65	47.05	67.20	62.20	59.20	56.90
37410	SV3198HJ X3R®	10.50	46.40	66.25	61.30	58.35	56.10
37419	SV8066HJ X3R®	12.00	52.95	75.60	70.00	66.65	64.05
37451	Talon	10.30	45.50	64.95	60.10	57.20	55.00
37430	Tzotzil ^{F300}	10.05	44.25	63.15	58.45	55.65	53.50



BECAN



CRACKLE



POTOSI



TAKARA

PEPPERS

HOT Hybrid

Pricing on pages 97 & 98

	Days	Flesh	Color	Relative Scoville Rating	Disease	Use	Features
<i>Miscellaneous Hot</i>							
37464 Becan			Pale Yellow to Red	800 - 1,000	PHY	FM	<i>Santa Fe Grande type hybrid which is used mainly for stuffing. Phytophthora tolerant conversion of Rio de Oro.</i>
37421 Crackle	65	Thin	Green to Red	1,500 to 3,000		FM	<i>"Finger Hot" type with length of 4 - 5 inches. Multiple harvests with fruit maintaining good size.</i>
37465 Potosi				4,000 to 4,500	BLS ^{9-3,7,8} , N, TMV	FM	<i>A hybrid Serrano type with large fruit size and classic shape. Very productive.</i>
37402 Super Chili	75	Thin	Green to Orange Red	40,000 to 50,000		FM, HG	<i>AAS winner. Early, very productive. Home garden. An excellent substitute for Asian cooking.</i>
37420 Takara	60	Thin	Bright Green to Bright Red	50 to 200		FM	<i>Typical shishito type pepper with small fruit and mild but rich flavor. The compact plant has a spreading habit, short internodes, is well branched and has high production potential. The fruit uniformity is superior to OP strains. The peduncle holds well to the fruit.</i>

PEPPERS HOT Hybrid

M=1,000 seeds

	Priced per package		Priced per 1,000 seeds in these package sizes			
	100 Seeds	500 Seeds	1M	5M	25M	50M
<i>Miscellaneous Hot</i>						
37464 Becan	13.60	60.10	85.80	79.40	75.60	72.65
37421 Crackle	7.55	33.35	47.60	44.05	41.95	40.30
37465 Potosi	9.15	40.40	57.65	53.35	50.80	48.80
37402 Super Chili	8.50	37.50	53.55	49.55	47.15	45.30
37420 Takara	10.85	47.95	68.50	63.40	60.35	58.00
<i>Specialty Hot Blends</i>						
Flamethrower Blend						
37480 Blend	16.85	74.35	106.20			

* Multiple packages may be used to fill orders for these quantities.

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Naturall™ VEGETABLE ROOT INOCULANT
 Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.



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PEPPERS		HOT OP Heritage Varieties						
		Days	Flesh	Color	Class Type	Relative Scoville Rating	Use	Features
37544	Anaheim Chili	75	Medium Thick	Dark Green to Red	Anaheim	900 to 3,500	FM	<i>A pungent pepper for canning, freezing or market.</i>
37507	Cayenne Large Thick	75	Medium Thick	Green to Red	Cayenne	30,000 to 50,000	P	<i>The commercial variety of the long thin pepper used as a dried ground powder.</i>
37502	Cayenne Long Slim	72	Thin	Green to Red	Cayenne	30,000 to 50,000	P	<i>Very productive, pungent, home garden variety.</i>
37504	Early Jalapeno	63	Thick	Green to Red	Jalapeno	4,000 to 6,000	FM, P	<i>Uniform, hot fruit. For processing or market.</i>
37508	Habanero	90	Thin	Light Green to Orange	Chinense	200,000	FM, P	<i>The hottest pepper that fits both into fresh market or processing. Often used in the dried powdered form.</i>
37543	Hot Portugal	64	Thick	Green to Bright Red	Cayenne	up to 30,000	FM, HG	<i>Bears elongated narrow fruit, 7-8" long, glossy scarlet with superb pepper flavor and medium heat.</i>
37501	Hungarian Yellow Wax	70	Medium Thick	Yellow to Red	Wax	750 to 3,000	FM, P	<i>Cylindrical fruit are 6 to 8" long x 1 1/2 - 2" diameter fruit.</i>
37505	Jalapeno M	73	Thick	Green to Red	Jalapeno	3,500 to 6,000	FM, P	<i>Uniform, 3 1/2" fruit. Pungent for processing and market.</i>
37512	Red Cherry ^{Large}	75	Medium Thick	Medium Green to Red	Cherry	3,500	FM, P	<i>Processing, home garden, and pickling.</i>
37509	Serrano	75	Medium Thin	Green to Red	Serrano	2,500 to 4,000	FM, P	<i>Shaped like a miniature Jalapeno. Very pungent for pickling, market and sauce. Resistant to Potato Virus Y.</i>
37531	Serrano Tampiqueno	75	Medium Thick	Green to Red	Serrano	2,500 to 4,000	FM, P	<i>Large plant bears club shaped smooth fruit 1 1/2 in. long, medium thick walls, green to red, very pungent.</i>

PEPPERS HOT OP Heritage Varieties		M=1,000 seeds			
Priced per package		1/2 oz	1 oz.	4 oz	1#
37544	Anaheim Chili	4.70	6.80	21.25	61.50
37502	Cayenne Long Slim	4.40	6.40	19.95	57.75
37504	Early Jalapeno	5.90	8.55	26.60	77.00
37501	Hungarian Yellow Wax	4.70	6.80	21.25	61.50
37505	Jalapeno M	5.90	8.55	26.60	77.00
37512	Red Cherry ^{Large}	7.00	10.15	31.70	91.75
37509	Serrano	4.70	6.80	21.25	61.50

PEPPERS HOT OP Heritage Varieties		M=1,000 seeds				
Priced per package		250 Seeds	500 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	50M		
37507	Cayenne Large Thick	5.85	7.90	10.50	7.00	5.80
37508	Habanero	7.95	10.80	14.40	9.60	8.00
37543U	Hot Portugal ^{Untreated}	6.85	9.30	12.40	8.25	6.85
37515	Pasillo Bajio	6.30	8.55	11.40	7.60	
37531	Serrano Tampiqueno	5.85	7.90	10.50	7.00	5.80

* Multiple packages may be used to fill orders for these quantities.



GARNET GOLD **NEW** pg. 104

PUMPKINS

PLANTING

Plant pumpkins ½" - 1" deep. For a general rule of thumb plant seed the depth of three times the thickness of the seed. Plant spacing varies depending on fruit size. If planting a large pumpkin give plant approximately 72 sq. ft. of space. Medium sized pumpkins require 30 sq. ft. of space. Pie pumpkins require 24 - 30 sq. ft. of space. Miniature pumpkins require 10 - 24 sq. ft. of space. See the "Pumpkin Planting/Harvesting Timing Chart" on page 105 for additional information.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout fields every 7 days to ensure crop health. Look for insect, weed, and disease pressure. The first three weeks focus on weeds and insect pressure. Then focus on disease pressure. For weed, insect, and disease identification and treatments consult the Midwest Vegetable Production Guide:

www.ruppseeds.com/MVPG or your local extension. Place pollinators in field to ensure maximum fruit set.

HARVEST

Harvest when fruit has developed deep color. Handles will appear dry. Cut handles with shears to protect handles from being broken off.

STORAGE

Clean fruit of dirt and wash in 5% chlorine solution. Let air dry and cure for 10 - 12 days. Make sure air is able to circulate around fruit. It is important to keep fruit dry.

POWDERY MILDEW RATINGS

HR - High Resistance
IR - Intermediate Resistance
T - Tolerant

PLANT SPACING

Each variety or type of pumpkin has an optimum plant spacing for its best performance. If plants are too close, stress and competition can decrease fruit size and possibly even reduce the number of female flowers. Under extreme stress, tight spacing may eliminate the crop entirely.

- Optimum spacing for maximum yield, especially for jack-o-lantern pumpkins, will not necessarily be the best spacing for large fruit size. For large fruit, we would suggest reducing plant density to the next recommended plant population.

PLANT SPACING (CONTINUED)

- Accurate plant spacing will be an equal opportunity environment for every plant.
- Suggested populations are for final plant stands.
- To achieve ideal plant populations it is necessary to either over-plant and hand thin or to plant according to recommendations and hand plant later to fill skips.
- Seed corn maggots, wire worms, mice and birds, floods or lack of rain are all common problems that effect accurate stand establishment.

PLANT SPACING CHART

	Row Width	Distance Between Plants	Plants Per Acre
Category 1	12'	6'	605
Category 2	7 ½ to 9'	4'	1,210 to 1,450
Category 3	6 to 7 ½'	4'	1,450 to 1,815
Category 4	5 to 6'	2'	3,600 to 4,350



MONSTER SMASH



WORLD OF COLOR

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VEGETABLE ROOT INOCULANT
Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

GROWER PREFERRED ALL-STARS ★ PUMPKINS

LARGE

A long awaited variety in the powdery mildew resistant class with a nice black handle atop a really dark orange, deep ribbed fruit is **Bayhorse Gold**. An 18-22 lb. fruit average make this one a sure winner for the wholesale market.

Carbonado Gold is a 40 count pumpkin that has a very uniform, round shape with strong PMT. Its dark orange fruit with black handles will make this variety an industry standard.

With its early 95 day maturity, growers can plant **Early Giant** later and still get orange pumpkins for fall. This makes it a preferred choice when challenging spring weather delays planting.

Under ideal growing conditions, **Gold Medal** will produce fruit in the 30 lb. size category. This dark orange, large handled variety has a full vine and 90 day maturity.

Growers are still telling us that **Solid Gold** is one of the best varieties that they have ever grown. It is the most uniform 20-25 lb. variety on the market. Remember to give it room, 25 square feet per plant at a minimum. It also has a 105 day maturity so plant accordingly. Its dark orange color and large handle make Solid Gold a winner.

MID SIZE

Growers tell us **Gold Standard** is the highest yielding 13-15 lb. pumpkin in the market. Its dark orange fruit and nice handles make it a winner.

Skidoo Gold is a powdery mildew tolerant pumpkin in the 12-15 lb. size. Its dark color and handle with uniform fruit make this variety a standout.

SMALL / PIE

Bisbee Gold's heavy ribbing, dark orange fruit and black handle make it a standout variety. The heavy yield of 6-7 lb. fruit along with Bisbee Gold's strong powdery mildew resistance make it a must have.

Prankster is a 3-5 lb. PMR pie pumpkin that is dark orange, deep ribbed, and has a very nice sized black handle making this one of the prettiest pie pumpkins on the market.

MINIATURE

A mini pumpkin with powdery mildew tolerance, **Gold Speck** delivers very uniform darker orange fruit, has a larger stem and is higher yielding than similar miniature varieties. Gold Speck is 20% smaller than Jack-B-Quik.

SPECIALTY

With the red veins on a white background, **One Too Many** is the only thing like it on the market. That is what makes it sell.

WHITE

At 20-30 lb. average, **Crystal Star** is one of the largest white pumpkins on the market. Its round shape and classic white color make this fly off the shelf. It has a large vine, so give it room to grow.



Barry Rupp
Vegetable Consultant

PUMPKINS		GIANT					
▲		Days	Weight pounds	Skin	Vine	Spacing Category	Features
38501	Dill's Atlantic Giant ^{PVP}	120	100 - 600	Orange	Very Large	1	<i>Produces giant show pumpkins.</i>
38092	Monster Smash ^{F1}	120	50 - 150	Bright Orange	Very Large	1	<i>Complete with slightly flattened/round fruit with moderately defined ribbing, this Rupp release is targeted for those growers who have a passion to enhance their already existing Rupp "Gold Series" pumpkin line. Without question, this invention is sure to be a "smashing" success!</i>
38007	Prizewinner ^{F1}	120	50 - 200	Orange	Very Large	1	<i>An excellent display pumpkin with superior shape and color to Atlantic Giant.</i>
38074	World of Color ^{Blend}	120	50 - 125	Multi Colored Mix	Very Large	1	<i>A Rupp product that is a blend of very large pumpkins with coats of many colors. The base of the blend will be a dark red-orange pumpkin that does not fade in the sun. Other colors are white, pink & blue, hubbard blue, plus peach and other nuances discovered in our breeding nursery. All of the fruit are pumpkin shaped and will definitely create a new concept in fall displays.</i>

PUMPKINS GIANT		M=1,000 seeds				
Priced per package		1 oz.	4 oz.			
Priced per pound in these package sizes		1#	5#	Seeds /lb.		
38501	Dill's Atlantic Giant	13.70	35.95	108.00	105.00	1,400

PUMPKINS GIANT		M=1,000 seeds					
Priced per package		100 Seeds	250 Seeds				
Priced per 1,000 seeds in these package sizes		1M	3M	25M	Seeds /lb.		
38092	Monster Smash	55.85	103.40	275.70	272.45	270.20	2,900
38007	Prizewinner ^{F1400}	85.50	158.25	421.95	418.70	416.45	1,300
38074	World of Color ^{Blend}	58.80	108.85	290.15	286.90	284.65	1,200



BELLATRIX



CAPTAIN JACK



EARLY GIANT ★



EARLY KING



GILTEDGE GOLD **NEW**



GOLD MEDAL ★

PUMPKINS		XTRA LARGE							
		Days	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Bin Count	Features
	38060 Bellatrix ^{F1}	95	25+	Orange	IR	Large Vine	1 or 2	35	<i>Large, round, attractive orange pumpkin with a strong, dark green handle.</i>
	38551 Captain Jack ^{F1}	105	30+	Dark Orange		Large Vine	1 or 2	30	<i>A variety from Sakata that has thick flesh and a flat bottom to help fruit stand straight under its heavy weight. Also has large embedded handle.</i>
	38083 Conestoga Giant ^{F1}	115	22 - 40	Orange	IR	Large Vine	1 or 2	30	<i>Strong, dark 2-3" thick handles ranging 4-5" long make this a winner. Has moderate PM tolerance.</i>
★	38009 Early Giant ^{F1}	95	25 - 30	Dark Orange	IR	Large Vine	2	30 - 35	<i>Upright fruit on a productive plant with excellent orange color. Intermediate resistance to powdery mildew.</i>
	38011 Early King ^{F1}	90	22 - 28	Deep Orange	IR	Large Vine	2	35	<i>Crop Failure for 2022. Rounded fruit on a productive plant with excellent orange color. Intermediate resistance to powdery mildew.</i>
NEW	38123 Giltedge Gold ^{RPX 6879 F1}	100	18 - 24	Orange	IR	Medium Vine	2		<i>The fruit have an elevated shape with a rough texture and dark, healthy handles. To maintain fruit weight, do not crowd the plants.</i>
★	38050 Gold Medal ^{F1}	95	25+	Deep Orange		Large	1 or 2	30	<i>A Rupp hybrid that is at the top of the class in appearance for the retail marketer. A large pumpkin with dark color and a great, long handle. U.S. Patent #5,811,642.</i>
	38071 Gold Medallion ^{F1}	110	30+	Orange		Large	1 or 2	30	<i>A sister hybrid to Gold Medal that is 2 lbs. larger and has a larger vine. U.S. Patent #5,811,642.</i>
	38523 Gold Rush	120	20 - 35	Deep Orange		Large	1 or 2	30	<i>A large Rupp pumpkin with handles 4" long and 3" in diameter, thick flesh and heavy. U.S. Patent #5,811,642.</i>
	38024 Gold Strike ^{F1}	110	27	Orange		Vine	2	35	<i>A Rupp pumpkin hybrid with round to slightly flattened fruit.</i>
	38500 Jumpin Jack TM	120	20 - 40	Orange		Large Very Vigorous	1 or 2	30	<i>A Rupp exclusive. Very large, well handled, taller than wide variety.</i>
	38090 Large Marge ^{F1}	105	30 - 40	Dark Orange		Vine	1 or 2	30	<i>A new, extremely large Sakata pumpkin with a large, dark, embedded handle to match the fruit size. Can set multiple fruit per plant and maintain size. Blocky round shape. Ribbed with wrinkled skin.</i>
	38537 Ol Zeb's	110	20 - 30	Light Orange		Medium	2	35	<i>A Rupp pumpkin developed in Canada. It has a unique florescent orange color and a long wispy handle that gives it a particular heirloom look. A high yielder.</i>
	38072 Phat Jack	125	50 +	Orange		Medium	1 or 2	25	<i>A very large Jack O' Lantern pumpkin from Siegers. Tall with a thick handle.</i>
NEW	38117 Quigley Gold ^{RPX 6883 F1}	100	22 - 26	Dark Orange	IR	Medium Vine	2		<i>Its rough texture with varying amounts of warts make this a great addition to fall displays. The round fruit with slight ribbing has some gold flecking and a dark handle. Harvest early for green warts.</i>
★	38085 Solid Gold ^{F1}	100	25	Deep Orange		Medium	2	35	<i>A Rupp hybrid that has performed very well on the farm. Has excellent color, handles and yields. U.S. Patent #5,811,642.</i>

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GOLD MEDALLION



GOLD RUSH



LARGE MARGE



OL ZEB'S



PHAT JACK



QUIGLEY GOLD **NEW**



SOLID GOLD ★



20 KARAT GOLD



BANNAK GOLD **NEW**



BAYHORSE GOLD ★



CARBONADO ★
GOLD



EAGLE CITY GOLD

PUMPKINS XTRA LARGE		M=1,000 seeds				
		250 Seeds				
	Priced per package	Priced per 1,000 seeds in these package sizes				
		1M	3M	25M	100M	
38060	Bellatrix ^{F1400}	32.95	87.80	84.55	82.05	80.75
38551	Captain Jack ^{F1400}	34.55	92.10	88.85	86.35	85.05
38083	Conestoga Giant ^{F1400}	27.20	72.45	69.20	66.70	65.40
38009	Early Giant ^{F1400}	27.00	71.90	68.65	66.15	64.85
38011	Early King ^{F1400}	Crop Failure				
38123	Giltedge Gold ^{F1400}	38.45	102.50	99.25	96.75	
38050	Gold Medal	20.40	54.35	51.10	48.60	47.30
38050	Gold Medal ^{F1400}	22.60	60.20	56.95	54.45	53.15
38050U	Gold Medal ^{Untreated}	20.40	54.35	51.10	48.60	47.30
38071	Gold Medallion	16.70	44.50	41.25	38.75	37.45
38071	Gold Medallion ^{F1400}	18.90	50.35	47.10	44.60	43.30

PUMPKINS XTRA LARGE		M=1,000 seeds				
		250 Seeds				
	Priced per package	Priced per 1,000 seeds in these package sizes				
		1M	3M	25M	100M	
38523	Gold Rush	12.10	32.15	28.90	26.40	25.10
38523	Gold Rush ^{F1400}	14.25	38.00	34.75	32.25	30.95
38090	Large Marge ^{F1400}	34.55	92.10	88.85	86.35	85.05
38117	Quigley Gold ^{F1400}	38.90	103.70	100.45	97.95	
38085	Solid Gold	26.10	69.55	66.30	63.80	62.50
38085	Solid Gold ^{F1400}	28.30	75.40	72.15	69.65	68.35
	Priced per package	1 oz. 4 oz.				
	Priced per pound in these package sizes	1#	5#	25#		
38024	Gold Strike	8.50	25.10	77.10	74.10	72.10
38500	Jumpin' Jack TM	7.35	21.75	66.90	63.90	61.90
38537	Ol Zeb's	6.55	19.30	59.25	56.25	54.25
38072	Phat Jack ^{F1400}	13.85	40.95	125.90	122.90	120.90

PUMPKINS		LARGE							Pricing on page 104
		Days	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Bin Count	Features
38068	20 Karat Gold ^{F1}	100	18 - 22	Dark Orange	IR	Semi Bush	2	40	A Rupp pmt, semi-bush hybrid with dark orange rind color and good handles. A potential option for the shipper market. U.S. Patent #5,811,642.
NEW 38112	Bannack Gold ^{RPK 6208 F1}	100	16 - 22	Deep Orange	IR	Medium Vine	3	35	Bannack Gold has a unique look with dark flecking and shadowed warts. It has a slightly elevated shape with a well attached handle.
★ 38061	Bayhorse Gold ^{F1}	100	15 - 20	Very Dark Orange	IR	Vine	3	40	Uniform, slightly elevated hybrid with strikingly gorgeous, very dark orange fruit and elongated dark handle. Can be used for roadside sales or wholesale shipping in 40 count bins. A grower favorite!
★ 38069	Carbonado Gold ^{F1}	100	15 - 18	Very Dark Orange	HR	Vine	3	40	Dynamic Rupp pumpkin variety with extremely uniform shape and strong handle. Similar in weight to Bayhorse Gold, with a more rounded shape. Perfect for 40 count shipping bins or roadside retail market.

Additional Large Pumpkins can be found on the next page --->.



GARNET GOLD **NEW**



GOLD CHALLENGER



GOLD GEM



ORANGE RAVE



WOLF

**ORDERS
OVER \$250
ARE SHIPPED
FREE!**


PUMPKINS **LARGE** Pricing on page 104

	Days	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Bin Count	Features
38062 Eagle City Gold ^{F1}	100	18 - 24	Medium Orange	IR	Vine	3	35 - 40	The shallow ribs on the round fruit make it an ideal choice for carving. Has intermediate resistance to powdery mildew.
NEW 38113 Garnet Gold ^{RFX 6209 F1}	100	13 - 17	Dark Orange	HR	Medium Vine	3	40	Beautiful, round fruit have heavy ribbing, strong handles and a uniform shape.
38073 Gold Challenger ^{F1}	105	20 - 24	Orange		Semi Bush	3	35 - 40	A semi-bush hybrid with a dark orange rind color, and a good handle in the 20 lb class. A very serious competitor.
38051 Gold Gem ^{F1}	105	22	Orange		Large	2	35	A Rupp hybrid pumpkin with excellent fruit color, and the right size for the shipper market; about 4 lbs smaller and darker orange than Howden.
38001 Orange Rave ^{F1}	100	15 - 25	Orange	IR	Semi Vine	2	35 - 40	A hybrid with rounded to slightly upright fruit and moderate ribbing. Has preferred dark orange color and intermediate resistance to powdery mildew.
38550 Wolf ^{PVP}	120	15 - 25	Deep Orange		Large	1	40	Round to oblate shaped fruit with moderate ribs and very thick, long handles. The flesh thickness is excellent which helps to prevent against flat-sided fruit and makes them heavy for their size.

PUMPKINS LARGE		M=1,000 seeds				
	250 Seeds	1M	3M	25M	100M	
38068 20 Karat Gold	20.75	55.25	52.00	49.50	48.20	
38068 20 Karat Gold ^{F1400}	22.95	61.10	57.85	55.35	54.05	
38112 Bannack Gold ^{F1400}	37.40	99.70	96.45	93.95		
38061 Bayhorse Gold ^{F1400}	36.40	97.00	93.75	91.25	89.95	
38069 Carbonado Gold ^{F1400}	37.40	99.70	96.45	93.95	92.65	
38062 Eagle City Gold ^{F1400}	35.10	93.50	90.25	87.75	86.45	
38113 Garnet Gold ^{F1400}	37.40	99.70	96.45	93.95		
38073 Gold Challenger	21.95	58.50	55.25	52.75	51.45	
38073 Gold Challenger ^{F1400}	24.15	64.35	61.10	58.60	57.30	
38001 Orange Rave ^{F1400}	34.35	91.55	88.30	85.80	84.50	
	1 oz.	4 oz.	1#	5#	25#	
38051 Gold Gem	8.35	24.70	75.90	72.90	70.90	
38550 Wolf ^{F1400}	17.70	52.35	160.95	157.95	155.95	

PUMPKINS MID SIZE		M=1,000 seeds					
	250 Seeds	1M	3M	25M	100M	Seeds /lb.	
38045 Gold Standard	13.30	35.45	32.20	29.70	28.40	3,100	
38045 Gold Standard ^{F1400}	15.50	41.30	38.05	35.55	34.25	3,100	
38045U Gold Standard ^{Untreated}	13.30	35.45	32.20	29.70	28.40	3,200	
38019 Jack of All Trades	15.30	40.75	37.50	35.00	33.70	3,800	
38056 Neon	19.00	50.65	47.40	44.90	43.60	3,800	
38034 Secretariat ^{F1400}	31.70	84.50	81.25	78.75	77.45	3,000	
38076 Skidoo Gold ^{F1400}	32.15	85.70	82.45	79.95	78.65	2,800	

CURIOS ABOUT THE NAMES OF OUR NEW PUMPKINS?
 Montana's gold rush started in 1863 at Bannack – check it out and read about Montana's mining history and view photos.
www.ruppseeds.com/PName



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GOLD STANDARD ★



NEON



SECRETARIAT



SKIDOO GOLD ★

GROW YOUR BEST PUMPKINS YET!



Our pumpkin guide features tips from product selection through planting and harvest. Visit our website to download it or request a printed copy.



www.ruppseeds.com/PumpkinGuide

PUMPKINS		MID SIZE								
		Days	Diameter Height	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Bin Count	Features
★	38045 Gold Standard ^{F1}	90	13 x 13"	16	Deep Orange		Restricted Vine	3	45	A Rupp pumpkin with good handles, high yields and deep orange color. Will blend right in with Howden to bring the average size down.
	38019 Jack Of All Trades ^{F1}	90	8 x 9"	9 - 12	Orange		Semi Bush	3	50	A hybrid that is very uniform in size, has an excellent handle and is smooth with light sutures. Fruits on a very vigorous yet semi-bush plant.
	38056 Neon ^{F1}	70	7 x 8"	7 - 8	Orange		Semi Bush	4	60	The earliest maturing pumpkin we offer. Semi bush plant, very early, colors early, dark stem and high yield.
	38034 Secretariat ^{F1}	105	12 x 9"	15	Dark Orange	IR	Restricted Vine	3	45	Prolific plants produce beautiful, slightly-flattened fruit with thick handles. Works well for binned markets or road-side growers.
★	38076 Skidoo Gold ^{F1}	90	10 x 11"	12 - 15	Deep Orange	HR	Restricted Vine	3	45	Blocky, heavily ribbed, mid-sized hybrid with powdery mildew tolerance. Improved uniformity and color over comparable varieties in the same weight class.

PUMPKIN PLANTING/HARVESTING TIMING CHART

Pumpkin growers who are planting multiple varieties need to consider multiple planting dates so that they can harvest their crop at its peak. The planting date plus the maturity of the variety should equal the potential harvest date. Keep in mind that higher or lower than average heat and sunlight may also impact the development of the crop by decreasing or increasing its maturity.

Use the following chart to align your pumpkin variety maturity with your desired harvest date to schedule planting.

Variety Maturity	Planting Date: May 1 Harvest Range	Planting Date: May 15 Harvest Range	Planting Date: June 1 Harvest Range	Planting Date: June 15 Harvest Range	Planting Date: July 1 Harvest Range
80	July 10 - July 30	July 24 - Aug. 13	Aug. 10 - Aug. 30	Aug. 24 - Sept. 13	Sept. 9 - Sept. 29
85	July 15 - Aug. 4	July 29 - Aug. 18	Aug. 15 - Sept. 4	Aug. 29 - Sept. 18	Sept. 14 - Oct. 4
90	July 20 - Aug. 9	Aug. 3 - Aug. 23	Aug. 20 - Sept. 9	Sept. 3 - Sept. 23	Sept. 19 - Oct. 9
95	July 25 - Aug. 14	Aug. 8 - Aug. 28	Aug. 25 - Sept. 14	Sept. 8 - Sept. 28	Sept. 24 - Oct. 14
100	July 30 - Aug. 19	Aug. 13 - Sept. 2	Aug. 30 - Sept. 19	Sept. 13 - Oct. 3	Sept. 29 - Oct. 19
105	Aug. 4 - Aug. 24	Aug. 18 - Sept. 7	Sept. 4 - Sept. 24	Sept. 18 - Oct. 8	Oct. 4 - Oct. 24
110	Aug. 9 - Aug. 29	Aug. 23 - Sept. 12	Sept. 9 - Sept. 29	Sept. 23 - Oct. 13	Oct. 9 - Oct. 29
115	Aug. 14 - Sept. 3	Aug. 28 - Sept. 17	Sept. 14 - Oct. 4	Sept. 28 - Oct. 18	Oct. 14 - Nov. 3
120	Aug. 19 - Sept. 8	Sept. 2 - Sept. 22	Sept. 19 - Oct. 9	Oct. 3 - Oct. 23	Oct. 19 - Nov. 8

Pumpkin quality will be the best when harvested nearest to the variety's actual maturity.

First, select the maturity of the variety you are using, then pick the date you would like your pumpkins to look the freshest (nice green handle). The required planting date will be at the top of the column.

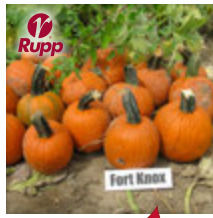
For example; if you are planting Gold Medal (95 day) and you want them to look their freshest on September 15th, you will want to plant on June 15. However, if you are planting Gold Rush (120 day) and you also want them to look their freshest on September 15th, you will want to plant on May 15.



BISBEE GOLD ★



DARLING



FORT KNOX ↗



JACK SPRAT



PIK-A-PIE



PRANKSTER ★

PUMPKINS		SMALL / PIE							
		Days	Diameter Height	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Features
★	38075 Bisbee Gold ^{F1}	90	6 1/2 x 6 1/2"	6 - 7	Dark Orange	HR	Semi Bush	3	Gorgeous dark orange fruit and jet black handles. Has tremendously refined ribbing and high resistance to PM. Top of the line!
	38020 Darling ^{F1}	90	8 x 12"	6 - 8	Dark Orange	IR	Semi Bush	3	Unique tall pie pumpkin with intermediate resistance to powdery mildew.
↗	38115 Fort Knox ^{RPX 6875}	90	7 x 7"	6	Dark Orange	HR	Medium	3	High yielding pumpkin with a handle that appears as indestructible as its namesake.
	38003 Jack Sprat ^{F1}	100	5" x 6"	2 - 3	Dark Orange	IR	Semi Bush	3	Fruit have a nice dark orange exterior and dark green embedded handles. Very uniform in size and shape. High fruit numbers per plant with an excellent yield potential.
	38038 Pik-A-Pie ^{F1}	85	6 x 5"	5 - 6	Orange		Semi Bush	3	Produces uniform fruit with a large, dark green handle. Yields an abundance of excellent quality pumpkins.
★	38067 Prankster ^{F1}	85	6 x 4"	3	Dark Orange	IR	Semi Bush	3	An excellent stemmed powdery mildew tolerant pumpkin. Good size for boxing, painting and the school market.
	38507 Small Sugar ^{Asgrow Strain}	100	6 x 7"	5 - 6	Orange		Medium	3	A selection with a distinctly superior handle when compared to other Small Sugar strains.
	38047 Touch of Autumn ^{F1}	95	6 x 5"	2 1/4	Medium Orange	IR	Semi Bush	3	A hybrid, with excellent handles and is just the right size for boxing. In most university trials is the highest yielding in fruit numbers and pounds per acre.
↗	38116 Yosemite ^{RPX 6880}	90	6 1/2 x 7"	6 - 7	Deep Orange	IR	Medium	3	The extra-long handle on Yosemite makes it an attractive addition for your farm market display and a nice option for kids to carry. Our trial cooperators love its "stunning shape and color". Stores extremely well.

PUMPKINS SMALL / PIE		M=1,000 seeds					
	250 seed	Priced per 1,000 seeds in these package sizes					Seeds /lb.
		1M	3M	25M	100M		
38075 Bisbee Gold ^{F1400}	34.25	91.25	88.00	85.50	84.20	3,100	
38020 Darling ^{F1400}	28.75	76.65	73.40	70.90	69.60	4,100	
38115 Fort Knox ^{F1400}	34.85	92.85	89.60	87.10	85.80	2,500	
38046 Hybrid Pam ^{F1400}	18.60	49.55	46.30	43.80	42.50	2,800	
38003 Jack Sprat ^{F1400}	31.70	84.45	81.20	78.70	77.40	5,800	
38038 Pik-A-Pie	14.95	39.80	36.55	34.05	32.75	3,800	
38038 Pik-A-Pie ^{F1400}	17.15	45.65	42.40	39.90	38.60	3,700	
38038U Pik-A-Pie ^{Untreated}	14.95	39.80	36.55	34.05	32.75	3,800	
38067 Prankster ^{F1400}	21.45	57.20	53.95	51.45	50.15	3,400	

PUMPKINS SMALL / PIE		M=1,000 seeds					
	250 seed	Priced per 1,000 seeds in these package sizes					Seeds /lb.
		1M	3M	25M	100M		
38047 Touch of Autumn	10.85	28.90	25.65	23.15	21.85	5,500	
38047 Touch of Autumn ^{F1400}	13.05	34.75	31.50	29.00	27.70	5,500	
38047U Touch of Autumn ^{Untreated}	10.85	28.90	25.65	23.15	21.85	5,500	
38116 Yosemite ^{F1400}	33.80	90.10	86.85	84.35	83.05	2,400	
Priced per package		1 oz.	4 oz.				
Priced per pound in these package sizes		1#	5#	25#	Seeds /lb.		
38511 Baby Pam	3.30	9.75	30.00	27.00	3,600		
38507 Small Sugar ^{Asgrow Strain}	4.75	14.05	43.15	40.15	3,700		

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TOUCH OF AUTUMN



YOSEMITE



BATWING MIX



GOLD DUST



GOLD SPECK



JACK-B-QUIK

PUMPKINS **MINIATURE**

	Days	Diameter Height	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Features
38531 Baby Bear ^{PVP}	105	5 x 6"	1	Orange		Vine	4	An AAS winner. Larger than Jack-B-Quik, smaller than Baby Pam. Long 4" handle. Good disease tolerance.
38548 Batwing Mix	90	3"	¼	Orange/Green		Semi Bush	4	A unique orange and dark green colored pumpkin when harvested early to full orange color at maturity.
38066 Gold Dust ^{F1}	95	3 ½ x 2"	1/8	Orange	IR	Semi Bush	4	A Rupp developed semi bush hybrid with darker fruit than Jack-B-Quik plus powdery mildew tolerance. Most fruit set close to the crown early and escape virus flecking. The strain that growers prefer.
Waiver Needed: Our current seed lot may produce up to 15% fruit that vary in shape, color, and size. We ask that you sign the "Gold Dust Agreement" on page 169. Pricing has been adjusted for this current seed lot.								
★ 38077 Gold Speck ^{F1}	95	3 x 2"	¼	Orange	IR	Bush	4	A Rupp sister bush hybrid to Gold Dust, with similar vine and fruit characteristics, but smaller than Jack-B-Quik and Munchkin. Most fruit set close to the crown early and escape virus flecking. Our highest yielding Jack-B-Little type. The strain that growers prefer.
38525 Jack-B-Quik	95	3 x 2"	¼	Orange		Medium	4	A more ribbed mini with taller and darker orange fruit.
38042 Orangita	80	5 x 3"	1 - 1 ½	Orange	HR	Semi Bush	4	Beautiful mini pumpkin featuring a disk shape with deep ribbing. Makes for an excellent display.

Additional Miniature Pumpkins can be found on the next page --->.

PUMPKINS MINIATURE	M=1,000 seeds					
	Priced per package 250 seed	1M	3M	25M	100M	Seeds /lb.
38531 Baby Bear	9.60	25.55	22.30	19.80	18.50	3,700
38066 Gold Dust	16.90	45.00	41.75	39.25	37.95	6,600
38066 Gold Dust ^{F1400}	19.10	50.85	47.60	45.10	43.80	6,600
38066U Gold Dust ^{Untreated}	16.90	45.00	41.75	39.25	37.95	6,700
38077 Gold Speck	20.40	54.40	51.15	48.65	47.35	7,000
38077 Gold Speck ^{F1400}	22.60	60.25	57.00	54.50	53.20	7,000
38077U Gold Speck ^{Untreated}	20.40	54.40	51.15	48.65	47.35	7,000
38042 Orangita ^{F1400}	26.00	69.30	66.05	63.55	62.25	6,500
38043 Spark	29.70	79.15	75.90	73.40	72.10	5,900

PUMPKINS MINIATURE	M=1,000 seeds					
	Priced per package 250 seed	1M	3M	25M	100M	Seeds /lb.
38538 Wee-B-Little	10.40	27.65	24.40	21.90	20.60	5,500
38538 Wee-B-Little ^{F1400}	12.60	33.50	30.25	27.75	26.45	5,400
38538U Wee-B-Little ^{Untreated}	10.40	27.65	24.40	21.90	20.60	5,500
WeeeeeeOne Blend						
38078 WeeeeeeOne Blend ^{F1400}	24.35	64.90	61.65	59.15	57.85	7,600
WeeeeeeOne Blend						
38078U WeeeeeeOne Blend ^{Untreated}	22.15	59.05	55.80	53.30	52.00	7,900
Priced per package		1 oz.		4 oz.		Seeds /lb.
Priced per pound in these package sizes		1#	5#	25#		
38548 Batwing Mix	13.20	39.10	120.30	117.30	115.30	5,800
38525 Jack-B-Quik	9.00	26.65	81.85	78.85	76.85	7,000



ORANGITA



SPARK



WEE-B-LITTLE



WEEEEONE BLEND



BLUE DOLL



FOOL'S GOLD

PUMPKINS		MINIATURE							
▲		Days	Diameter Height	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Features
38043	Spark	90	3.5 x 2"	1/2	Deep Orange / Yellow Stripes	HR	Vine	4	Very uniform, striped ornamental variety with a dark green handle that is strongly attached to the fruit. Excellent for fall decorations when used together with Casperita.
38538	Wee-B-Little	95	3 x 3"	1/2	Orange		Bush	3	An AAS winner that can be carved and provides excellent plant health on a tight bush plant. A true mini pumpkin.
<p>Growing Tip: Wee-B-Little is known for its poor yields! High levels of nitrogen causes excessive plant growth and low fruit set. If you force it into the survival mode (more like a weed) with low nitrogen, plant size will be reduced and fruit numbers will multiply and give much better yields. We have proven to ourselves that low input production improves yields.</p>									
38078	WeeeeOne Blend	95	3 x 3" - 1 1/2 x 1 1/2"	1/2	Orange	IR	Large Bush	3	A unique miniature pumpkin with shallow ribs. Vigorous bush with intermediate resistance to powdery mildew and very high yields. WeeeeOne Blend approximate size range from 1 1/2 x 1 1/2" up to 3 x 3" fruit size. A must have in your miniature and gourd lineup.

PUMPKINS		SPECIALTY							Pricing on page 111
▲		Days	Diameter Height	Weight pounds	Skin	Vine	Spacing Category	Features	
38012	Blue Doll	100	12 x 10"	20 - 24	Blue	Very Large Vine	2	Features an exotic blue color and an almost square appearance with deep ribbing. Exhibits deep orange, sweet flesh that can be used for pies, soup, and gourmet culinary delights. Great for stacking displays.	
38542	Dickinson Field	115	14 - 18 x 12 - 14"	12 - 16	Buff Orange	Medium	4	An old widely used pumpkin variety for the processing industry.	
	38114 Fool's Gold	90	9 1/2 x 9 1/4"	11 - 12	Tan	Large Vine	3	With its unique tan color, Fool's Gold will catch your customer's eye and it looks great when displayed in a mix with orange and white varieties. Intermediate resistance to powdery mildew.	
38118	Fright	90	10 x 9 1/2"	12	Orange with green warts	Medium	3	Add a frightening look to your fall display with this heavily-warted variety. The green warts pop out on this orange pumpkin, making it a favorite of our trial cooperators.	
38093	Goose Bumps II	95	8 X 8"	8 - 12	Orange	Medium	3	Improved Goose Bumps with higher percentage of fruit covered with warts.	
38048	HSC151	110	8 1/2 x 11"	9 - 14	Medium Orange / Green Stripes	Medium	3	Totally hullless, the roasted seeds are delicious with a nutty texture. Compared to other hullless varieties, maturity is earlier and seed yield is exceptional.	
38081	Indian Doll	100		20 - 24	Deep Orange	Vine	2	Indian Doll features a deep-orange color and an almost square appearance. Sweet flesh is great for pies, soup and gourmet culinary delights. Great for fall decorations.	
42939	Jarrahdale	95	10"	7 - 8	Blue	Medium	2	The favorite Australian winter squash. Excellent quality flesh, beautiful looking fruit. Good to use for both food or ornamental use.	

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FRIGHT



GOOSE BUMPS II
KNUCKLE HEAD



HSC151



INDIAN DOLL



MELLOW YELLOW



MIDNIGHT

PUMPKINS		SPECIALTY						Pricing on page 111
		Days	Diameter Height	Weight pounds	Skin	Vine	Spacing Category	Features
38044	Mellow Yellow	100	10 x 12"	12 - 15	Yellow	Vine	2	<i>Slightly elevated profile. Medium ribbing. Intermediate tolerance to PM.</i>
38089	Midnight <small>Black Kat F1</small>	77		½ - 1	Black	Semi Bush	4	<i>Very dark green pumpkin having a classic shape with deep ridges. Will start to turn orange after approximately 2 months of storage. Intermediate tolerance to PM. Plant no earlier than June 22.</i>
38030	Naked Bear	105	5 x 6"	2 - 4	Light Orange	Medium	3	<i>Large handled, naked seeded variety. High yielding product for either boxed pie pumpkin or edible seed pack markets.</i>

Additional Specialty Pumpkins can be found on the next page -->.

BARRY'S PUMPKIN GROWING TIPS FOR SUCCESS

My name is Barry Rupp and I have been serving growers as a vegetable seed consultant with Rupp Seeds for over 30 years. Our company started breeding pumpkins about 25 years ago and I've been passionate about them ever since. Following are my "Tips for Success for the Novice Pumpkin Grower" or maybe "Reminders for Success for the Experienced Pumpkin Grower". Regardless of your experience in raising pumpkins, here are nine helpful suggestions, listed in no particular order:

CROP ROTATION

I strongly recommend that growers NOT plant pumpkins in the same field in consecutive years and would suggest that waiting a minimum of three years between pumpkin crops would be best. If you have adequate acreage, I would even prefer that you wait 5 to 7 years before raising another pumpkin crop in that same field. This helps to reduce and possibly even prevent soil diseases and pest infestations. When possible, raising pumpkins after wheat is a great option. Rotating pumpkins in after corn and soybeans can increase the likelihood of higher rootworm populations and phytophthora, which will be detrimental to the crop.

PLANT SPACING

Correct plant spacing is very important and will vary by product. Planting a full vine variety too close can increase disease pressure. Diseases like powdery mildew or fruit rot can become more prevalent when the vine foliage does not have adequate space for air movement to aid in removing moisture in the plant canopy. Planting too closely will also affect fruit size and yield by holding too much heat in the field and restricting the ability for pollinators to do their job. It also impedes insecticide and fungicide effectiveness by restricting spray penetration.

PEST CONTROL

The biggest problem I hear about concerning insect and disease control is when growers are using the same product in repeated applications. Rotate your insecticide and fungicides based on their mode of action and NOT just

brand name or active ingredient. Remember scouting is one of your best tools. For chemical recommendations, consult the Midwest Vegetable Production Guide www.ruppseeds.com/MVPG.

POLLINATION

Pollinators can have a significant effect on pumpkin yield. I have heard it can take 14 - 17 visits by a pollinator (bees, etc.) in order for a flower to be fully pollinated. Scout your fields in the morning and if you don't see or hear bees, I recommend bringing in 1 hive of bees per acre.

VARIETY CHOICE

Make sure you know your target market before selecting which hybrids you want to grow. Most retail markets will accept a wide range of sizes, shapes and colors, where wholesale markets tend to have more specific requirements around bin count, size, shape, color and handle.

FIELD LOCATION

Vine crops typically perform better on well-drained sandy soils. The heavier the soils, the greater the importance of drainage. When a pumpkin is ripe, any rain that gets taken up by the plant is deposited into the seed cavity, which may lead to and even speed up the process of fruit rot.

BIOLOGICS

Beneficial bacteria in the soil, or added at planting time, will colonize on the roots and improve root and plant health which will help the plant handle stress (i.e. - drought or excessive water) later in the season.

PLANTING TIMING

This is a topic we discuss often as we continue to develop new varieties. If you are currently growing a late maturing variety and choose to also plant an early variety, DO NOT plant them on the same day. The early variety usually ripens way too early for your market and will likely rot before you harvest. We have a very handy "Pumpkin Planting/Harvesting Timing Chart" on page 105 to assist you with your planting dates.

FERTILITY

Soil testing can't be emphasized enough. Know what is already in your soil, and what you need to add. For invaluable information on this, see the Midwest Vegetable Production Guide link listed under Pest Control.





NAKED BEAR



NEW ENGLAND CHEDDAR



ONE TOO MANY ★



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Plant Porcelain Doll and help in the fight against breast cancer. Visit www.PinkPumpkinPatch.org for details.

Send pledge form and funds to:



Pink Pumpkin Patch Foundation
PO Box 670
Rocky Ford, CO 81067

For promotional materials, please visit

www.ruppseeds.com/PinkPumpkin



PUMPKINS

SPECIALTY

Pricing on page 111

		Days	Diameter Height	Weight pounds	Skin	Vine	Spacing Category	Features
42969	New England Cheddar ^{F1}	112	8 ½ x 12"	15	Tan	Vine	2	A hybrid that is excellent for industrial, or home processing (canning or pies) or other uses. It has a uniform rind color and deep orange flesh. It has superior dry matter and sugar content when compared with Long Island Cheese or Dickinson Field.
★ 42961	One Too Many ^{F1}	110	14"	20	White Back-ground with Red Veins	Large Vine	2	A Rupp product with outstanding potential for decorative use, developed through cross species breeding work. Fruit are 75% round with about 25% oblong fruit.
38029	Porcelain Doll ^{F1}	110	12 x 10"	20 - 24	Pink	Very Large Vine	3	This eye-catching hybrid pink pumpkin with deep ribbing and almost square appearance, stacks well and is sure to be a winner for your market stand! When picking, wait for the stem to get fully corky for maximum pink potential.
42967	Red Eye	110	14"	18	Red	Large Vine	2	A Rupp developed squash with excellent eating quality; will likely be used more for its decorative value.
42953	Red Warty Thing ^{Essex Turban}	110	14"	20	Bright Orange / Warty	Large Vine	2	A variety sourced from the U.S. Seed Bank with an appearance that is well suited as an unusual addition for the decorative market. Good eating. Hubbard type flesh, very hard, thick rind.
38533	Rouge Vif d'Etampes ^{Cinderella}	105	15 x 6"	20	Reddish Orange	Vine	2	A unique pumpkin from France. A flattened, deeply ridged fruit. Surprising beauty, great yield and flavor. Cinderella type used for stacking displays.
NEW 38127	Scarface ^{F1}	105	12 x 10"	12 - 16	Orange	Medium	3	Largest variety in the Super Freak series.
38084	Small World of Color	110	12 x 11"	25 - 30	Multi Color	Vine	1	A Rupp mix with round pumpkin shaped fruit in the maxima class that can be used in a new way of decorating. The blend contains Crystal Star that will keep its white color (not turn blue or yellow), plus a pink and also a pink & blue variety.
38549	Thumpkin	120	14 x 8"	15 - 25	Dark Orange	Vine	1	Hard stemmed pumpkin with unique flattened fruit and a gigantic handle. Plant at 72 square feet per plant. Crowding results in fewer but larger pumpkins. From the same supplier as Wolf.

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RED EYE



RED WARTY THING



SCARFACE **NEW**



SMALL WORLD OF COLOR



THUMPKIN

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PUMPKINS SPECIALTY		M=1,000 seeds					
Priced per package		100 Seed	250 Seed				
Priced per 1,000 seeds in these package sizes				1M	3M	25M	55M
38012	Blue Doll ^{FI400}	18.15	33.60	89.60	86.35	83.85	82.55
38114	Fool's Gold ^{FI400}	21.05	38.95	103.80	100.55	98.05	96.75
38118	Fright ^{FI400}	22.80	42.20	112.50	109.25	106.75	105.45
38093	Goose Bumps II ^{FI400}	22.10	40.90	109.05	105.80	103.30	102.00
38048	HSC151 ^{FI400}	12.60	23.30	62.05	58.80	56.30	55.00
38081	Indian Doll ^{FI400}	17.80	32.95	87.85	84.60	82.10	80.80
38088	Knuckle Head ^{FI400}	22.10	40.90	109.05	105.80		
38044	Mellow Yellow ^{FI400}	22.10	40.90	109.05	105.80	103.30	102.00
38089	Midnight ^{Black KatFI400}	16.20	30.00	80.00	76.75	74.25	72.95
38030	Naked Bear	14.95	27.60	73.50	70.25	67.75	66.45
42969	New England Cheddar	7.40	13.65	36.40	33.15	30.65	29.35
42969U	New England Cheddar ^{Untreated}	7.40	13.65	36.40	33.15	30.65	29.35

PUMPKINS SPECIALTY		M=1,000 seeds					
Priced per package		100 Seed	250 Seed				
Priced per 1,000 seeds in these package sizes				1M	3M	25M	55M
42961	One Too Many	32.40	59.95	159.85	156.60	154.10	152.80
42961U	One Too Many ^{Untreated}	32.40	59.95	159.85	156.60	154.10	152.80
42961	One Too Many ^{FI400}	33.60	62.15	165.70	162.45	159.95	158.65
38029	Porcelain Doll ^{FI400}	25.85	47.85	127.60	124.35	121.85	120.55
38127	Scarface ^{FI400}	22.10	40.90	109.05	105.80	103.30	102.00
38084	Small World of Color	45.35	83.95	223.75	220.50	218.00	216.70
Priced per package		1 oz.	4 oz.				
Priced per pound		1#	5#	25#	Seeds /lb.		
38542	Dickinson Field	4.45	13.15	40.35	37.35	35.35	5,100
42939	Jarrahdale	4.90	14.45	44.40	41.40	39.40	2,800
42967	Red Eye	9.45	28.00	86.15	83.15	81.15	1,900
42967U	Red Eye ^{Untreated}	9.45	28.00	86.15	83.15	81.15	2,000
42953	Red Warty Thing	10.00	29.60	91.05	88.05	86.05	1,900
42953U	Red Warty Thing ^{Untreated}	10.00	29.60	91.05	88.05	86.05	1,900
38533	Rouge Vif d'Etampes	7.90	23.40	71.95	68.95	66.95	1,500
38549	Thumpkin ^{FI400}	19.10	56.55	173.85	170.85	168.85	2,200



CASPERITA



SNOWBALL



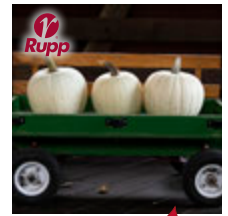
ICICLE NEW



BLANCO



COTTON CANDY



WHITE GOLD ➔

PUMPKINS		WHITE							
		Days	Diameter Height	Weight pounds	Skin	Powdery Mildew	Vine	Spacing Category	Features
38532	Baby Boo ^{PVP}	100	3 x 2"	¼	White		Vine	4	A white Jack-B-Quik type variety. Should be planted later than Jack-B-Quik types because it will turn a pale yellow at full maturity.
38032	Casperita ^{F1}	77	3 x 2"	½ - 1	White	IR	Semi Bush	4	Stunning personal sized hybrid with good yield. Classic shape that can be used for both ornamental and edible purposes. Ideal size for restaurant use.
38004	Snowball ^{F1}	90	6 x 6"	1-2	White	IR	Vine	4	Very high yielding variety with attractive smooth round fruit. Bright white coloration with a dark green stem. Has the ability to hold white color under stress.
NEW 38122	Icicle ^{F1}	105	5 x 4"	2	White	HR	Medium	4	Icicle is the perfect pie size pumpkin with a nice white color and a strong handle. It grows on a restricted vine. Pairs well with Touch of Autumn. The right size for boxing.
38033	Blanco	100	8 x 6"	4 - 6	White		Medium	4	Flattened shape, medium rib and long handle. Has shown moderate resistance to color change due to sun or light frost. Great alternative for growers who require a consistent high quality white pumpkin. The stay white gene extends the harvest window.
38065	Cotton Candy ^{F1}	110	9 x 8"	5 - 12	White		Vine	3	A Rupp white pumpkin with good handles, a blend of strains that range between 5 and 12 lbs. Harvest and store in the dark to maintain best white color. Excellent for painting. Flesh color is white. Despite its name, this is not good for eating.
➔ 38119	White Gold ^{F1 RPX 6927}	90	7 ½ x 8 ¾"	8	White		Medium	3	A new generation of white pumpkin with uniform, slightly ribbed fruit and a well attached black handle.
38514	Lumina ^{PVP}	90	8 x 10"	10 - 15	White		Medium	3	Excellent for both carving or painting. Excellent eating, bright orange flesh shows itself on cut fruit.
38016	Casper	90	8 x 10"	10 - 20	White		Medium	3	A smooth, white-skinned pumpkin for painting. Bright white background.
38510	Flat White Boer Ford	115	10 x 4"	15 - 17	White		Large	2	A flat pumpkin with a creamy white rind and thick orange flesh. The vines are vigorous, providing good cover for the fruit. It is both superbly tasty and great for fall decoration. Stacks well.
38041	Flat Stacker	90 - 95		15 - 20	White		Semi Bush	4	Extremely oblate shape with deep ribbing. Great for stacking. Good disease resistance.
38545	Valenciano	110	12 x 8"	15 - 20	White		Vine	2	A white pumpkin from Johnny's to compare to Casper and Lumina. Larger and better color with excellent flesh for pies.
★ 38086	Crystal Star	100	12 x 11"	25 - 35	White		Medium	2	A Rupp variety that will maintain its true white color (not turn blue or yellow at maturity) and be a pumpkin shape.
38547	Full Moon ^{PVP}	115		25 - 75	White		Large	2	A large white display pumpkin from Hollar. Harvest when white and store in the shade to maintain white color.

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FLAT WHITE BOER
FORD



FLAT STACKER



CRYSTAL STAR ★
FORD

VEGETABLE ROOT INOCULANT
Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

PUMPKINS WHITE		M=1,000 seeds					
Priced per package		100 seed	250 seed				
Priced per 1,000 seeds in these package sizes				1M	3M	25M	100M
38033	Blanco ^{FI400}	31.75	84.55	81.30	78.80	77.50	
38032	Casperita ^{FI400}	28.45	75.80	72.55	70.05	68.75	
38065	Cotton Candy	15.25	40.60	37.35	34.85	33.55	
38065	Cotton Candy ^{FI400}	17.45	46.45	43.20	40.70	39.40	
38065U	Cotton Candy ^{Untreated}	15.25	40.60	37.35	34.85	33.55	
38086	Crystal Star ^{FI400}	40.40	74.80	199.35	196.10	193.60	192.30
38086U	Crystal Star ^{Untreated}	39.25	72.60	193.50	190.25	187.75	186.45
Flat White Boer							
38510	Ford ^{FI400}	18.80	50.10	46.85	44.35	43.05	
38041	Flat Stacker ^{FI400}	17.35	32.10	85.55	82.30	79.80	78.50

PUMPKINS WHITE		M=1,000 seeds					
Priced per package		100 seed	250 seed				
Priced per 1,000 seeds in these package sizes				1M	3M	25M	100M
38547	Full Moon	32.40	60.00	160.00	156.75	154.25	152.95
38122	Icicle ^{FI400}		31.70	84.50	81.25	78.75	77.45
38004	Snowball ^{FI400}		37.00	98.55	95.30	92.80	91.50
38119	White Gold ^{FI400}	21.25	39.30	104.70	101.45	98.95	97.65
Priced per package		1 oz.		4 oz.			
Priced per pound in these package sizes				1#	5#	25#	
38532	Baby Boo	14.55	43.05	132.40	129.40	127.40	
38016	Casper	6.30	18.55	57.00	54.00	52.00	
38514	Lumina ^{PVP}	9.70	28.70	88.30	85.30	83.30	
38545	Valenciano	9.20	27.25	83.75	80.75	78.75	

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CELESTA



CHAMPION



CRUNCHY KING



KONA **NEW**

Natural[™]
 Enhance root growth and increase seedling vigor for healthier plants and higher yields with Natural[™] for Vegetables.
 See page 152 for rates and pricing.

RADISH		Days	Shape	Features
39104	Celesta ^{F1}	25	Globe	Excellent quality and reliability. Uniform round bulbs, bright red bulb color, very good internal quality. Strong against Peronospora on bulbs and foliage.
39003	Champion	21	Globe	Bright red, globe-shaped, very firm. Slow to pith.
39004	Cherry Belle	21	Globe	AAS winner. Round, red, solid, crisp and very popular garden variety.
39005	Crimson Giant	28	Globe	Firm, crisp, white flesh with bright red skin.
39105	Crunchy King ^{F1}	24	Globe	Holds round shape and does well all season. Strongest in Fall and Spring slots. Bright white interior with attractive dark red skin. Has very high recovery and is slow to pith.
39001	Easter Egg II	28	Globe	Multi-line mix for the home garden. Red, pink, purple, violet and white radishes; good flavor.
39007	French Breakfast	24	Oblong	Skin is rose scarlet with a white tip. Flesh is white, tender and coarser than most varieties.
39102	Pearl ^{F1}	25	Globe	White round radish with a small green neck for open field production. Very vigorous growth and good resistance to cracking. Nice mix with reds.
39023	Pink Celebration	25	Globe	A pink skinned, white fleshed globe with crisp, firm texture that holds up well.
39008	Sparkler Early Scarlet	25	Globe	Skin is scarlet with a definite white tip. Flesh is white, crisp and tender. Popular in most areas.
39010	White Globe Hailstone	25	Globe	A white globe with crisp flesh. Excellent for market or garden.
39009	White Icicle	28	Tapered	Long and slender with white skin and white, crisp tender flesh. Very popular.

RADISH		WINTER / ORIENTAL		
Days	Features			
39701	April Cross ^{F1} Daikon Japanese Type	60	Extra slow bolting. Plant in early spring. Up to 15" long and 2 lbs.	
39503	Black Spanish Round	60	Black skin with white, tender flesh. Tolerates cool weather and stores well.	
39501	China Rose	52	Rose colored skin. Mild, sweet and crisp.	
39502	China White	55	Excellent for storage. Roots 5 - 6" long.	
Minowase Summer Cross #3 ^{F1}				
39702	^{Daikon Japanese Type}	50	This radish is best when harvested in the fall. Excellent quality. 15" long and weighs 2 lbs.	
39706	Red Meat	60	Beautiful red flesh, 3" diameter round root. Exterior is white with dark green neck.	

RADISH		M=1,000 seeds			
Priced per package		4 oz.			
Priced per pound in these package sizes		1#	5#	25#	
39003U	Champion ^{Untreated}	4.00	9.50	9.25	9.00
39004U	Cherry Belle ^{Untreated}	4.00	9.50	9.25	9.00
39005U	Crimson Giant ^{Untreated}	4.00	9.50	9.25	9.00
39001	Easter Egg II	8.40	20.00	19.75	19.50
39007U	French Breakfast ^{Untreated}	4.00	9.50	9.25	9.00
39023U	Pink Celebration ^{Untreated}	5.50	13.00	12.75	12.50
39008U	Sparkler Early Scarlet ^{Untreated}	4.00	9.50	9.25	9.00

RADISH		M=1,000 seeds			
Priced per package		4 oz.			
Priced per pound in these package sizes		1#	5#	25#	
39010U	White Globe Hailstone ^{Untreated}	5.50	13.00	12.75	12.50
39009U	White Icicle ^{Untreated}	4.00	9.50	9.25	9.00
Priced per 1,000 seeds in these package sizes		10M	50M	250M	1000M
39104	Celesta	1.20	1.10	1.05	1.00
39105	Crunchy King ^{F300}	1.49	1.39	1.34	1.29
39102	Pearl	2.40	2.30	2.25	2.20

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SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November7%
December6%
January5%
February4%
March3%
April2%

FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



**JOHN DEERE
FINANCIAL**

0%

SALSIFY

		Days	Features
40001	Mammoth Sandwich Island	150	<i>Called Vegetable Oyster. Roots 8 - 9" long. Good winter keeper.</i>

SPINACH

Hybrid

		Days	Features
NEW 41002	Kona	35	<i>Kona is a mid-late, semi-savoy variety that is well suited for late spring/early summer or autumn production. It produces a dark green leaf with excellent thickness and pliability providing increased yield potential. High resistance to downy mildew.</i>
41001	Olympia	45	<i>A fast growing and long standing smooth leaf hybrid for early spring or late summer sowing. Tolerant to downy mildew.</i>

SPINACH

OP

		Days	Features
41501	Bloomsdale Long Standing	45	<i>Semi-erect plants with savoyed, dark green leaves. Slow to bolt. Good for spring or summer sowing.</i>
41502	Giant Noble	45	<i>A smooth leaf, long standing benchmark variety.</i>
41503	New Zealand	60	<i>A heat and drought resistant variety with spreading, succulent leaves.</i>

RADISH WINTER/ORIENTAL

M=1,000 seeds

	Priced per package		M=1,000 seeds	
	1 oz.	4 oz.	1#	5#
39503U Black Spanish Round <small>Untreated</small>		5.35	10.95	10.70
39501U China Rose <small>Untreated</small>		4.55	9.25	9.00
39502U China White <small>Untreated</small>		6.45	13.15	12.90
39702 Minowase Summer Cross #3	20.10	64.20	183.35	182.35
39706U Red Meat <small>Untreated</small>	10.25	32.80	93.65	92.65
Priced per 1,000 seeds in these package sizes		1M	5M	25M
39701 April Cross		11.30	9.90	9.00

SALSIFY

	Priced per package		M=1,000 seeds	
	1 oz.	4 oz.	1#	5#
40001U Mammoth Sandwich Island <small>Untreated</small>	4.05	13.45	37.50	37.00

SPINACH Hybrid

M=1,000 seeds

	Priced per 1,000 seeds in these package sizes			
	5M	25M	250M	1,000M
41002 Kona <small>F300</small>	0.56	0.48	0.43	0.40
41001 Olympia <small>F300</small>	0.54	0.46	0.41	0.38

SPINACH OP

	Priced per package 4 oz.			
	Priced per pound in these package sizes			
	1#	5#	25#	
41501U Bloomsdale Long Standing <small>Untreated</small>	7.55	12.05	11.75	11.50
41502U Giant Noble <small>Untreated</small>	7.25	11.55	11.25	11.00
41503U New Zealand <small>Untreated</small>	8.50	13.55	13.25	13.00



SPINELESS PERFECTION ★ pg. 118

SQUASH SUMMER

PLANTING

Direct seed into field. Plant $\frac{1}{2}$ " - $\frac{3}{4}$ " deep. Row spacing should range from 36" - 60" apart. In row spacing ranges from 18" - 24".

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout fields every 7 days. Inspect for weeds, insect, and disease infestation.

HARVEST

Harvest every other day. Fruit should be 7 - 8" in length and 1 - $2\frac{1}{2}$ " in diameter. Another way to determine harvestability is to harvest when blossom has wilted.

STORAGE

Store at 40 - 50°F and at 95% humidity.

DISEASE CODES

CMV - Cucumber Mosaic Virus
DM - Downy Mildew
PM - Powdery Mildew
PRV - Papaya Ringspot Virus
WMV - Watermelon Mosaic Virus
ZYMV - Zucchini Yellows Mosaic Virus

HERBICIDE CAUTION

Some pre-emergence herbicides can and will cause distortions in squash and pumpkins, especially the species with the corky stems. It also has been noticed in hardstem varieties. These distortions may show up in both color or shape.



BASIMA



CUE BALL



DUNJA ★



GREEN MACHINE



JUSTICE III



KOPANA

SQUASH		SUMMER GREEN Hybrid					Pricing on page 118	
Days	Harvest Length	Color	Type	Fruit Shape	Disease	Features		
42092	Basima	40	4"	Pale Green	Lebanese	Tapered	WMV, ZYMV	Strong plant habit with semi-erect stem and open habit. Very productive. Perfect for stuffing.
42084	Cue Ball	35 - 40	3 x 3"	Pale Green	Zucchini	Round		In the series of globe shaped zucchini. Productive, when well grown it should be harvested daily.
★ 42096	Dunja	45	7 - 8"	Dark Green	Zucchini	Cylindrical	PM, WMV, ZYMV	A high yielding variety with a compact and open plant for ease of picking. Glossy fruit also exudes fine flecking for a quite handsome exterior.
42065	Eight Ball	40	3 x 3"	Medium Dark Green	Zucchini	Round		An AAS winner. A unique variety for both the commercial grower or the home gardener. Uniform round fruit on an open bush plant.
42009	Green Machine	45	7 - 8"	Medium Dark Green	Zucchini	Cylindrical	CMV, PM, WMV, ZYMV	Widely adaptable, high yielding variety. Has a strong semi-open plant with an excellent disease package.
42129	Justice III	40	7 - 8"	Medium Dark Green	Zucchini	Cylindrical	CMV, PM, WMV, ZYMV	Transgenic resistance to stated viruses. Highly productive on a vigorous bush plant.
42017	Kopana	45	7 - 8"	Dark Green	Zucchini	Cylindrical	PM, PRSV, WMV, ZYMV	Selected for high tunnel production in the spring. Vigorous, open plant with shiny and slightly flecked fruit. Works best in the presence of some pollination. Uniform high quality fruit for early market. High yielding. Can get nine feet tall.

Additional Green Summer Squash can be found on the next page --->.

GROWER PREFERRED ALL-STARS ★ SUMMER SQUASH

GREEN

Dunja has the highest market share of any green zucchini that we offer. Ideal for those customers who want a darker skinned, glossy looking fruit. Dunja also has a comprehensive disease package for extended harvest.

Payload is an all-around versatile zucchini to be used all season long. Payload features an open plant for easy picking in a color that's preferred by consumers.

For those that love oldies but goodies, **Spineless Beauty** is for you. The glossy, medium-green fruit is still one of the prettiest looking zucchini hybrids on the market today.

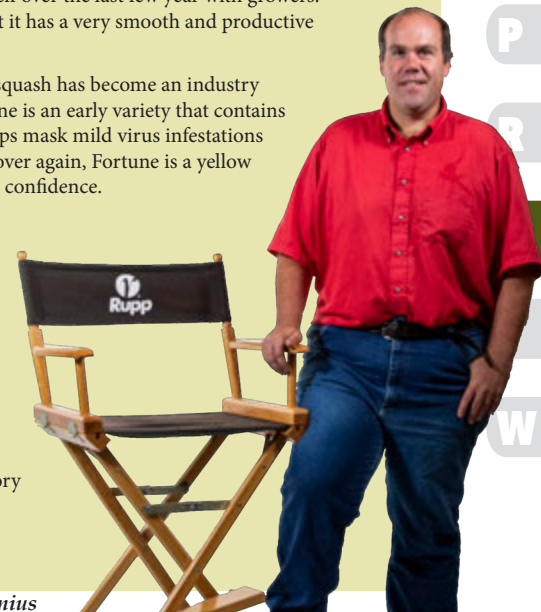
Spineless Perfection is quickly gaining traction with commercial growers. It demonstrates a similar style of classy fruit exterior as its forerunner, Spineless Beauty. It is simple to harvest due to an open plant habit and "easy pick" trait. Spineless Perfection also has an enhanced disease platform when compared to Spineless Beauty.

YELLOW

Blonde Beauty has proven itself over the last few year with growers. Growers have commented that it has a very smooth and productive plant with a classic shape.

Fortune yellow straight neck squash has become an industry standard over the years. Fortune is an early variety that contains the precocious gene which helps mask mild virus infestations on the fruit. Proven over and over again, Fortune is a yellow hybrid that can be grown with confidence.

When choosing a yellow zucchini hybrid, **Golden Glory** should be your go to variety...hands down. Wide-ranging package includes: small petiole spines, open plant, easy twist picking capabilities, and beautiful contrast between dark green handle and splendid dark yellow fruit. Grow Golden Glory in 2022.



Pete Dinius
Product Development



LIBERTY



PAYCHECK



PAYLOAD ★



SPINELESS BEAUTY ★



SPINELESS PERFECTION ★



SPINELESS SUPREME

SQUASH		SUMMER GREEN Hybrid					Pricing on page 118	
		Days	Harvest Length	Color	Type	Fruit Shape	Disease	Features
42052	Liberty 🌱	45	8"	Dark Green	Zucchini	Cylindrical	PRSV, WMV, ZYMV	Strong, open and spineless plant promoting ease of picking and less damage at harvest. Attractive glossy fruit maintain a cylindrical shape and twist off easily at maturity.
42124	Magda	50	3 - 4"	Light Green	Lebanese	Cylindrical		Very sweet, nutty flavor used for stuffing, stir-fries, and pickling. High yielding over a long season.
42088	Paycheck 🌱	42	7 - 8"	Medium Green	Zucchini	Cylindrical	CMV, PM, WMV, ZYMV	In eastern trials, it has shown good adaptability and excellent fruit quality. Works well in cooler conditions.
★ 42002	Payload 🌱	43	7 - 8"	Medium Green	Zucchini	Cylindrical	CMV, PM, WMV, ZYMV	Open plant and reduced spines. Comprehensive disease package. Slightly darker fruit and higher yielding than Paycheck.
★ 42027	Spineless Beauty 🌱	50	7 ½ - 8 ½"	Medium Green	Zucchini	Cylindrical		Popular with growers due to lack of petiole spines, open plant habit, large yields, classy cylindrical fruit, and continuous setting ability.
★ 42094	Spineless Perfection 🌱	44	7 - 8"	Medium Green	Zucchini	Cylindrical	PM, WMV, ZYMV	A spineless variety that integrates more refined flecking onto a rich looking glossy fruit. Contains the "easy pick" characteristic meaning the fruit are easily twisted from the plant leaving the peduncle and fruit still intact.
42051	Spineless Supreme 🌱	45	7 - 8"	Medium Green	Zucchini	Cylindrical	CMV, PM, WMV, ZYMV	Newest of the spineless series from Syngenta. Offers improved virus and disease protection over its predecessors.
42135	Starship	45	2 x 3 - 4"	Medium Dark Green	Scallop	Dish		A quality scallop squash that consistently maintains its shape and glossy dark green color through multiple harvests without rounding. A vigorous bush plant.
42016	SV0914YG 🌱 📦	45	6 - 7"	Medium Dark Green	Zucchini	Cylindrical	CMV, WMV, ZYMV	Transgenic resistance to stated viruses. Open plant makes harvest easy. Vines are nearly spineless. Very high percentage of marketable yield. Larger, more upright plant than Justice III.

SQUASH SUMMER GREEN Hybrid		M=1,000 seeds					
Priced per package	100 Seeds	250 Seeds	Priced per 1,000 seeds in these package sizes				
			1M	3M	25M	50M	55M
42092	Basima	9.35	15.55	44.40	38.60	36.85	35.85
42072	CashFlow F1400	14.15	23.55	67.15	58.35	56.60	55.60
42084	Cue Ball	12.15	20.20	57.70	50.15	48.40	47.40
42096	Dunja F1400	14.85	24.75	70.70	61.45	59.70	58.70
42065	Eight Ball	12.35	20.55	58.60	50.95	49.20	48.20
42050	Everglade F1400	15.75	26.20	74.85	65.05	63.30	62.30
42009	Green Machine F1400	14.65	24.35	69.55	60.45	58.70	57.70
42017	Kopana	28.45	47.35	135.25	117.60		
42052	Liberty F1400	12.25	20.40	58.15	50.55	48.80	47.80
42124	Magda	7.95	13.25	37.75	32.80	31.05	30.05
42088	Paycheck F1400	17.25	28.70	82.00	71.30	69.55	68.55
42002	Payload F1400	18.20	30.30	86.45	75.15	73.40	72.40

SQUASH SUMMER GREEN Hybrid		M=1,000 seeds					
Priced per package	100 Seeds	250 Seeds	Priced per 1,000 seeds in these package sizes				
			1M	3M	25M	50M	55M
42075	Payroll F1400	15.45	25.75	73.45	63.85	62.10	61.10
42027	Spineless Beauty F1400	11.70	19.50	55.70	48.40	46.65	45.65
42094	Spineless Perfection F1400	16.35	27.25	77.80	67.65	65.90	64.90
42051	Spineless Supreme F1400	17.20	28.60	81.65	71.00	69.25	68.25
42135	Starship	6.55	10.85	30.95	26.90	25.15	24.15
Priced per 1,000 seeds in these package sizes			1M	3M	55M		
Transgenic							
42129	Justice III F1400			66.60	61.85	58.90	
42016	SV0914YG F1400			69.15	64.25	61.15	

Transgenic squash require a STSA license number from Seminis. Please put your number on your order form. If you need a license number, please call us for an agreement.



STARSHIP



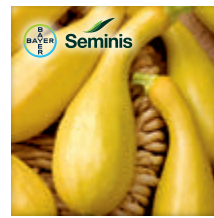
SV0914YG



BLONDE BEAUTY ★








CONQUEROR III



DESTINY III



FORTUNE ★

SQUASH		SUMMER YELLOW Hybrid					Pricing on page 120	
		Days	Harvest Length	Color	Type	Fruit Shape	Disease	Features
★	42018 Blonde Beauty 	40	5 - 7"	Glossy Yellow	Straightneck	Tapered		<i>Spineless petioles provide less painful picking on this hybrid from the Slickpick series. Standard commercial shape with an open plant makes a desirable package all around!</i>
	42011 Conqueror III 	41	6 - 7"	Creamy Yellow	Straightneck	Tapered	CMV, PRSV, WMV, ZYMV	<i>A green stemmed variety from Seminis with high transgenic resistance to stated diseases and intermediate resistance to Papaya Ringspot virus.</i>
	42127 Destiny III 	45	5 - 7"	Lemon Yellow	Crookneck	Full Crook	CMV, WMV, ZYMV	<i>A Seminis transgenic crookneck hybrid with Dixie-type fruit.</i>
	42059 Enterprise 	41	7 - 8"	Yellow	Straightneck	Tapered		<i>Known for its very productive, vigorous plant and broad adaptability. Slim bulb, excellent fruit quality, smooth, small blossom scars.</i>
★	42042 Fortune 	39	5 - 6"	Bright Yellow	Straightneck	Cylindrical		<i>A Syngenta variety that is early, high yielding, and carries the precocious gene that masks mild virus infections. Also has fruit ideal for the baby vegetable markets.</i>

Additional Yellow Summer Squash can be found on the next page -->



DOCUMENTS REQUIRED

Various products in our catalog require signed documents before seed can be shipped.

A STSA (Squash Technology Stewardship Agreement) is needed for all transgenic squash orders: Justice III, SV0914YG, Conqueror III, Destiny III, and XPT 1832 III.

Please include your license number when ordering. If you are not licensed, please call us for an agreement. Allow 3-4 weeks for processing.

Honor local restrictions: Four California counties — Marin, Mendocino, Santa Cruz and Trinity — prohibit planting any crop improved through biotechnology. Seminis has not commercialized these products in Maine, and you agree not to plant this product in Maine.



GOLDEN GLORY ★



GOLDPRIZE



GRANDPRIZE



ONE BALL



XPT 1832 III

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ruppseedsinc/



SQUASH

SUMMER YELLOW Hybrid

Pricing on page 120

	Days	Harvest Length	Color	Type	Fruit Shape	Disease	Features
★ 42133 Golden Glory 🌱	50	7 - 8"	Golden Yellow	Gold Zucchini	Cylindrical	PM, WMV, ZYMV	Produces high quality uniform fruit on an open, upright and vigorous plant.
42093 Goldprize 🌱	42	6 - 7"	Glossy Yellow	Straightneck	Bottle	WMV, ZYMV	Green-stemmed variety with high quality fruit and an attractive yellow luster. High yields of #1 fruit.
42049 Grandprize 🌱	42	6 - 7"	Yellow	Straightneck	Cylindrical	PM, WMV, ZYMV	Offers improved fruit coloring, great plant vigor, and solid yield potential. Solid outer texture to withstand harvest. Increased virus resistance over Goldprize.
42080 One Ball	38	3 x 3"	Gold	Zucchini	Round		Fruit set at every node and grow very rapidly after flowering. Has occasional green fruit.
42010 Sunburst 🌱	50	2 ½ x 3"	Bright Yellow	Scallop	Dish		AAS winner. Attractive, colorful fruit. Best when young.
42073 XPT 1832 III 🌱 📦	45	5 - 7"	Glossy Yellow	Straightneck	Tapered	CMV, WMV, ZYMV	A yellow stemmed, transgenic precocious variety from Seminis with smooth fruit.

SQUASH SUMMER YELLOW Hybrid

M=1,000 seeds

	Priced per package	100 Seeds		250 Seeds			
		1M	5M	25M	80M		
42018 Blonde Beauty F1400		11.05	18.35	52.30	45.45	43.70	42.70
42059 Enterprise F1400		8.50	14.10	40.25	35.00	33.25	32.25
42042 Fortune F1400		7.15	11.90	33.95	29.50	27.75	26.75
42093 Goldprize F1400		12.00	20.00	57.05	49.60	47.85	46.85
42049 Grandprize F1400		13.65	22.75	65.00	56.50	54.75	53.75
42010 Sunburst F1400		11.30	18.80	53.60	46.60	44.85	43.85
	Priced per package	100 Seeds		250 Seeds			
	Priced per 1,000 seeds in these package sizes	1M	3M	25M	55M		
42133 Golden Glory F1400		13.70	22.80	65.10	56.60	54.85	53.85
42080 One Ball		12.25	20.40	58.20	50.60	48.85	47.85
	Priced per 1,000 seeds in these package sizes	1M	3M	55M			
Transgenic							
42011 Conqueror III Straight F1400			86.05	81.15	77.25		
42127 Destiny III Crook F1400			61.50	58.00	55.20		
42073 XPT 1832 III Straight F1400			60.00	56.60	53.90		

Transgenic squash require a STSA license number from Seminis. Please put your number on your order form. If you need a license number, please call us for an agreement.

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SQUASH		SUMMER OP					
		Days	Harvest Length	Color	Type	Fruit Shape	Features
42101	Black Zucchini	62	6 - 7"	Black Green	Zucchini	Cylindrical	Popular home garden variety.
42112	Dark Green Zucchini	62	6 - 7"	Medium Dark Green	Zucchini	Cylindrical	Popular, medium dark green variety.
42102	Early Prolific Straightneck	50	4 - 6"	Yellow	Straightneck	Tapered	AAS winner. Popular, early home garden variety. Somewhat warted, not recommended for commercial growers.
42103	Golden Summer Crookneck	50	6 - 7"	Bright Yellow	Crookneck	Full Crook	Popular home garden crookneck, heavily warted. Not for market growers.
42107	Golden Zucchini	55	6 - 7"	Golden	Golden Zucchini	Cylindrical	Has crisp flesh on golden skinned fruit. A good choice for the home gardener.
42130	Saffron ^{Imp.}	42	4 - 6"	Yellow	Straightneck	Tapered	A Hollar improved yellow straightneck variety.
42104	White Bush Scallop	52	3 - 5"	Creamy White	Scallop	Flat	Firm, creamy fleshed, prolific, home garden variety.
42116	Yellow Scallop	55	3 - 4"	Bright Yellow	Scallop	Flat	Attractive yellow colored fruit in the scallop family. Some have a dark green blossom scar.

SQUASH SUMMER OP		Priced per package 4 oz.		
		Priced per pound in these package sizes		
			1#	5#
42101U	Black Zucchini ^{Untreated}	8.10	21.35	21.10
42112U	Dark Green Zucchini ^{Untreated}	6.45	17.00	16.75
42102U	Early Prolific Straightneck ^{Untreated}	8.05	21.20	20.95
42103U	Golden Summer Crookneck ^{Untreated}	7.75	20.45	20.20
42107U	Golden Zucchini ^{Untreated}	9.00	23.75	23.50
42130U	Saffron ^{Untreated}	9.50	25.10	24.85
42104U	White Bush Scallop ^{Untreated}	9.35	24.75	24.50
42116U	Yellow Scallop ^{Untreated}	8.80	23.25	23.00

Biological Enhancement for Vegetables

Naturall™
for Vegetables
ROOT INOCULANT

Enhanced root growth
Healthier plants
Increased seedling vigor
Easy to apply
Higher yields
Improved nutrient and water efficiency

ABM™
Patent Pending
Made in U.S.A.

Net Wt. 1 oz.

NATURALL™ APPLICATION RATES

CROPS	RATE
Cucurbit Vegetables: Pumpkins and Squash	1.0 oz. per 80,000 seeds
Cucurbit Vegetables: Cucumbers and Melons	0.5 oz. per 80,000 seeds
Broccoli, Cabbage and Cauliflower	0.5 oz. per 50,000 seeds
Peppers and Tomatoes: Garlic, Leeks, Onions, Shallots	0.5 oz. per 100,000 seeds
Root Crops: Beets, Sugar Beets, Red Beets, Carrots, Celeriac, Chicory, Horseradish, Parsnip, Radish, Rutabaga, Salsify, Turnips	0.5 oz. per 100,000 seeds

For pricing on Naturall inoculant, see page 152.
For additional information visit the following website.
www.ruppseeds.com/Naturall



AUTUMN FROST **NEW** pg. 130

SQUASH WINTER

PLANTING

Plant seeds ½" - ¾" deep. Plant spacing varies depending on vine type. Bush type plants should be planted closer and vine types should be planted farther apart. Squash need to have approximately 25 - 30 sq. ft. See the Winter Squash Planting / Harvest Timing chart on page 129 for additional information.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout every 7 days for insect, weed, and disease pressure. Fruit will tend to decrease in size the farther south a crop is planted and increase in size the farther north it is planted. Size is relative to day length.

HARVEST

Cut off the vine to keep peduncle. Wash in 5% chlorine solution and pat dry. Let cure for 10 days. Keep fruit dry to prevent spoilage. Allow air to circulate around fruit.

STORAGE

Store at 45 - 55°F and humidity level of 50 - 60%. Keep fruit dry and allow air to circulate around fruit.

PLANT SPACING

Each variety or type of squash has an optimum plant spacing for its best performance. If plants are too close, stress and competition can decrease fruit size and possibly even reduce the number of female flowers. Under extreme stress, tight spacing may eliminate the crop entirely.

- Accurate plant spacing will be an equal opportunity environment for every plant.
- Suggested populations are for final plant stands.
- To achieve ideal plant populations it is necessary to either over-plant and hand thin or to plant according to recommendations and hand plant later to fill skips.
- Seed corn maggots, wire worms, mice and birds, floods or lack of rain are all common problems that effect accurate stand establishment.

PLANT SPACING CHART

	Row Width	Distance Between Plants	Plants Per Acre
Compact Bush	5'	2'	4,356
Bush	5'	3'	2,904
Semi Bush	5'	4'	2,178
Restricted Vine	5'	4'	2,178
Vine	5'	5'	1,742



AUTUMN DELIGHT ★



AUTUMN PERFECTION



CELEBRATION ★



CREAM OF THE CROP



HARLEQUIN



HEART OF GOLD

SQUASH		WINTER ACORN					Pricing on page 123
★	Days	Fruit Size	Weight pounds	Color	Habit	Features	
★ 42311	Autumn Delight ^{F1 pmt}	80	6 x 5"	1 ½	Dark Green	Semi Bush	A popular, powdery mildew tolerant acorn hybrid. Fruit are large with excellent quality.
42308	Autumn Perfection ^{F1 pmt}	80	6 ½ x 5 ½"	2 - 2 ¼	Dark Green	Bush	Produces slightly larger fruit with improved taste when compared to Autumn Delight as the standard. Features high resistance to powdery mildew and better yields.
★ 42955	Celebration ^{F1 pmt}	80	4 x 5"	1 ½	Light Yellow / Orange Sutures	Compact Bush	A powdery mildew tolerant, gold striped acorn hybrid with exceptional eating quality. Is also decorative. A sure winner. A Rupp exclusive in cooperation with Cornell University.
42304	Cream of the Crop ^{F1}	85	6 x 5"	1 ½ - 2	Cream	Compact Bush	AAS winner. Unique creamy white fruit. Uniform size.
42952	Harlequin ^{F1 pmt}	80	4 x 5"	1 ½ - 2	Light Green / Dark Green Sutures	Compact Bush	A powdery mildew tolerant, green striped acorn hybrid from Rupp. Has exceptional eating and decorative qualities. A sure winner.
42930	Heart of Gold ^{F1}	80	4 x 5"	3	Cream / Green Stripes	Semi Bush	A winter squash striped like Sweet Dumpling, heart shaped, with fine sweet flesh. Yields have been 35% higher than Sweet Dumpling.
42302	Mashed Potato	100	6 x 5"	1 - 1 ½	White	Compact Vine	White acorn with fantastic color holding ability. Flesh is nearly white and resembles mashed potatoes when baked and fluffed. 3 to 4 fruit per plant.
42301	Table Ace ^{F1}	80	6 x 5"	1 ½	Dark Green	Semi Bush	A popular, dark black-green, acorn squash with rounded ribs and blunted blossom ends. It has solid, tasty flesh with almost no fibers or stringiness.
42406	Table Gold	80	6 x 5"	1 ½	Golden	Bush	A golden acorn suited for home gardeners.
42410	Table Queen	80	5 ½ x 4"	1 ½	Dark Green	Vine	An older, reliable OP variety with smaller fruit than the current marketed hybrids.

Additional Winter Acorn Squash can be found on the next page --->.

SQUASH WINTER ACORN		M=1,000 seeds					
Priced per package		1 oz.	4 oz.				
Priced per pound in these package sizes		1#	5#	20#	Seeds /lb.		
42406	Table Gold	6.00	18.75	51.55	50.55	49.05	5,300
42410	Table Queen	4.00	12.00	32.50	31.50	30.00	5,200
42309	Table Treat	9.00	28.50	78.35	77.35	75.85	4,600
Priced per package		250 Seeds					
Priced per 1,000 seeds in these package sizes		1M	3M	25M	55M	Seeds /lb.	
42311	Autumn Delight	16.70	44.50	41.50	39.50	38.50	4,300
42311	Autumn Delight ^{F1400}	17.80	47.45	44.45	42.45	41.45	4,300
42311U	Autumn Delight ^{Untreated}	16.70	44.50	41.50	39.50	38.50	
42308	Autumn Perfection ^{F1400}	18.10	48.25	45.25	43.25	42.25	
42955	Celebration	11.55	30.70	27.70	25.70	24.70	4,800
42955	Celebration ^{F1400}	12.65	33.65	30.65	28.65	27.65	4,800

SQUASH WINTER ACORN		M=1,000 seeds					
Priced per package		250 Seeds					
Priced per 1,000 seeds in these package sizes		1M	3M	25M	55M	Seeds /lb.	
42304	Cream of the Crop	12.80	34.05	31.05	29.05	28.05	4,000
42304	Cream of the Crop ^{F1400}	13.90	37.00	34.00	32.00	31.00	4,000
42952	Harlequin	11.10	29.50	26.50	24.50	23.50	4,400
42930	Heart of Gold	12.90	34.30	31.30	29.30	28.30	4,900
42930	Heart of Gold ^{F1400}	14.00	37.25	34.25	32.25	31.25	4,900
42302	Mashed Potato	13.85	36.85	33.85	31.85	30.85	5,900
42301	Table Ace	13.85	36.85	33.85	31.85	30.85	4,400
42301	Table Ace ^{F1400}	14.95	39.80	36.80	34.80	33.80	4,400
42301U	Table Ace ^{Untreated}	13.85	36.85	33.85	31.85	30.85	4,400
42310	Table Star	10.75	28.65	25.65	23.65	22.65	3,900
42310	Table Star ^{F1400}	11.85	31.60	28.60	26.60	25.60	3,900
42307	Taybelle PM ^{F1400}	14.70	39.20	36.20	34.20	33.20	4,300



MASHED POTATO



TABLE ACE



TABLE STAR



TABLE TREAT



AUTUMN CUP ★



ECLIPSE

SQUASH

WINTER ACORN

Pricing on page 123

		Days	Fruit Size	Weight pounds	Color	Habit	Features
42310	Table Star F1 pmc	80	6 x 5"	2	Jet Black with a golden star around the stem attachment	Bush	A top selling acorn squash due to its eating quality and powdery mildew tolerance. It is competitive with the best in the market, plus has 50% higher sugars than other acorns.
42309	Table Treat F1	70	5 1/2 x 5"	1 1/2 - 1 3/4	Jet Black	Bush	A powdery mildew tolerant acorn hybrid from Rupp that is slightly smaller than Table Star, plus has 50% higher sugars than the comparable acorns. Very good eating quality.
42307	Taybelle PM F1	80	6 x 5"	2	Jet Black	Bush	A direct conversion from Taybelle to include intermediate resistance to powdery mildew. Sweet flavor and good storage quality.

GROWER PREFERRED ALL-STARS ★ WINTER SQUASH

These winter squash All-Stars continue to bring growers consistent, predictable performance.

ACORN

With great dark color, good storage abilities and zero to very little ground spot, **Autumn Delight** is a sure winner for both fresh market and shipper growers.

Celebration is a must have for your autumn displays. Color, color, color!

BUTTERCUP

For that classic look, **Autumn Cup** is your choice. It is a great compliment to Thunder for seasonal markets.

For your storage market, choose **Sweet Mama** for long term keepers.

What can we say about **Thunder** but yield, yield, yield! Sure to put plusses in your income column.

George Wonnacott
Vegetable Consultant

BUTTERNUT

Betternut 900 has quickly become the standard in the boxing trade. It also carries other qualities such as taste, sweetness, vitamins, and minerals for today's nutritional needs.

Ultra will give you a large yield with huge fruit that work whether you're a processor or fresh market grower.

DELICATA

Sweet Lightning is a great choice when you want great looking fall decorations. When it's cooked it provides the consumer with one of the sweetest eating squash on the market today. A great "dual-purpose" variety.

HUBBARD

When you want to attract customers to your market, **Blue Hubbard New England** is the one. It exudes great looks, an attractive interior and distinctive hubbard flavor.

SPAGHETTI

If it's spaghetti squash you're looking for, then **Primavera** is the variety to pick. Uniformity, yield, and great color make this a grower favorite.

OTHER

Galeuse d'Eysines is also known as "The Peanut Squash". Customers can't believe its unusual looks, but they enjoy its delicious squash flavor when fried up in a pan with butter.

Marina de Chioggia is a unique green warted squash that adds variety to your fall display, but also eats very well. It was bred for use in gnocchi and ravioli.

Turk's Turban adds great fall colors to any decorated area. Customers will ask for this one by name, so be sure to have plenty on hand.

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SPACE STATION



SUNSHINE



SUN SPOT



SWEET MAMA ★



THUNDER ★

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SQUASH		WINTER BUTTERCUP / KABOCHA					
		Days	Fruit Size	Weight pounds	Color	Habit	Features
★	42935 Autumn Cup F1	95	6"	4 1/2	Dark Green	Semi Bush	The first hybrid, semi bush buttercup squash. Dark green, very high quality flesh and high yields. Has a reduced button when compared to Burgess and is slightly more oval.
	42904 Buttercup Burgess	110	8 - 9 x 5"	3	Dark Green	Vine	Flesh is dry and sweet, good for storage, fresh market or garden.
	42963 Eclipse F1	85	7 x 4"	3 1/2	Black Green	Vine	A buttercup (kabocha) hybrid.
	42962 Space Station F1	90	7 x 4"	3 1/2	Black Green	Semi Bush	A semi bush kabocha hybrid with excellent flesh color and quality. Flesh is very sweet and dry. An upgrade to the long used Sweet Mama.
	42902 Sunshine F1	95	7 x 5"	3 - 5	Bright Orange	Vine	Tender flesh is smooth, sweet, and bright orange for baking, mashing, and pies. Appearance and eating quality are superior to other varieties of this type. Average 3 - 4 fruit per plant.
	42966 Sun Spot F1	75	6 x 4"	1 1/2	Dark Red	Vine	A dark red buttercup hybrid with excellent dry flesh and fruit size that is desirable for today's small household. Early, dark orange, tasty flesh.
★	42905 Sweet Mama F1	85	8 - 9 x 5"	4	Dark Green	Semi Bush	AAS winner. A kabocha with sweet flavor that stores well.
★	42968 Thunder F1	85	7 x 4"	3 1/2	Black Green	Vine	A buttercup (kabocha) hybrid that is an excellent yielder with dry sweet flesh.

SQUASH WINTER BUTTERCUP / KABOCHA		M=1,000 seeds			
Priced per package	1 oz.		4 oz.		
	1#	5#	20#		
42927 Baby Delica	27.25	88.00	242.50		
42904 Buttercup Burgess	4.50	13.25	36.10	35.10	33.60
42905 Sweet Mama F1400	25.25	81.75	225.50	224.50	223.00

SQUASH WINTER BUTTERCUP / KABOCHA		M=1,000 seeds				
Priced per package	250 Seeds					
	Priced per 1,000 seeds in these package sizes					
	1M	3M	25M	55M		
42935 Autumn Cup	23.70	63.20	60.20	58.20	57.20	
42935 Autumn Cup F1400	24.85	66.15	63.15	61.15	60.15	
42963 Eclipse	25.65	68.35	65.35	63.35	62.35	
42963 Eclipse F1400	26.75	71.30	68.30	66.30	65.30	
42962 Space Station	32.80	87.35	84.35	82.35	81.35	
42962 Space Station F1400	33.90	90.30	87.30	85.30	84.30	
42962U Space Station Untreated	32.80	87.35	84.35	82.35	81.35	
42902 Sunshine	23.35	62.15	59.15	57.15	56.15	
42966 Sun Spot	23.20	61.75	58.75	56.75	55.75	
42966 Sun Spot F1400	24.30	64.70	61.70	59.70	58.70	
42968 Thunder	25.30	67.40	64.40	62.40	61.40	
42968 Thunder F1400	26.40	70.35	67.35	65.35	64.35	



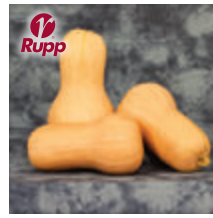
BETTERNUT 23



BETTERNUT 401



BETTERNUT 900 ★



BETTERNUT 1744



BUGLE



BUTTERBABY

SQUASH		WINTER BUTTERNUT					
▲		Days	Fruit Size	Weight pounds	Color	Habit	Features
42617	Atlas F1	100 - 110	10 - 12"	5 - 7	Light Tan	Semi Bush	A uniform butternut hybrid. High yields. Good for processing.
42613	Avalon F1	88	11"	4 - 5	Buff	Vine	This Hollar Seeds butternut is a good packing and high yielding variety.
42606	Betternut 23 F1 pmt	105	12 - 15"	6 - 8	Buff	Vine	Powdery mildew tolerant. Very uniform variety with proportional neck to bulb ratio. Exceptional flesh and skin color. High percentage of dry matter and sugar content.
42614	Betternut 401 F1 pmt	80	8 - 9"	2 ¾	Light Tan	Semi Bush	A hybrid with good flesh color and uniformity on a semi bush plant. Powdery mildew tolerant.
★	42622 Betternut 900 F1 pmt	80	8 - 9"	3	Light Tan	Semi Bush	Overall best variety in the Betternut series for boxing. Powdery mildew tolerant.
42976	Betternut 1744 F1 pmt	80	8 - 9"	3 ¼	Light Tan	Semi Bush	Slightly larger than Betternut 900 for farm markets and roadside stands. Provides powdery mildew tolerance.
42704	Bugle	80	10"	3	Light Tan	Semi Bush	Uniform fruit that are slightly smaller than Waltham. Bred by Molly Jahn and George Moriarty at Cornell.
42607	Butterbaby	100 - 105	5 - 6"	½ - 1	Buff	Semi Bush	High eating quality variety that is perfect size for CSA box growers and personal-sized market. Very nice color and shape while maturing earlier than Honeynut. Longer storage ability than Honeynut.
42702	Honeynut	105 - 110	4 - 5"	½ - 1	Dark Tan	Restricted Vine	Produces single-serving squash with very sweet and delicious flavor. Very high yielding.
38518	Neck Pumpkin	120	18 - 24"	10	Light Brown	Vine	Flesh similar to butternut. Can be used for market or processing.
42626	Quantum F1	100 - 110	7"	2 ½ - 4 ½	Light Tan	Vine	Large necked, blocky fruit. Thick flesh.
★	42615 Ultra F1	90	15"	10	Light Tan	Vine	A high yielding large butternut for both processors and market gardeners.
42701	Waltham	97	10 - 12"	3 - 6	Light Tan	Vine	Vigorous, fruit size more variable than hybrids.

SQUASH WINTER BUTTERNUT		M=1,000 seeds						
Priced per package		1 oz.	4 oz.					
Priced per pound in these package sizes					1#	5#	20#	Seeds /lb.
42704	Bugle	7.50	24.00	65.75	64.75	63.25	5,600	
38518	Neck Pumpkin	3.75	12.00	32.50				4,000
42701	Waltham	4.00	12.50	34.35	33.35	31.85	4,700	
Priced per package		250 Seeds						
Priced per 1,000 seeds in these package sizes		1M	3M	25M	100M	Seeds /lb.		
42617	Atlas F1400	20.55	54.80	51.80	49.80	48.80	5,100	
42613	Avalon F1400	18.00	47.90	44.90	42.90	41.90	5,000	
42606	Betternut 23	14.10	37.50	34.50	32.50	31.50	5,000	
42606	Betternut 23 F1400	15.20	40.45	37.45	35.45	34.45	5,000	
42614	Betternut 401	13.60	36.25	33.25	31.25	30.25	6,000	
42614	Betternut 401 F1400	14.70	39.20	36.20	34.20	33.20	6,000	

SQUASH WINTER BUTTERNUT		M=1,000 seeds					
Priced per package		250 Seeds					
Priced per 1,000 seeds in these package sizes		1M	3M	25M	100M	Seeds /lb.	
42622	Betternut 900	14.65	38.95	35.95	33.95	32.95	4,600
42622	Betternut 900 F1400	15.75	41.90	38.90	36.90	35.90	4,600
42622U	Betternut 900 Untreated	14.65	38.95	35.95	33.95	32.95	4,600
42976	Betternut 1744	13.05	34.80	31.80	29.80	28.80	5,000
42976	Betternut 1744 F1400	14.20	37.75	34.75	32.75	31.75	5,000
42607	Butterbaby F1400	13.25	35.25	32.25	30.25	29.25	5,800
42702	Honeynut	11.25	30.00	27.00	25.00	24.00	
42626	Quantum F1400	20.55	54.80	51.80	49.80	48.80	4,900
42615	Ultra F1400	18.60	49.50	46.50	44.50	43.50	4,500

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HONEYNUT



QUANTUM



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LA ESTRELLA



JESTER

SQUASH		WINTER CALABASA				
▲		Days	Weight pounds	Color	Habit	Features
42802	La Estrella ^{F1}	125 Northern U.S. / 70 Florida in Winter	10# Northern U.S. Summer / 6# Florida Winter	Green and Tan	Vine	A Rupp exclusive from the University of Florida. Bred by Dr. Don Maynard for uniform fruit size and superior flesh color. Fruit are a popular choice for use in Pun-kin Chunkin contests.

SQUASH		WINTER DELICATA / SWEET DUMPLING					
▲		Days	Fruit Size	Weight pounds	Color	Habit	Features
42957	Bush Delicata	105	5 - 6"	2	White / Green Stripes	Bush	An AAS winner bred by Cornell and marketed by Rupp. A typical delicata fruit on a bush plant with strong tolerance to powdery mildew.
42931	Delicata	100	5 - 6"	2 - 3	Green / White Stripes	Vine	Colorful with fine grained, sweet flesh. An improved strain with better fruit shape.
42945	Festival ^{F1}	100	4 - 5"	1 ½ - 2	Yellow Green Orange	Vine	A Carnival type squash with fewer oversized fruit, similar color and flesh quality. Fruit shape is between an acorn and Sweet Dumpling. Highly ornamental with great eating quality.
42933	Jester ^{F1}	95	5 - 7"	1 ½	Ivory / green inter-rib stripes	Short Vines	Superb flavor with eye-catching fruit. Oval and tapered at both ends, with small to average ribs. Among the best in eating quality. About 60 days storage time.
42911	Sweet Dumpling	100	4"	1	Cream Striped	Vine	Colorful, acorn shape, sweet flesh. Stores 3 - 4 months.
★ 42501	Sweet Lightning ^{F1 pml}	100	3 x 5"	1 - 1 ¼	Pale Yellow / Orange Stripes	Semi Bush	A Rupp product with both outstanding decorative and eating qualities. Is one of the best flavored when used as a squash. Has powdery mildew tolerance on a semi-bush vine.
42934	Ugly Dumpling ^{F1}	100	2 ½ x 3 ¾	¾ - 1	Tan / Green Stripes	Semi Bush	While at first glance it may not have great eye appeal, our trial partners tell us its one of the best tasting winter squash they've ever tried, and its unique appearance makes it an option for fall decoration too.

SQUASH WINTER CALABASA		M=1,000 seeds			
Priced per package		250 Seeds			
Priced per 1,000 seeds in these package sizes		1M	3M	25M	55M
42802	La Estrella	13.50	36.00	33.00	31.00 30.00

SQUASH WINTER DELICATA / SWEET DUMPLING		Priced per package		Priced per pound in these package sizes		
		1 oz.	4 oz.	1#	5#	25#
42931	Delicata	5.25	16.75	45.75	44.75	43.25
42945	Festival	12.00	37.75	104.00	103.00	101.50
42911	Sweet Dumpling ^{F400}	13.00	41.50	114.05	113.05	111.55
Priced per package		250 Seeds		M=1,000 seeds		
Priced per 1,000 seeds in these package sizes		1M	3M	25M	100M	
42957	Bush Delicata	11.25	29.95	26.95	24.95	23.95
42957	Bush Delicata ^{F400}	12.35	32.90	29.90	27.90	26.90
42933	Jester	15.75	42.00	39.00	37.00	36.00
42501	Sweet Lightning	19.55	52.10	49.10	47.10	46.10
42501	Sweet Lightning ^{F400}	20.65	55.05	52.05	50.05	49.05
42934	Ugly Dumpling ^{F400}	21.35	56.85	53.85	51.85	50.85



FESTIVAL



SWEET LIGHTNING ★



UGLY DUMPLING









HEAVENLY HUBBARD



NK580



RSP1232

SQUASH		WINTER HUBBARD					
▲		Days	Fruit Size	Weight pounds	Color	Habit	Features
42913	Baby Blue	90	5 x 6"	3	Blue Gray	Vine	Flattened to round in shape, grayish blue skin, yellow flesh. Good flavor when cooked.
42906	Blue Hubbard	110	7 x 12"	12 - 14	Blue Gray	Vine	A popular hubbard type with thick, orange, fine textured, sweet flavored flesh. Claimed by some to be the best of all hubbards.
★ 42918	Blue Hubbard New England	120	20 - 30"	30 - 45	Blue Gray	Vine	Largest of the hubbards. Flesh is orange with fine texture and flavor. Rupp produced.
42944	Blue Magic ^{F1}	100	5 x 6"	5 - 7	Blue Gray	Vine	Miniature Blue Hubbard hybrid for those that love the hubbard flavor but are overwhelmed with the normal Blue Hubbard size. Has a true hubbard shape.
42908	Chicago Warted	115	10 x 13"	12 - 14	Green Black	Vine	Large warts, flesh is rich, fine grained and dry. Use for market or garden.
42907	Golden Delicious	100	7 x 14"	10	Red Orange	Vine	Rind is hard and smooth. Flesh is dry, fine grained, and good quality. Used primarily as a processing squash.
42926	Golden Hubbard	110	11 x 9"	10	Orange	Vine	Slightly smaller than most hubbards, slightly warted, orange color with tan stripes toward blossom end.
42909	Green True	105	9 x 12"	12 - 14	Dark Green	Vine	Good shipper and keeper.
42977	Heavenly Hubbard ^{F1}	100	12 x 15"	15 - 20	Blue Gray	Vine	A Hubbard hybrid with thick, fine textured flesh and sweet flavor.
42921	NK580 ^{F1}  	105	12 x 14"	14 - 16	Golden	Vine	An improved, very high yielding, golden hubbard hybrid. Great for pies and pastries.
42972	RSp1232  	105	7 1/2 x 10"	11 - 12	Orange	Vine	Improved food quality with 2.25 higher brix and 5 points higher dry matter than NK580.
42982	RSp1962  	110		12	Red Orange	Vine	Optimal dry matter and sugar content for the processing market. Gorgeous skin and flesh color. Prime variety to replace Golden Delicious hubbard.
42919	Uchiki Kuri	90	7 x 7"	2 1/2	Orange Red	Vine	Improved smooth Hubbard selection with almost no ribbing on the fruit. Flesh is very sweet and nutty in flavor.

	SQUASH WINTER HUBBARD		M=1,000 seeds			
	Priced per package		1#	5#	25#	
	1 oz.	4 oz.	Priced per pound in these package sizes			
42913	Baby Blue	6.50	20.00	55.00	54.00	52.50
42906	Blue Hubbard	4.25	12.75	34.50	33.50	32.00
42918	Blue Hubbard New England	7.00	22.00	60.35	59.35	57.85
42944	Blue Magic	10.25	32.00	88.00	87.00	85.50
42908	Chicago Warted	4.00	12.25	33.50	32.50	31.00
42907	Golden Delicious	3.75	11.25	30.50	29.50	28.00
42926	Golden Hubbard	4.25	13.25	36.00	35.00	33.50
42909	Green True	4.25	13.25	36.00	35.00	33.50
42919	Uchiki Kuri	12.75	40.25	110.85	109.85	108.35

	SQUASH WINTER HUBBARD		M=1,000 seeds			
	Priced per package		1M	3M	25M	55M
	250 Seeds	Priced per 1,000 seeds in these package sizes				
42977	Heavenly Hubbard	41.35	110.25	107.25	105.25	104.25
42921	NK580	13.70	36.45	33.45	31.45	30.45
42921	NK580 ^{F1400}	14.80	39.40	36.40	34.40	33.40
42972	RSp1232 ^{F1 F1400}	17.70	47.10	44.10	42.10	41.10
42982	RSp1962 ^{F1 F1400}	16.65	44.35	41.35	39.35	38.35

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RSP1962



PINNACLE



PRIMAVERA ★



VEGETABLE SPAGHETTI



SQUASH		WINTER SPAGHETTI					Pricing on page 130
Days	Fruit Size	Weight pounds	Color	Habit	Features		
42950	Pinnacle	85	7 x 5"	3	Bright Yellow	Semi-Bush	<i>Spaghetti squash with a semi-bush plant habit, that allows higher plant densities and higher yields per acre. Fruit ripen to an appealing bright yellow color. The spaghetti strands are fine and have the nutty flavor of a true Spaghetti Squash.</i>
★ 42946	Primavera	90 - 95	5 1/2 x 10"	2 1/2 - 3	Canary Yellow	Restricted Vine	<i>A high yielding Sakata hybrid with good uniformity and attractive color.</i>
42947	Small Wonder	90	6"	1 1/2 - 2	Light Orange	Vine	<i>A spaghetti squash from Hollar with the right size for an individual serving. A prolific yielder with a vine type habit. Normal interior noodles like spaghetti squash.</i>
42903	Spaghetti	105	8 - 10"	2 1/2 - 3	Light Yellow	Vine	<i>A uniform, purified strain by Hollar. Is slightly smaller and will be an excellent fit for the commercial grower. Good keeper, low-calorie spaghetti squash. Market or garden.</i>
42929	Stripetti	95	12"	4	Tan with Green Stripes	Vine	<i>Spaghetti squash in a unique package. Interior "noodles" are just like vegetable spaghetti but are sweeter and better tasting. Striped, cream colored rind turns orange when well ripened. A very uniform hybrid.</i>
42920	Tivoli	95	6 - 7"	3 - 4	Creamy	Bush	<i>AAS Winner. First bush spaghetti squash.</i>
42981	Vegetable Spaghetti	100	5 1/2 x 10"	2 1/2	Creamy Yellow	Vine	<i>Sakata's popular OP spaghetti squash introduced years ago. Long, oval shaped with noodle-like strands inside when cooked.</i>

WINTER SQUASH PLANTING/HARVESTING TIMING CHART

Winter squash growers who are planting multiple varieties need to consider multiple planting dates so that they can harvest their crop at its peak. The planting date plus the maturity of the variety should equal the potential harvest date. Keep in mind that higher or lower than average heat and sunlight may also impact the development of the crop by decreasing or increasing its maturity.

Use the following chart to align your squash variety maturity with your desired harvest date to schedule planting.

Variety Maturity	Planting Date: May 1 Harvest Range	Planting Date: May 15 Harvest Range	Planting Date: June 1 Harvest Range	Planting Date: June 15 Harvest Range	Planting Date: July 1 Harvest Range
70	July 1 - July 20	July 14 - Aug. 3	Aug. 1 - Aug. 20	Aug. 14 - Sept. 3	Aug. 31 - Sept. 19
75	July 5 - July 25	July 19 - Aug. 8	Aug. 5 - Aug. 25	Aug. 19 - Sept. 8	Sept. 4 - Sept. 24
80	July 10 - July 30	July 24 - Aug. 13	Aug. 10 - Aug. 30	Aug. 24 - Sept. 13	Sept. 9 - Sept. 29
85	July 15 - Aug. 4	July 29 - Aug. 18	Aug. 15 - Sept. 4	Aug. 29 - Sept. 18	Sept. 14 - Oct. 4
90	July 20 - Aug. 9	Aug. 3 - Aug. 23	Aug. 20 - Sept. 9	Sept. 3 - Sept. 23	Sept. 19 - Oct. 9
95	July 25 - Aug. 14	Aug. 8 - Aug. 28	Aug. 25 - Sept. 14	Sept. 8 - Sept. 28	Sept. 24 - Oct. 14
100	July 30 - Aug. 19	Aug. 13 - Sept. 2	Aug. 30 - Sept. 19	Sept. 13 - Oct. 3	Sept. 29 - Oct. 19
105	Aug. 4 - Aug. 24	Aug. 18 - Sept. 7	Sept. 4 - Sept. 24	Sept. 18 - Oct. 8	Oct. 4 - Oct. 24
110	Aug. 9 - Aug. 29	Aug. 23 - Sept. 12	Sept. 9 - Sept. 29	Sept. 23 - Oct. 13	Oct. 9 - Oct. 29
115	Aug. 14 - Sept. 3	Aug. 28 - Sept. 17	Sept. 14 - Oct. 4	Sept. 28 - Oct. 18	Oct. 14 - Nov. 3
120	Aug. 19 - Sept. 8	Sept. 2 - Sept. 22	Sept. 19 - Oct. 9	Oct. 3 - Oct. 23	Oct. 19 - Nov. 8

Squash quality will be the best when harvested nearest to the variety's actual maturity.
 First, select the maturity of the variety you are using, then pick the date you would like your squash to look the freshest. The required planting date will be at the top of the column.



AUTUMN FROST **NEW**



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TINY TURK



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SQUASH		WINTER OTHER					Pricing on page 131
		Days	Fruit Size	Weight pounds	Color	Habit	Features
NEW	42989 Autumn Frost	100-105	5-7" x 5-6"	2 - 3	Dark Tan	Medium Vine	Uniquely ribbed, round fruit ripens to dark tan with a frosted overlay. Fruit is similar in taste to a butternut, with superior quality, rich flavor and a shelf life of up to 4 months after maturity, allowing for a supply of high-quality fruit throughout the winter season. Also adds a nice variety to fall displays. Intermediate resistance to powdery mildew.
	42901 Banana Pink Jumbo	105	20"	15	Pink / Orange	Vine	Thick, fine grained, light orange flesh. Delicious flavor.
	38505 Cushaw Green Striped	110	17 x 10"	25 - 40	White / Green Stripe	Vine	Fine grained flesh. Good for pies or canning.
★	42971 Galeuse d'Eysines <small>Peanut</small>	100	6 ½ x 11"	18	Pink	Vine	A warty squash from France with ornamental value plus delicious when fried in butter.
	42948 Georgia Candy Roaster	110	2 ½ - 3'	up to 60	Pink / Orange	Vine	A long, narrow fruited heirloom that is known for its outstanding baking quality. One of the sweetest and tastiest. Enough for the entire village.
★	42970 Marina de Chioggia	100	7 x 11"	11	Green warty	Vine	A unique green warty squash from Italy with ornamental value. Bred to be used in gnocchi and ravioli.
NEW	26017 Rupp's Turk's Turban	110	15 x 10	15 - 25	Orange, Green and White	Vine	Large ornamental turban.
	42105 Sweet Meat	100	9 x 5"	10	Blue Green	Vine	An excellent keeper with great tasting flesh. Makes superior pies. An old time favorite of the Northwest.
	26024 Tiny Turk	100	4 x 5"	1 ½ - 3	Orange, Green and White	Vine	A smaller selection of Turk's Turban. Used primarily as decoration.
	42938 Tricolor Cushaw	110	Large Curved Neck	5 - 10	Gold / Dark Gold Stripes	Vine	Beautiful bright orange squash. Same flesh qualities as other cushaw types. A resurrected old variety.
★	26007 Turk's Turban	100	7 x 8"	3 - 4	Orange, Green and White	Vine	An ornamental and edible squash/gourd. Attractive for displays. Keeps well.

SQUASH WINTER SPAGHETTI		M=1,000 seeds				
Priced per package		1 oz.	4 oz.			
Priced per pound in these package sizes				1#	5#	25#
42903	Spaghetti	6.00	18.75	51.20	50.20	48.70
42920	Tivoli <small>F1400</small>	15.75	50.00	137.55	136.55	135.05
42981	Vegetable Spaghetti <small>Sakata F1400</small>	9.00	28.25	77.55	76.55	75.05
Priced per package		250 Seeds				
Priced per 1,000 seeds in these package sizes		1M	3M	25M	Seeds /lb.	
42950	Pinnacle <small>F1400</small>	30.80	82.05	64.60	64.10	2,600
42946	Primavera <small>F1400</small>	25.20	67.15	52.85	52.35	3,500
42947	Small Wonder	26.40	70.40	55.40	54.90	2,000
42929	Stripetti	22.60	60.15	47.35	46.85	5,900

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		Days	Features
47007	Full Sun Improved	60-100	A single stem with dark yellow petals and dark disc, 68 - 84 inches tall. Seed spacing will affect plant height and head size. For shorter stems (6') and smaller heads (5") - plant 4" apart. For taller stems (7-8') and larger heads (7") - plant 6" apart.
47005	Giant Striped	80	Excellent confectionery type variety. Striped, plump seeds are well filled and have thin hulls. 6 - 12' tall. Plant at 3-4 pounds per acre.
47016	Lemon Queen	70	6 - 7' tall with 5" blooms, pale lemon-yellow with dark centers. Free flowering and multiple branched with strong stems are ideal for cut flowers or borders.
47027	NuSun 3732	95	A black oil hybrid that is excellent for bird seed. 4 - 6' plant with 6 - 8" flowers. Plant at 25M per acre.
47028	NuSun 545CL	95	A mid-maturity black oil with an overall strong disease package giving it excellent stalk strength. 545CL includes the Clearfield Production System for Sunflowers.
47014	Sunspot Dwarf	55	1 - 2' tall with a full size yellow flower of 10". Does well in the garden or in 8 - 10" pots. Large seed.
47015	Velvet Queen	70	5' tall with 5" velvety blooms that are burgundy, chestnut and bronze with a dark center. Well branched, multiple flowered, free flowering plants with strong stems which are ideal for cut flowers or borders.

Additional Cut Sunflowers and Zinnias can be found on the next page -->.

SQUASH WINTER OTHER

	Priced per package		Priced per pound in these package sizes			
	1 oz.	4 oz.	1#	5#	25#	
42901 Banana Pink Jumbo	5.50	16.75	46.00	45.00	43.50	
38505 Cushaw Green Striped	5.00	15.50	42.25	41.25	39.75	
42971 Galeuse d'Eysines <small>Peanut</small>	9.00	28.25	77.30	76.30	74.80	
42971U Galeuse d'Eysines <small>Peanut Untreated</small>	9.00	28.25	77.30	76.30	74.80	
42948 Georgia Candy Roaster	7.25	22.50	61.75	60.75	59.25	
42970 Marina de Chioggia	8.40	26.50	73.00	72.00	70.50	
42970U Marina de Chioggia <small>Untreated</small>	8.40	26.50	73.00	72.00	70.50	
42105U Sweet Meat <small>Untreated</small>	6.50	20.50	56.00	55.00	53.50	
26024 Tiny Turk	6.75	20.75	56.80	55.80	54.30	
42938 Tricolor Cushaw	6.75	21.00	57.65	56.65	55.15	
26007 Turk's Turban	6.00	18.50	50.55	49.55	48.05	
42954 Zapalo Plomo	6.75	20.75	56.80	55.80	54.30	
	Priced per package		Priced per 1,000 seeds in these package sizes			
	250 Seeds		1M	3M	25M	55M
42989 Autumn Frost	26.85	71.50	68.50	66.50	65.50	
26017 Rupp's Turk's Turban <small>F1400</small>	17.80	47.45	44.45	42.45	41.45	

SUNFLOWER

M=1,000 seeds

	Priced per package		Priced per pound in these package sizes			
	1 oz.	4 oz.	1#	5#	50#	
47005U Giant Striped <small>Untreated</small>		6.50	11.75	11.25	11.00	
47016U Lemon Queen <small>Untreated</small>	4.75	15.45	43.50	42.50		
47014U Sunspot Dwarf <small>Untreated</small>	4.75	15.45	43.50	42.50		
47015U Velvet Queen <small>Untreated</small>	4.75	15.45	43.50	42.50		
	Priced per 1,000 seeds in these package sizes		5M	25M	50M	100M
47027 NuSun 3732		4.50	3.50	3.00	2.75	
47028 NuSun 545CL <small>Clearfield</small>		5.25	4.25	3.75	3.50	





PROCUT BICOLOR



PROCUT PLUM



PROCUT RED



PROCUT WHITE LITE



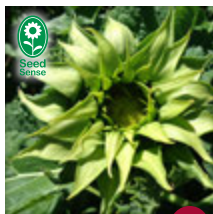
PROCUT WHITE NITE



PROCUT HORIZON



PROCUT ORANGE EXCEL



SUNFILL GREEN **NEW**



SUNFILL PURPLE **NEW**



SUNRICH GOLD



SUNRICH LEMON



SUNRICH LIME

SUNFLOWER & CUT FLOWERS

Pricing on page 131 & 133

	Days	Features
Cut Flowers	to flower	
ProCut Series Sunflowers		

ProCut Series Sunflowers are early maturing, pollenless hybrids. Plants are strong single stems that are 60 - 72" high with 4 - 6" blooms. All of the ProCut varieties are day length neutral.

47037	ProCut Bicolor	50-60	When you think about autumn colors you have to include ProCut Bicolor. A splash of bronzy red on orange tipped petals. It is the best single stem cutting bicolor sunflower available to growers.
47033	ProCut Plum	50-60	Is it pink? Rose? Mauve? Unique plum colored petals.
47034	ProCut Red	50-60	The latest breakthrough in sunflowers! Deep burgundy colored petals.
47031	ProCut White Lite	50-60	Lush white petals border a light colored center disc. An excellent choice paired with other flowers in bouquets.
47032	ProCut White Nite	50-60	White petals with a dark center. With unlimited possibilites. Can even be dyed red and blue for a July 4th vase.
47036	ProCut Horizon	45-55	A brand new ProCut variety, with rich overlapping orange petals surrounding a traditional dark disc, with perfect upward facing blooms.
47035	ProCut Orange Excel	45-55	The next generation of ProCut series. Deep orange color with upright flowers.
47080	ProCut Blend	45-60	A blend of the five most popular ProCut Sunflower Series. Plum, Red, White Nite, Horizon and Orange Excel

SunFill Series Sunflowers				
NEW	47041	SunFill Green	55-60	SunFill Series Sunflowers are a unique, novel green and purple sunflower. Fast growing sunflower that produces a 3-4" geometric flower head for use as bouquet greenery. They have highly ornamental sepals that wrap the flower face, creating a look typically only found on the back of the flower. Pollenless, single stem. Ht: 60-72". Should be cut early.
NEW	47042	SunFill Purple	55-60	

Sunrich Series Sunflowers				
	47001	Sunrich Gold	55-70	Sunrich Series Cut Sunflowers. An early, male sterile, pollenless sunflower used exclusively for the cut flower market. A 48" - 60" plant when cut will have a height of 2 - 2 ½ feet, with a 5 - 6" flower. Works best if direct sown with a 5" spacing. Need to keep a dense planting. Over fertilizing will cause the flower to grow too big for floral purposes.
	47002	Sunrich Lemon	55-70	
	47006	Sunrich Lime	55-70	
	47003	Sunrich Orange	55-70	
	47070	Sunrich Blend	50-70	
	47004	Sunrich Limoncello Summer	50-65	An early variety in the Sunrich series. Flowers 5 to 10 days earlier than the Gold, Lemon and Orange. A unique bi-color flower, vibrant yellow changing to a light, creamy yellow tip.

Zinnia				
	50001	Benary Giant Zinnia Mix	63-70	Undeniably the most eye catching Zinnia mix available for cut flower growers. Vigorous plants producing attractive brightly colored blooms in 12 colors: Lilac, Salmon Rose, Carmine Rose, Golden Yellow, Orange, Deep Red, White, Purple, Bright Pink, Coral, Wine and Scarlet.



SUNRICH ORANGE



SUNRICH LIMONCELLO SUMMER



BENARY GIANT MIX



CELEBRATION



SUPER VERDE

ORDERS OVER \$250 ARE SHIPPED FREE!

SWISS CHARD		Days	Features
43006	Celebration	60	A multi-colored chard. It exhibits highly uniform plants with dark green, glossy leaves. It has vibrant multi-colored petioles and venations with high percentage of pink, yellow and orange chards. Great for producing full-sized specialty chard or baby leaf.
43004	Five Color <small>Australian Heirloom</small>	60	Offers growers a rainbow of stem colors: yellow, gold, orange, pink, violet, green, white, red or striped, plus green, dark green or bronze leaf colors. Has improved tenderness and a mild chard flavor. Can be used fresh as a miniature leaf in salads or cooked when more mature.
43001	Fordhook Giant	60	A vigorous variety with dark green, savoyed, fleshy leaves. Stalks are 2 1/2" wide.
43801	Lucullus	60	A fool-proof variety that grows well, even in the heat. Harvest outer leaves for continuing harvest.
43002	Rhubarb	60	Unique crimson stalks look like rhubarb. Dark green, heavily crumpled leaves have delicious flavor.
43003	Silverado	60	Broad white stems with heavily savoyed dark green leaves. Slow bolting, compact market variety. Single leaf or whole plant harvest. More compact plant than Fordhook Giant.

TOMATILLO		Days	Features
44530	Super Verde	80	A green hybrid tomatillo that has mid maturity, plus a nice plant with strong vigor and cover. Fruit set is very good and offers improved uniformity, yield potential and longer cycle production. Fruit are firm, have healthy husks, attractive green color and above average shelf life.

SUNFLOWER	M=1,000 seeds		
	Priced per package 500 Seeds	1M	5M
<i>Priced per 1,000 seeds in these package sizes</i>			
Cut Flowers			
47007U Full Sun Improved <small>Untreated</small>	24.50	38.50	35.00
47037U ProCut BiColor <small>Untreated</small>	18.75	29.50	26.75
47036U ProCut Horizon <small>Untreated</small>	18.75	29.50	26.75
47035U ProCut Orange Excel <small>Untreated</small>	18.75	29.50	26.75
47033U ProCut Plum <small>Untreated</small>	18.75	29.50	26.75
47034U ProCut Red <small>Untreated</small>	21.25	33.50	30.25
47031U ProCut White Lite <small>Untreated</small>	26.50	41.75	37.75
47032U ProCut White Nite <small>Untreated</small>	26.50	41.75	37.75
47080U ProCut Blend <small>Untreated</small>	26.75	42.25	33.75
47041U SunFill Green <small>Untreated</small>	26.50	41.75	37.75
47042U SunFill Purple <small>Untreated</small>	26.50	41.75	37.75
47001U Sunrich Gold <small>Untreated</small>	23.50	37.00	33.50
47002U Sunrich Lemon <small>Untreated</small>	23.50	37.00	33.50
47006U Sunrich Lime <small>Untreated</small>	23.50	37.00	33.50
47004U Sunrich Limoncello Summer <small>Untreated</small>	23.50	37.00	33.50
47003U Sunrich Orange <small>Untreated</small>	23.50	37.00	33.50
47070U Sunrich Blend <small>Untreated</small>	29.25	46.25	37.00
Zinnia			
<i>Priced per package 250 Seeds</i>			
<i>Priced per 1,000 seeds in these package sizes</i>			
50001U Benary Giant Zinnia Mix <small>Untreated</small>	13.00	34.25	31.00

SWISS CHARD	M=1,000 seeds			
	Priced per package 4 oz.	1#	5#	25#
<i>Priced per pound in these package sizes</i>				
43004U Five Color <small>Untreated</small>	12.00	31.25	31.00	30.50
43001U Fordhook Giant <small>Untreated</small>	5.10	13.25	13.00	12.50
43801U Lucullus <small>Untreated</small>	5.10	13.25	13.00	12.50
43002U Rhubarb <small>Untreated</small>	7.95	20.75	20.50	20.00
43003 Silverado	3.30	8.55	8.30	7.80
<i>Priced per 1,000 seeds in these package sizes</i>				
43006 Celebration	3.60	3.35	3.20	3.10

TOMATILLO	M=1,000 seeds					
	Priced per package 100 Seeds	500 Seeds	1M	5M	25M	100M
<i>Priced per 1,000 seeds in these package sizes</i>						
44530 Super Verde	4.10	13.60	21.70	18.85	17.10	16.25

TOMATOES

PLANTING

Sow in greenhouse 4 - 6 weeks before desired planting date. Allow plants to adjust to field conditions for 48 hours before transplanting. Plant transplants up to 6 inches deep.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Staking and pruning plants are an important management practice. Staking and pruning allows the plant to concentrate on fruit development and also ensures less damage when harvesting fruit. Staking also keeps fruit from setting on the ground. Grow plants on raised beds with drip irrigation. Scout weekly to ensure crop quality. Consult Midwest Vegetable Production Guide on identification and treatment.

www.ruppseeds.com/MVPG

HARVEST

Harvest tomatoes when 60 - 90% red for fresh markets. Consult your buyers on what stage they would like their tomatoes harvested. However, please note that the more red the tomato the shorter the shelf life.

STORAGE

Store at 50 - 60°F and 85 - 95% humidity to ensure the longest shelf life.

DISEASE CODES

ASC - Alternaria Stem Canker
 BLS - Bacterial Leaf Spot
 BS - Bacterial Spec
 BW - Bacterial Wilt
 EB - Early Blight
 FCR - Fusarium Crown Rot
 Ff - Leaf Mold
 FR - Fusarium Race #
 GLS - Gray Leaf Spot
 N - Nematodes
 PM - Powdery Mildew
 PVY - Potato Virus Y
 TMV - Tobacco Mosaic Virus
 ToMV - Tomato Mosaic Virus
 TYLC - Tomato Yellow Leaf Curl
 SW - Spotted Wilt
 SBW - Southern Bacterial Wilt
 VW - Verticillium Wilt

USE

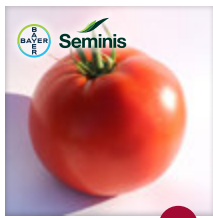
BP - Bedding Plant
 HG - Home Garden
 FM - Fresh Market
 S - Shipping
 P - Processing

TERMS

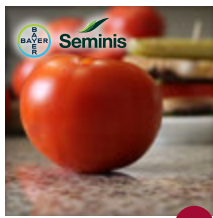
GS - Green Shoulders
 LGS - Light Green Shoulders when ripe
 UG - Uniform Green Gene ripe fruit are a uniform color
 DT - Determinate restricted vine or bush
 INDT - Indeterminate vining type used primarily in home gardens



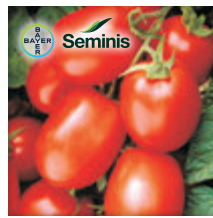
BETTER BOY PLUS **NEW**



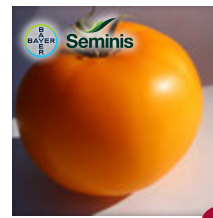
BIG BEEF PLUS **NEW**



CELEBRITY PLUS **NEW**



★ HEALTH KICK



LEMON BOY PLUS **NEW**

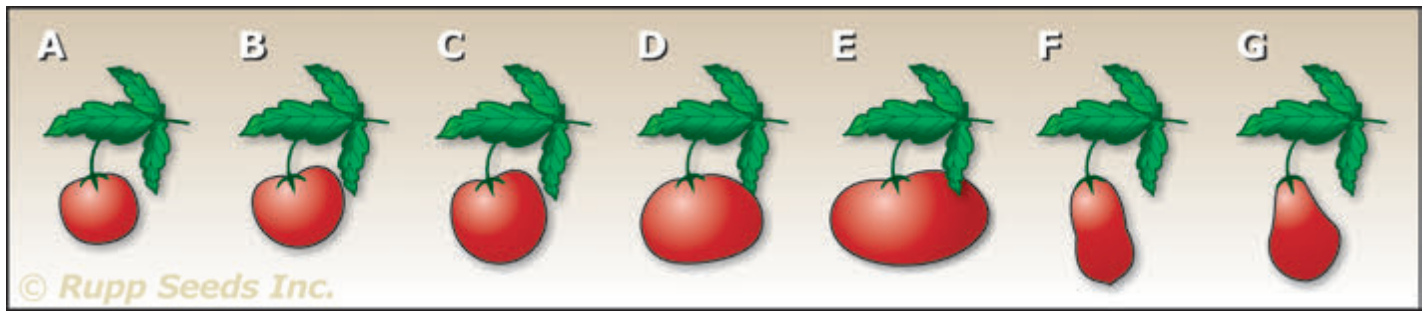


RUBEE DAWN **NEW**

TOMATO		HOME GARDEN / BEDDING Hybrid							
▲		Days	Use	Weight ounces	Shoulders	Shape	Habit	Disease	Features
	44015 Beefmaster	80	HG	12	GS	D	INDT	ASC, FR ¹ , GLS, N, VW	<i>Crop Failure for 2022. Large, vigorous Beefsteak type.</i>
	44002 Better Boy	75	HG	8	GS	C	INDT	ASC, FR ¹ , GLS, N, VW	<i>Widely adapted.</i>
NEW	44080 Better Boy Plus	77	FM/HG	8	GS	C	INDT	ASC, FCR, FR ¹ , GLS, N, SW, ToMV ² , VW	<i>This is an even better, Better Boy... You better believe it! Better Boy Plus has all the great characteristics of the classic Better Boy, plus more flavor, disease resistance and adaptability.</i>
	44076 Big Beef	73	HG	9-10	GS	D	INDT	ASC, FR ^{1,2} , N, TMV, VW	<i>AAS winner with an excellent name that will assure its place in the home garden. High yield, attractive.</i>
NEW	44081 Big Beef Plus	75	FM/HG	9-10	GS	D	INDT	ASC, FCR, FR ^{1,2} , GLS, N, SW ⁰ , ToMV ⁰⁻² , ToTV, VW ¹	<i>Big Beef Plus boasts better flavor, adaptability, disease resistance and appearance! It has the Crimson Gene that gives this classic tomato a visibly deeper red internal gel.</i>
	44003 Big Boy <small>Burpee's</small>	78	HG	12	GS	C	INDT		<i>Large, popular home garden.</i>
	44006 Celebrity	72	FM, HG	8	GS	D	DT	ASC, FR ^{1,2} , GLS, N, TMV, VW	<i>AAS winner. Excellent flavor.</i>
NEW ★	44082 Celebrity Plus	75	FM, HG	8	GS	D	DT	ASC, FR:0-1, GLS, N, SW:0, TMV ⁰⁻² , VW:0	<i>This tomato is everything you loved about the original Celebrity, plus an added resistance to tomato spotted wilt virus. A widely adaptable hybrid for fresh market and home garden. Celebrity produces large, smooth fruit with outstanding flavor.</i>
	44035 Early Girl	60	HG	4-6	GS	B	INDT	VW	<i>Popular, early home garden variety.</i>
	44153 Health Kick	72	FM, HG	4	UG	F	DT	SW	<i>A high-yielding roma type with 50% more lycopene than the average variety.</i>
	44102 Husky Red	67	BP, HG	5-7	UG	B	INDT	DWARF FR ¹ , VW	<i>Outstanding flavor and yield. Excellent in a container.</i>
	44009 Lemon Boy	72	HG	6	GS	C	INDT	ASC, FR ¹ , GLS, N, VW	<i>Lemon colored, sweet flavored.</i>

TOMATO HOME GARDEN/BEDDING Hybrid							
	Priced per package	100	500	M=1,000 seeds			
		Seeds	Seeds	1M	5M	25M	100M
44015 Beefmaster				<i>Crop Failure</i>			
44002 Better Boy		5.90	22.60	36.10	31.35	28.50	27.10
44080 Better Boy Plus		8.40	32.20	51.45	44.70	40.60	38.65
44076 Big Beef		7.55	28.85	46.10	40.05	36.40	34.65
44081 Big Beef Plus		10.70	41.10	65.75	57.15	51.95	49.45
44003 Big Boy <small>Burpee's</small>		5.50	21.00	33.55	29.15	26.50	25.20
44036U Blush <small>Untreated</small>		6.10	23.30	37.25	32.35	29.40	28.00
44006 Celebrity		7.30	28.00	44.75	38.90	35.35	33.65
44082 Celebrity Plus		10.40	39.90	63.80	55.45	50.40	48.00

TOMATO HOME GARDEN/BEDDING Hybrid							
	Priced per package	100	500	M=1,000 seeds			
		Seeds	Seeds	1M	5M	25M	100M
44035 Early Girl		6.10	23.45	37.50	32.60	29.60	28.15
44153 Health Kick		8.85	33.95	54.25	47.15	42.85	40.80
44102 Husky Red		7.05	27.05	43.25	37.60	34.15	32.50
44009 Lemon Boy		7.70	29.50	47.15	41.00	37.25	35.45
44083 Lemon Boy Plus		10.95	42.05	67.25	58.45	53.10	50.55
44025 Patio				<i>Crop Failure</i>			
44073 Pink Girl		7.50	28.70	45.85	39.85	36.20	34.45
44085 RuBee Dawn		23.05	88.50	147.50	134.05	127.65	121.55



TOMATO		HOME GARDEN / BEDDING Hybrid							
		Days	Use	Weight ounces	Shoulders	Shape	Habit	Disease	Features
NEW	44083 Lemon Boy Plus	70	FM/HG	7	GS	C	INDT	ASC, FCR, FR ¹⁻³ , GLS, N, ToMV ⁰⁻² , ToTV, VW ¹ ,	Boy oh boy this is a great tomato! Lemon Boy Plus has all the best qualities of the original Lemon Boy, plus added flavor and disease resistance. This tomato has a unique yellow color and a sweet, tangy flavor.
	44025 Patio	70	HG	4	GS	D	DWARF	ASC, FR ¹	Crop Failure for 2022. Excellent container hybrid.
	44073 Pink Girl	76	FM, HG	8	GS	D	INDT	ASC, FR ¹ , GLS, VW	A smooth pink hybrid for home garden or market.
NEW	44085 RuBee Dawn	55	FM/HG	7	GS	C	INDT	ASC, FCR, Ff, FR:0-1, GLS, N, ToMV ⁰⁻¹ , VW ¹	RuBee Dawn is a large-fruited indeterminate red salad variety, that is very early maturing and has great flavor. The fruit are deep oblate in shape, smooth, firm, have a light green shoulder and have a deep red color at maturity. The compact plant has short internodes, is open with mid vigor, and is well suited for staked open field and high tunnel.

GROWER PREFERRED ALL-STARS ★ TOMATOES

LARGE ROUNDS

BHN-964 is a great tomato for the grower who wants the perfect combination of excellent flavor and high yield potential.

Carolina Gold is the choice for tomato growers looking for a large yellow hybrid. Carolina Gold produces large fruit with a small stem scar and a very nice yellow/gold color.

Celebrity Plus is a new version of the longtime favorite Celebrity. Growers and customers will love the same great vine ripe flavor and quality fruit but now with the added benefit of TSWV resistance.

Mountain Spring has been a favorite of tomato growers for a long time. Fruit size is consistently large and the maturity is mid-season. Mountain Spring can be used in both open field and high tunnel applications.

Dave Silveus
Vegetable Consultant

Red Snapper was a new tomato offering from Sakata in 2021. Red Snapper can be used as a vine ripe or a mature green. Fruit quality is excellent with the crimson interior and firmness. Maturity is in the 2nd early segment and benefits from light pruning.

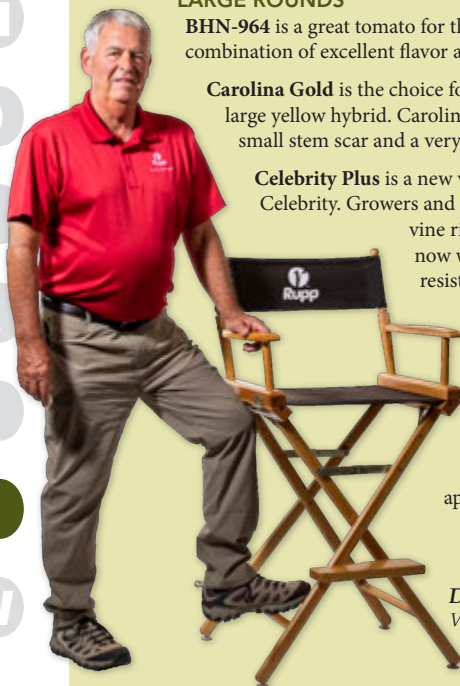
Roadster is the variety for the grower needing a high quality round tomato. It has great flavor, fantastic crimson interior, and 2nd early maturity.

ROMA

Mariana is a great choice for your Roma tomato needs. Mariana produces a large number of medium sized fruit on a medium sized plant. Mariana has been a favorite with growers for years.

CHERRY/GRAPE

SunSugar is an indeterminate yellow cherry tomato with great eating quality and good crack resistance. Growers have been relying on SunSugar for years.



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BHN-871



BHN-964 ★



CAROLINA GOLD ★



DIXIE RED 🚀



FLORIDA 47 R



FLORIDA 7514



GRAND MARSHALL



LAGUNA RED



MOUNTAIN MAN



MOUNTAIN SPRING ★

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ORDERS OVER \$250 ARE SHIPPED FREE!

TOMATO		FRESH MARKET Hybrid							Pricing on page 138
▲		Days	Use	Weight ounces	Shoulders	Shape	Habit	Disease	Features
44209	BHN-871 🏠	76	FM	10	UG	C	DT	FR, TMV, VW	A striking gold to tangerine colored globe shaped variety with firm, smooth fruit and improved taste and texture.
★	44214 BHN-964	76	FM, S	10	UG	C	DT	FR, TMV, VW	A variety with early blight tolerance. Possesses beautiful shoulders and excellent interior flesh quality. Sets well in the heat.
★	44126 Carolina Gold 🏠	75	HG, FM	10 - 12	GS	C	DT	FR ^{1,2} , VW	A yellow hybrid from Syngenta and North Carolina State University with very small blossom scar, tolerance to cracking and weather check.
🚀	44028 Dixie Red	85	FM, S	11	UG	C	DT	ASC, FR ^{1,3} , GLS, N, SW, VW	A Seminis product, produces a continuous set of larger fruit up the plant. This strong yielder has intermediate resistance to Root-knot nematodes. Its hot set capabilities make it ideal for southern growers during the main season. It can be used as a vine ripe or gas green variety.
	44120 Florida 47 R	75	S	10	UG	C	DT	ASC, FR ^{1,2} , GLS, VW	A Seminis hybrid with exceptional firmness and fruit quality.
	44159 Florida 7514 🍅	75	FM, S	10	UG	C	DT	BS, BW, FR ^{1,2} , GLS, VW	A University of Florida hybrid with excellent disease resistance, fruit qualities, yield, plus good crack resistance and great flavor.
	44045 Grand Marshall	78	FM, S	9 - 10	UG	C	DT	ASC, FR ^{1,2} , GLS, TYLC, VW	Vigorous hot set variety with extra-large and large, firm fruit. Pruning is beneficial at a low to medium level. Strong plant and good field performance under bacterial pressure.
	44061 Laguna Red 🏠	70	FM, S	8 - 12	UG	C	DT	ASC, FR ^{1,2} , FCR, ToMV ^{0.1} , VW ¹	A high quality determinate variety well suited for cool season production. Fruit are an attractive red, firm and smooth-shouldered with good flavor. Suited for both mature green and vine ripe markets. Medium tall plants that benefit from light pruning, and a mid-concentrated set.
	44071 Mountain Man	70	FM	10-12	UG	C	DT	SW	Mountain Man is a fresh market tomato ideal for the eastern summer production season. The strong plant type produces extra-large fruit with delicious flavor that keeps customers happily returning.
★	44067 Mountain Spring 🏠	70	FM, S	10	UG	C	DT	FR ^{1,2} , VW	A superior market hybrid.



RED SNAPPER



ROADSTER



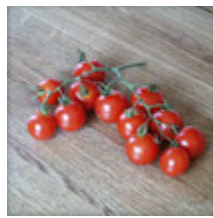
SAYBROOK



SKYWAY 687



STM2255 **NEW**



BHN-268

TOMATO **FRESH MARKET Hybrid** Pricing on page 138

	Days	Use	Weight ounces	Shoulders	Shape	Habit	Disease	Features
★ 44063 Red Snapper	70	FM, S	8 - 12	UG	C	DT	ASC, FR ^{1,2} FCR, ToMV ^{0,1} VW ¹	A high quality determinate variety well suited for cool season production. Fruit are an attractive red, firm and smooth-shouldered with good flavor. Suited for both mature green and vine ripe markets. Medium tall plants that benefit from light pruning, and a mid-concentrated set.
★ 44048 Roadster	67	FM, S	8 - 12	UG	C	DT	ASC, FR ^{1,2,3} , TSWV, VW	High quality variety with large sized fruit. Fruit are attractive red, very firm and smooth-shouldered. Medium tall plants and benefit from light pruning.
44057 Saybrook	80	FM, S	10	UG	C	DT	GLS, N, SW, VW	Saybrook is a determinate round tomato that is ideal for both the vine ripe and mature green market. The vigorous plant type produces a large set of extra-large smooth fruit all the way to the top of plant with good canopy cover to help reduce the risk of sunscald.
44022 Skyway 687	75	FM	11	UG	C	DT	FR ^{1,3} , N, SW, TYLC	With excellent interior color, firmness and good eating quality, it has a strong plant that provides consistent sized fruit up the plant. Fruit size is extra-large to jumbo.
NEW 44086 STM2255	70	FM, S	8 - 12	UG	C	DT	ASC, FCR, FR ^{1,2} , GLS, SW, TYLC, VW ¹	STM2255 is a very versatile and adaptable variety with high yield potential and good vine-ripe flavor. Fruit are an attractive red color, firm and have a good shelf-life. Can be used for both mature green and vine ripe markets. Plants are medium tall, have mid cover and benefit from pruning. Has potential to be used in multiple slots and regions across the eastern USA.
44075 Sunbrite	73	FM, S	10	UG	C	DT	ASC, FR ^{1,2} , GLS, VW	High yield potential for this mid season tomato with a concentrated fruit set.

TOMATO FRESH MARKET Hybrid			M=1,000 seeds			
Priced per package	100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes	1M	5M	25M	100M		
44188P BHN-602 Pelleted	15.55	59.70	99.50	90.45	86.10	82.00
44209P BHN-871 Pelleted	13.65	52.45	87.35	79.40	75.60	72.00
44214P BHN-964 Pelleted	13.65	52.45	87.35	79.40	75.60	72.00
44126P Carolina Gold Pelleted	9.90	37.95	63.25	57.50	54.75	52.10
44028P Dixie Red Pelleted	15.70	60.30	100.50	91.35	87.00	82.85
44206 Finishline	12.80	49.15	81.90			
44120P Florida 47 R Pelleted	14.45	55.45	92.35	83.95	79.95	76.10
44159 Florida 7514	8.25	31.60	52.60	47.80	45.50	43.30
44045 Grand Marshall	16.55	63.50	105.80	96.15	91.55	87.15
44046 Katana	19.65	75.45	125.75	114.30		
44061P Laguna Red Pelleted	16.65	63.90	106.50	96.80	92.15	87.75
44071 Mountain Man	9.70	37.15	61.90	56.25	53.55	51.00

TOMATO FRESH MARKET Hybrid			M=1,000 seeds			
Priced per package	100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes	1M	5M	25M	100M		
44067 Mt. Spring	7.60	29.15	48.55	44.10	42.00	40.00
44067P Mt. Spring Pelleted	8.00	30.60	51.00	46.35	44.10	42.00
44044 Pink-a-licious	6.20	23.70	39.45	35.85	34.10	32.45
44063P Red Snapper Pelleted	18.65	71.55	119.20	108.35	103.15	98.20
44014P RidgeRunner Pelleted	12.45	47.70	79.50	72.25		
44048P Roadster Pelleted	16.70	64.05	106.70	97.00	92.35	87.95
44201P Rocky Top Pelleted	10.90	41.85	69.75	63.40	60.35	
44057P Saybrook Pelleted	15.40	59.20	98.60	89.60	85.30	81.20
44022P Skyway 687 Pelleted	14.80	56.80	94.60	86.00	81.90	78.00
44086 STM2255	26.15	100.45	167.35	152.10	144.85	137.95
44075 Sunbrite	8.25	31.65	52.75	47.95	45.65	43.45

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CHOCOLATE SPRINKLES



GOLD SPARK NEW



RUBY CRUSH



SWEET CANARY



SWEET HEARTS



TIDY TREATS

TOMATO		CHERRY Hybrid					
Days	Weight ounces	Shape	Habit	Disease	Features		
44140	BHN-268	68	0.9	Globe	DT	FR ² , VW	Longer shelf life, increased firmness, and a fraction smaller than other hybrids. Ships extremely well. Fewer picks of higher color fruit. Yields are unbelievable.
44059	Chocolate Sprinkles	55	.4 - .5	Globe	INDT	FR ¹ , N	Heirloom flavor and appearance with a modern disease package and firm texture. Performs well in high tunnel and open field. Unique dark red fruit with a green striped exterior and purple flesh color.
NEW 44087	Gold Spark	65	.4 - .5	Grape	INDT	Ff, ToMV ⁰² , GLS	Gold Spark a great tasting indeterminate yellow grape with high yield and consistent brix throughout the season. Excellent shelf life. Plants display strong vigor with medium height.
44103	Husky Cherry Red	65	1	Cherry	Dwarf Indt	FR ¹ VW	High yields with controlled growth.
44165	Red Grape	68	.3 - .5	Grape	INDT		A superior flavored grape tomato from D. Palmer Seed with firm, excellent shaped red fruit.
44047	Ruby Crush	65	.4 - .5	Grape	DT	FCR, FR ^{1,2} , ToMV ⁰² , GLS	Deep red fruit that are very smooth, uniform and firm with a good flavor profile. Limited to no pruning necessary. High yield potential.
★ 44169	SunSugar	62	0.5	Cherry	INDT	F1, TMV	A Seminis yellow cherry with high sugars and vitamin A. Has good crack resistance and is early.
44021	Super Sweet 100	75	1	Cherry	INDT	FR ¹ , TMV, VW	Popular cherry hybrid.
44156	Sweet Canary	62	0.5	Grape	SEMI-DT		Semi-determinate yellow grape with deep yellow color and firm texture. Can be used in open field or protected culture. Fantastic flavor.
44199	Sweet Hearts	60	.4 - .5	Grape	INDT	Ff, Fol, ToMV ⁰²	Hybrid from Sakata with excellent crack resistance, shelf life, high Brix and yields. Sets under cooler conditions than most grapes.
44049	Tidy Treats	50-55	.2 - .4	Cherry	DT	FR, VW	Tons of fruit on a compact plant. Good in small-space gardens and containers.

TOMATO FRESH MARKET Hybrid		M=1,000 seeds					
Priced per package		100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes							
Surplus List		1M	5M	25M	100M		
44012P	Brickyard <small>Pelleted</small>	5.00	19.15	31.90	29.00	27.60	26.25
44183	Mr. Ugly	5.00	19.15	31.90	29.00		
44054	Myrtle	5.00	n/a	31.90			
44027P	Quincy <small>F300 Pelleted</small>	5.00	19.15	31.90	29.00	27.60	
44161P	Sebring <small>Pelleted</small>	5.00	19.15	31.90	29.00	27.60	
44150	Sunguard	5.00	19.15	31.90	29.00	27.60	
44023P	Sunkeeper <small>Pelleted</small>	5.00	19.15	31.90	29.00	27.60	

* Multiple packages may be used to fill orders for these quantities.

TOMATO CHERRY Hybrid		M=1,000 seeds				
Priced per package		100 Seeds	500 Seeds			
Priced per 1,000 seeds in these package sizes						
		1M	5M	25M		
44030	Aligote	30.85	102.40	170.60	162.75	155.00
44140P	BHN-268 <small>Pelleted</small>	40.25	133.65	222.75	212.10	202.00
44059	Chocolate Sprinkles	22.85	75.80	126.30	120.50	114.75
44087	Gold Spark	61.35	203.80	339.60	323.40	308.00
44103	Husky Cherry Red	5.90	21.75	34.80	30.25	27.50
44223	Montesino	26.25	87.20	145.30		
44165	Red Grape	27.05	89.75	149.55	142.70	
44047	Ruby Crush	39.40	130.75	217.90	207.90	198.00
44169	SunSugar	9.60	35.55	56.85	49.40	44.90
44021	Super Sweet 100	6.35	23.35	37.35	32.45	29.50
44156	Sweet Canary	28.25	93.80	156.30	149.10	142.00
44199	Sweet Hearts	55.20	183.25	305.40	290.85	277.00
44222	Sweet Treats	52.20	173.35	288.90	275.10	262.00
44049	Tidy Treats	12.30	40.80	68.00	64.85	61.75

* Multiple packages may be used to fill orders for these quantities.



ARTISAN BUMBLE BEE MIX



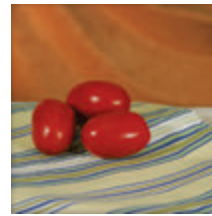
FREDERIK



TORERO



SYNERGY ROOTSTOCK



BHN-768

ORDERS OVER \$250 ARE SHIPPED FREE!

TOMATO		CHERRY Hybrid					
		Days	Weight ounces	Shape	Habit	Disease	Features
Open Pollinated							
44068	Artisan Bumble Bee Mix	70	.7 - .8		INDT		A mix of 3 colors of Bumble Bee Cherry Tomatoes. Pink, Purple and Sunrise, which is yellow with red stripes. Excellent sweet and tangy flavor, 0.7-0.8 oz fruit.
44507	Red Cherry	72			INDT		

TOMATO		GREENHOUSE				
	Use	Weight ounces	Shape	Disease	Features	
44038	Frederik Greenhouse	7.5 - 8.5	Round Beef	ToMV:0-2/Ff:A-E/ Fol:0,1/For	Relatively short plant type with lots of vigor. Has good endurance for the longer crop cycle. Sets very well in all conditions. The fruit are flat, round and of high quality with a good shelf life. Is a top choice when fruit quality and shelf life are top priority year-round.	
44020	Torero Cold Greenhouse & Tunnels	8 - 9	Round	Ff ^{A,E} , Fol ^{0,1} , For, Va ⁰ , Vd ⁰ , ToMV ^{0,2} , ToTV	Large beef variety with excellent fruit quality and shelf life. Maintains an excellent fruit size even during summer. For the highest yield potential, should be grafted onto Maxifort.	
44198	Arnold Rootstock Cold Greenhouse & Tunnels				Germinates extremely well. Arnold has a more generative effect on the plant and is therefore suitable for vigorous varieties, late plantings in the spring or in vegetative conditions; such as with growers that produce without heat to save energy. Slightly more open plant than Maxifort.	
44185	Maxifort Rootstock				Maxifort is the most popular rootstock in North America. Very strong vigor. High Resistance to: ToMV-Tomato Mosaic Virus; Fol:0,1-Fusarium oxysporum races 0 and 1; For-Fusarium oxysporum fsp. Radicis-lycopersici (crown rot); PI-Pyrenochaeta lycopersici (Corky Root); Va-Verticillium albo-altum; Vd-Verticillium dahliae; Ma-Meloidogyne arenaria; Mi-meloidogyne incognita; Mj-Meloidogyne javanica.	
44180	Multifort Rootstock				Provides excellent vigor for long seasons. Great pairing for varieties that require additional protection against Fusarium, adding miles to crops under pressure. High Resistance to: ToMV-Tomato Mosaic Virus; Fol:1-3 Fusarium oxysporum races 1-3; For-Fusarium oxysporum fsp. PI-Pyrenochaeta lycopersici (Corky Root); Va-Verticillium albo-altum; Vd-Verticillium dahliae; Ma-Meloidogyne arenaria; Mi-meloidogyne incognita; Mj-Meloidogyne javanica.	
44058	Synergy Rootstock				Synergy is a rootstock with medium strong vigor and is well suited to balance high vigor scions. It is best suited for medium and short cycles and non-heated conditions. Well suited for specialty type tomatoes. High Resistance to: Ff:A-E / Fusarium wilt: 1-3 / FCR / ToMV: 0-2 / Va: 1 / VW: 1 / Intermediate Resistance to: Root knot nematode / Corky root.	

TOMATO CHERRY Open Pollinated		M=1,000 seeds			
Priced per package		100 Seeds	500 Seeds	1M	5M
Priced per 1,000 seeds in these package sizes					
44068	Artisan Bumble Bee Mix	8.20	30.20	48.30	42.00
Priced per package		1/2 oz	1 oz	4 oz	1#
44507	Red Cherry	6.65	9.95	34.20	95.00

TOMATO GREENHOUSE		M=1,000 seeds		
Priced per package		100 Seeds	500 Seeds	1M
Priced per 1,000 seeds in these package sizes				
44038	Frederik	81.70	314.15	523.55
44020U	Torero Untreated	105.40	405.35	675.55
44198	Arnold Rootstock	40.80	156.75	261.20
44185U	Maxifort Rootstock Untreated	40.70	156.50	260.80
44180U	Multifort Rootstock Untreated	40.70	156.50	260.80
44058	Synergy Rootstock	46.00	176.85	294.75

* Multiple packages may be used to fill orders for these quantities.

Other Tomatoes & Cucs for greenhouse production are available. Ask us.

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MARIANA ★



MONTICELLO



SAN MARZANO

VEGETABLE ROOT INOCULANT
Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.

TOMATO		PROCESSING / SALADETTE Hybrid						
▲		Days	Use	Weight ounces	Shape	Habit	Disease	Features
44202	BHN-768	74	FM, S	4	F	DT	FR, SW	A BHN Roma that produces high yields of very classy tomatoes. The deep blocky globe fruit are uniform green and jointless.
44062	BHN-1045	75	FM, S	4	F	DT	FR ^{1,2,3} N, SW, TYLC, VW	The newest BHN Roma release. BHN1045 has uniform large fruit and a deep blocky shape. A strong determinate plant with an excellent disease package. An all-around improved BHN410.
★	44176 Mariana	74	FM	4-5	F	DT	ASC, FR ^{1,2} , N, VW	A blocky, Roma type with thick walls and very good external and internal fruit color. Excellent firmness and shelf life.
44224	Monticello	74	FM	4-5	F	DT	ASC, FR ^{1,2} , N, VW	High disease package. Suitable for the northern and central growing regions of the Eastern U.S.
44091	San Marzano	61	FM	3.8	F	INDT		A step above your typical Roma with high yields. Classic Italian flavor with an extra kick! Great in sauces and baked dishes.

TOMATO		OP	
▲		Days	Features
44510	Ace 55 VF	80	Disease-resistant Ace strain.
44506	Beefsteak	80	Also known as Red Ponderosa or Crimson Cushion. Fruits are large, flattened, and irregular shaped.
44529	Delicious	77	Large 1 lb. fruit with overall high quality. Nearly solid interiors with very small seed cavity.
44502	Jubilee Golden	80	AAS winner. Fruit is large, deep orange-yellow color, meaty with a mild flavor.
44504	Marglobe	72	A solid, mild fleshed tomato that is suitable for home garden and processing.
44526	Red Pear	80	Two-inch long fruit with a distinct elongated neck that is unique to this variety.
44508	Roma VF	78	A heavy-yielding, processing tomato for the home gardener. Vines are compact, pear shaped fruit.
44509	Rutgers	75	Bright red, medium large and smooth, globed-shaped fruit. A popular garden variety.
44525	Yellow Pear	75	Mild sweet flavor, uniform fruit 1 1/2 inches long.

TOMATO PROCESSING/SALADETTE Hybrid							
Priced per package		100 Seeds	500 Seeds				
Priced per 1,000 seeds in these package sizes				1M	5M	25M	100M
44202P	BHN-768 Pelleted	13.65	52.45	87.35	79.40	75.60	72.00
44062P	BHN-1045 Pelleted	14.60	56.05	93.40	84.90	80.85	77.00
44176P	Mariana Primed Pelleted	12.25	47.05	78.35	71.20	67.80	64.55
44224P	Monticello Pelleted	11.65	44.80	74.65	67.85	64.60	61.50
44091	San Marzano	13.10	50.25	83.75	76.10	72.45	69.00
Special Value Priced: Roma Types for either Bedding Plants or Market. Excellent substitute for either Roma Hybrid or Hybrid 882							
BHN-783 Gold Roma							
44208P	Pelleted	4.75	18.25	30.40			

TOMATO OP					
Priced per package		1/2 oz.	1 oz.	4 oz.	1#
44510	Ace 55 VF	6.30	9.40	32.40	90.00
44506	Beefsteak	5.95	8.90	30.60	85.00
44529U	Delicious Untreated	7.65	11.50	39.60	110.00
44502	Jubilee Golden	7.65	11.50	39.60	110.00
44504	Marglobe	6.30	9.40	32.40	90.00
44508	Roma VF	7.35	11.00	37.80	105.00
44509	Rutgers	7.35	11.00	37.80	105.00
44526	Red Pear	8.40	12.60	43.40	120.50
44525	Yellow Pear	8.40	12.60	43.40	120.50

* Multiple packages may be used to fill orders for these quantities.

TOMATO		HEIRLOOM				
▲		Days	Flesh Color	Use	Fruit Size	Features
44723	Amish Paste	85	Red	HG	8 oz.	An Amish heirloom variety with paste type fruit and outstanding sweet flavor. Fruit are oblong oxheart shaped.
44738	Black From Tula	80	Dark Red-Black	HG	10 - 14 oz.	Good yields of brownish-red, slightly flattened globes weighing up to 14 oz. Rich full flavor, great for slicing and canning. Has been described as "the ugliest, most delicious tomato grown." Indeterminate.
44701	Brandywine, Pink	85	Pink	FM, HG	10 - 16 oz.	A tomato from the 1800's known for being the standard setter for flavor. Potato leaved, indeterminate with pinkish red fruit.
44712	Cherokee Purple	80	Burgundy	FM, HG	10 - 12 oz.	Burgundy colored fruit with green shoulders and delicious sweet flavor. Gel around seed stays green with deep burgundy flesh, a beautiful variegation that looks as good as it tastes.
44733	German Pink	85	Pink	FM, HG	12 - 24 oz.	One of two original Bavarian varieties. Potato-leaf plants produce large 1-2 lb meaty fruit with few seeds, very little cracking or blossom scars. Sweet flavor.
44722	Green Zebra	75	Green	FM, HG	3 oz.	A delicious salad tomato with flavorful flesh. A sweet and zingy, tasty treat.
44734	Hillbilly Potato Leaf	85	Yellow fruit red stripes	HG	1 lb.	Absolutely gorgeous slicing tomato that is similar to Mr. Stripecy. Sweet 4-6" flattened fruits.
44705	Mortgage Lifter	80	Pink	HG	1 lb.	From the "Great Depression", an indeterminate vined variety with large, very firm, pink fruit with good flavor. Productive.
44709	Old German	75	Yellow Orange	HG	1 lb.	Large, yellow fruit with orange centers. Very sweet, excellent flavor.
44725	Prudens Purple	75	Dark Pink	FM, HG	10 - 16 oz.	Large, dark pink fruit that mature quite early, with delicious flavor and good production. Has indeterminate potato leaved vines.
44737	Red Brandywine	85	Red	FM, HG	10 - 16 oz.	The red version of Brandywine originating from the late 1800's. Very productive, excellent taste. Indeterminate.

TOMATO HEIRLOOM		M=1,000 seeds				
Priced per package	250 Seeds	500 Seeds*	Priced per 1,000 seeds in these package sizes			
			1M	5M	10M	
44723 Amish Paste	5.75	7.00	9.15	6.75	5.50	
44738 Black From Tula	5.75	7.00	9.15	6.75	5.50	
44701 Brandywine, Pink	5.75	7.00	9.15	6.75	5.50	
44712 Cherokee Purple	5.75	7.00	9.15	6.75	5.50	
44703 Currant Red	5.75	7.00	9.15	6.75	5.50	
44704 Currant Yellow	5.75	7.00	9.15	6.75	5.50	
44733 German Pink	5.75	7.00	9.15	6.75	5.50	
44722 Green Zebra	5.75	7.00	9.15	6.75	5.50	
44734 Hillbilly Potato Leaf	5.75	7.00	9.15	6.75	5.50	
44705 Mortgage Lifter	5.75	7.00	9.15	6.75	5.50	
44709 Old German	5.75	7.00	9.15	6.75	5.50	
44726 Persimmon	5.75	7.00	9.15	6.75	5.50	
44725 Prudens Purple	5.75	7.00	9.15	6.75	5.50	
44737 Red Brandywine	5.75	7.00	9.15	6.75	5.50	

* Multiple packages may be used to fill orders for these quantities.

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VEGETABLE ROOT INOCULANT

Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields. See page 152 for application rates and pricing.



SAVE WITH CASH DISCOUNTS

Cash discounts are available throughout the season and are a great way to add money to your bottom line. See page 158 for all of the details.

November	7%
December	6%
January	5%
February	4%
March	3%
April	2%

TURNIPS / RUTABAGA

▲	Days	Features
45006 Alamo ^{F1}	48	50% higher yielding than the standards with excellent flavor. Taste comparable with standard turnip greens.
45003 All-Top ^{F1}	50	A hybrid for greens only. Dark green leaves with many branches for exceptional yields.
45002 Just Right ^{F1}	70	A very large white type turnip with excellent uniformity. Fall to winter cold tolerance.
45903 Laurentian ^{Rutabaga}	90	A dependable, yellow-fleshed rutabaga for storage and shipping. Selected for its sweet flavor and small necks.
45501 Purple Top White Globe	57	Smooth, globe-shaped, purple topped with, white globe beneath 5 - 6" fruit with white, fine grained flesh.
45503 Seven Top	60	A turnip grown for greens only.
45502 Shogoin	60	A dual purpose turnip grown for tops and large roots.
45001 Tokyo Cross ^{F1}	35	A very early, perfect globe shaped root. Can be harvested from 2 - 6" without risk of getting pithy.
45004 Topper ^{F1}	60	A heavy yielding Seven Top type with thick hairless leaves that are less lobed than Seven Top.
45507 White Egg	50	A 3 - 4" egg shaped, sweet tender root popular both for the home garden or market.
49011 White Lady ^{F1}	50	A turnip with superior eating quality, harvestable small or up to 5". Pubescence free stems, tender and suitable for greens. Spring, summer or autumn sowing.

TURNIPS / RUTABAGA

	Priced per package		Priced per pound in these package sizes		
	1 oz.	4 oz.	1#	5#	50#
45006 Alamo	12.60	41.30	115.50	115.00	
45003 All Top	9.45	30.95	86.50	86.00	
45002 Just Right	15.15	52.65	147.15	146.15	
45903 Laurentian ^{Rutabaga}	3.35	11.55	32.20	31.20	
45501U Purple Top White Globe ^{Untreated}	6.15	15.00	14.50	14.00	
45503U Seven Top ^{Untreated}	6.15	15.00	14.50	14.00	
45502U Shogoin ^{Untreated}	6.55	16.00	15.50	15.00	
45001 Tokyo Cross	20.55	71.45	199.75	198.75	
45004 Topper	12.30	40.25	112.50	112.00	
45507U White Egg ^{Untreated}	6.55	16.00	15.50	15.00	
49011 White Lady	18.95	62.05	173.50	173.00	

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ESTRELLA ★ pg. 145

WATERMELON

PLANTING

Start in the greenhouse and allow 28 - 35 days to get plants ready to transplant. Excessive water during germination must be avoided. Water transplant growing medium well and allow excess moisture to drain and moisture to stabilize for 24 - 48 hours. Bring medium temperature to 80 - 95°F before seeding. Seedcoat adherence to cotyledons may be virtually eliminated by orienting the seed in transplant trays with the pointed end up at a 45° to 90° angle. Plant transplants 6 - 12 feet apart with 36" between plants.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

Scout fields every 7 days to monitor weed, insect, and disease pressure. Place pollinating insects near the field to ensure proper pollination. Water only if necessary. Do not over-water.

HARVEST

Ripeness is indicated by a cream to slight yellowing of the white background color of the part of the melon that rests on the ground. Drying of the stem tendril nearest the attachment point of the watermelon and green color tone of the rind are also indicators of ripeness but these vary with cultivar. Melons should be cut from the vine rather than pulled, twisted, or broken off.

STORAGE

Store at 50 - 60°F and at a humidity level of 90 - 95%. This will ensure a long shelf life.

DISEASE CODES

A - Anthracnose
F - Fusarium
GSB - Gummy Stem Blight



COMPADRE



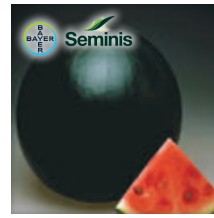
ESTRELLA ★



JAMBOREE



SANGRIA



JADE STAR



YELLOW DOLL

WATERMELON		LARGE Hybrid							
▲		Days	Shape	Weight pounds	Rind Type	Flesh Color	Seed Size	Disease	Features
46124	Compadre	82	Oval	20 - 25	Crimson Sweet	Bright Red		F ¹ , GSB	A D. Palmer hybrid with a strong vine, high yields and a good disease package.
★	46041 Estrella	80	Long Blocky	20 - 24	Allsweet	Bright Red	Small	A, F	Excellent flavor and texture. Plants are typically vigorous with large leaves. Uniform fruit.
46088	Jamboree	88	Elongated	25 - 27	Allsweet	Deep Red		A, F	An excellent choice when size commands a premium! Produces large, very uniform fruit.
46030	Sangria	85	Elongated	18 - 22	Allsweet	Bright Red	Large	A, F	Good field performance with excellent taste.
46009	Starbrite	85	Oblong	22 - 31	Dark Green / Light Green Stripes	Bright Red		A ¹ , F	A Seminis high yielding hybrid with an oblong shaped fruit. Rind is tough and resilient for long distance shipping.
46072	StarGazer	85	Elongated	24 - 28	Allsweet	Red	Large	A ¹ , F	An elongated Allsweet type hybrid, from Seminis, that is more uniform when compared to other Allsweet hybrids.

WATERMELON		ICEBOX							
▲		Days	Shape	Weight pounds	Rind Type	Flesh Color	Seed Size	Disease	Features
46051	Jade Star	80	Round Oval	15	Dark Green / Faint Stripes	Intense Red	Small	F ¹	An improved Sugar Baby type hybrid with brighter, sweeter flesh and a better vine. For fresh market.
46005	Yellow Doll	68	Oval	5 - 7	Medium Green / Dark Stripes	Yellow	Small		Unusual, very sweet home garden hybrid. Crisp flesh.

WATERMELON LARGE Hybrid		M=1,000 seeds			
Priced per package		250 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	10M*	
46124	Compadre	26.40	68.10	63.10	58.10
46041	Estrella	34.65	89.35	84.35	79.35
46088	Jamboree	34.75	89.60	84.60	79.60
46030	Sangria	36.40	93.85	88.85	83.85
46009	Starbrite	28.40	73.20	68.20	63.20
46072	StarGazer	33.95	87.50	82.50	77.50
Surplus List					
46006	Early Slicer	15.70	40.50	35.50	30.50

*NOTICE WATERMELON GROWERS: Customers are required to sign a "Waiver of Liability" form, prior to the shipping of any watermelon seed.

* Multiple packages may be used to fill orders for these quantities.

WATERMELON ICEBOX		M=1,000 seeds			
Priced per package		250 Seeds			
Priced per 1,000 seeds in these package sizes		1M	5M	10M*	
46051	Jade Star	36.25	92.90	91.90	90.90
46005	Yellow Doll	38.25	98.05	97.05	96.05

* Multiple packages may be used to fill orders for these quantities.

DOCUMENTS REQUIRED

Various products in our catalog require signed documents before seed can be shipped.

Look for this document icon with a page number. This will guide you to the page with the appropriate document for the product you are purchasing.



EL CAPITAN **NEW** pg. 147

WATERMELON SEEDLESS

PLANTING

Start in the greenhouse. Allow 28 - 35 days to get plants ready to transplant. Excessive water during germination must be avoided. Water transplant growing medium well and allow excess moisture to drain and moisture to stabilize for 24 - 48 hours. Bring medium temperature to 80 - 95°F before seeding. Seedcoat adherence to cotyledons may be virtually eliminated by orienting the seed in transplant trays with the pointed end up at a 45° to 90° angle. Plant transplants 6 - 12 feet apart with 36" between plants.

As a general rule, direct field seeding of the pollinizer variety should be done on the same day the triploid seed is planted in the greenhouse. Small-fruited, icebox varieties usually flower earlier than standard watermelon varieties. If icebox varieties are to be used as the pollinizer, then direct seeding should be delayed a week to ten days. The diploid icebox pollinizer variety will frequently set fruit and stop producing male blossoms while the triploid variety is still producing female blossoms. Growers may make a second planting of a pollinizer 2 - 3 weeks after the initial planting to provide pollen for the late-developing female

blossoms on the triploid variety. No consistent differences among any standard and icebox types in effectiveness of pollination have been noted. Icebox varieties used as pollinizers result in high early yields; standard varieties used as pollinizers result in high total yields.

See "Germination Chart" on page 153 for additional information on germination rate and days to germination at various soil temperatures.

MANAGEMENT

For successful seedless watermelon production, an adequate bee population is especially important to transfer the pollen from the pollinizer variety to the seedless variety (seedless watermelons do not produce pollen). The pollinizer variety is normally planted in alternate, or every third row to ensure adequate pollen movement by the bees. At least eight visits to an individual flower of the seedless variety are necessary for adequate hormonal stimulation for normal fruit development. Scout fields very 7 days to monitor weed, insect, and disease pressure.

HARVEST

Ripeness is indicated by a cream to slight yellowing of the white background color of the part of the melon that rests on the ground. Drying of the stem tendril nearest the attachment point of the watermelon and green color tone of the rind are also indicators of ripeness but these vary with cultivar. Melons should be cut from the vine rather than pulled, twisted, or broken off.

STORAGE

Store at 50 - 60°F and at a humidity level of 90 - 95%. This will ensure a long shelf life.



AMARILLO



BOLD RULER



DARK KNIGHT **NEW**



EL CAPITAN **NEW**



EXCLAMATION



FASCINATION ★



JOY RIDE



MELODY



ORANGE CRISP



ROAD TRIP



SWEET DAWN ★

**ORDERS
OVER \$250
ARE SHIPPED
FREE!**

WATERMELON		TRIPLOID Hybrid					Pricing on pages 148
Days	Shape	Weight pounds	Rind Type	Flesh Color	Features		
46093	Amarillo	82	Globe	13 - 15	Tiger Stripe	Yellow	<i>A Syngenta melon with deep yellow flesh and less tendency to hollow heart.</i>
46001	Bold Ruler	83	Round / Oval	16 - 18	Crimson Sweet	Bright Red	<i>A high quality seedless with early set in cool conditions. Very high yield and excellent fruit uniformity. Must be planted with an early pollinator like Ace Plus.</i>
NEW 46049	Dark Knight	80	Globe	14 - 17	Dark Green	Dark Red	<i>Dark Knight is eye-catching with its globe shape and dark green smooth exterior. Dark red flesh with medium firmness. Slightly larger fruit size than Sweet Gem.</i>
NEW 46052	El Capitan	85- 90	Blocky Oval	16 - 20	Wide dark green stripes	Deep Red	<i>A new triploid watermelon with an attractive darker Crimson Sweet rind pattern. This variety has shown excellent yield potential as well as extended shipping and field holding ability. Uniform, blocky-shaped fruit on vigorous vines. Deep red, firm flesh, small pip size and excellent flavor.</i>
46013	Exclamation	90	Blocky	17 - 21	Crimson Sweet	Dark Red	<i>Full-season maturity seedless variety. Produces blocky, firm-fleshed fruit of uniform size with an attractive rind, small pips and sweet flesh.</i>
★ 46140	Fascination	85	Blocky	17 - 21	Crimson Sweet	Dark Red	<i>A variety with very firm, high quality flesh with small pips. Exhibits improved disease tolerances to Fusarium and Anthracnose.</i>
46026	Joy Ride	86	Oblong	19 - 20	Mottle Stripe	Dark Red	<i>Highly adaptable and suitable hybrid for growing across all regions of the country. Produces a large percentage of 36-count watermelons. Offers a thick rind and firm fruit with uniform setting. Has a vigorous plant type with good canopy coverage. Has shown a high, industry leading average degrees Brix of 11.5 in trials, surpassing all comparable varieties.</i>
46134	Melody	80	Globe	14 - 16	Allsweet	Dark Red	<i>Offers growers the advantage of an early maturing hybrid, with a heavy, concentrated and uniform fruit set.</i>
46007	Orange Crisp	92	Round / Oval	14 - 18	Jubilee	Orange	<i>The melons hold up for a very long time in and out of the field. Very crisp and firm flesh. Yellow-orange flesh turns more orange as it matures and the taste improves with time. Don't pick too early!</i>

Additional Triploid Watermelons can be found on the next page --->.

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SWEET GEM ★



UNBRIDLED



YELLOW BUTTERCUP



SIRIUS



ACE PLUS



WILD CARD PLUS

WATERMELON **TRIPLOID Hybrid** Pricing on pages 148

	Days	Shape	Weight pounds	Rind Type	Flesh Color	Features
46029 Road Trip	84	Round / Oval	16 - 18	Dark Mottle Stripe	Bright Red	45-count hybrid watermelon with exceptional external and internal quality. Uniform in fruit shape and size. Very adaptable variety with high yield potential. Has average Brix of 11.5%.
★ 46102 Sweet Dawn	76	Blocky	16 - 20	Crimson Sweet	Dark Red	Early variety that produces consistently high yields, offering growers significant first to market advantages. Firm and sweet flesh are ideal for retail markets.
★ 46008 Sweet Gem	83	Oval	12	Dark Green	Bright Red	High-yielding seedless variety that produces uniform, large, oval fruit with a rich, classy rind. Its distinctive look and superior flavor make it ideal for the fresh market and a standout in the produce aisle.
46018 Unbridled	85	Oval	18 - 22	Medium Green Background / Dark Green Stripes	Deep Red	Next generation breeding from Sakata includes this high yield potential, strong vined variety. Beautiful rind pattern and crisp, dark red flesh round out a solid product.
46021 Yellow Buttercup	90	Round/Oval	14 - 16	Dark Green Background / Green Stripes	Bright Yellow	One of the top yellow-fleshed varieties in today's marketplace. Crisp texture and great eating quality.
Personal Size						
46045 Sirius	74	Globe	5.5-6.5	Crimson Sweet	Red	High-quality, Crimson Sweet striped personal size seedless. Medium thick rind and intermediate resistance to Fusarium wilt race 1. Globe shaped fruit with red flesh and small-medium pip size. Early maturity.
Pollenizers						
46103 Ace Plus		Round / Oval		Light Green Background / Medium Green Stripes		Offers a very early flowering date that makes pollen available for the first female flowers produced by the triploid hybrid. Continues an elongated pollination cycle.
46109 Wild Card Plus		Round / Oval		Light Green Background / Medium Green Stripes		Early and extended flowering period that ensures early pollination availability when triploid hybrid begins flowering. Long, thin internodes radially extend pollen to wherever a female flower is located.

	WATERMELON TRIPLOID Hybrid			M=1,000 seeds		
	Priced per package	100 Seeds	500 Seeds	1M	5M	10M*
46093 Amarillo ^{Yellow}	54.55	218.05	372.70	365.20	360.20	
46001 Bold Ruler	32.15	128.45	219.50	212.00	207.00	
46020 Captivation	42.20	168.75	288.45	280.95	275.95	
46049 Dark Knight	59.55	238.20	407.15	399.65	394.65	
46052 El Capitan	42.50	169.95	290.50	283.00	278.00	
46013 Exclamation	41.00	164.00	280.30	272.80	267.80	
46140 Fascination	46.65	186.50	318.80	311.30	306.30	
46026 Joy Ride	40.70	162.70	278.10	270.60	265.60	
46134 Melody	45.10	180.25	308.10	300.60	295.60	
46007 Orange Crisp	42.55	170.10	290.75	283.25	278.25	
46029 Road Trip	40.15	160.45	274.20	266.70	261.70	

	WATERMELON TRIPLOID Hybrid			M=1,000 seeds		
	Priced per package	100 Seeds	500 Seeds	1M	5M	10M*
46102 Sweet Dawn	47.50	189.95	324.65	317.15	312.15	
46008 Sweet Gem	57.50	229.95	393.00	385.50	380.50	
46039 Tailgate	41.00	164.00	280.30	272.80	267.80	
46018 Unbridled	20.85	83.40	142.50	135.00	130.00	
46021 Yellow Buttercup	54.95	219.70	375.50	368.00	363.00	
Personal Size						
46045 Sirius	36.10	144.30	246.60	239.10	234.10	
Pollenizers						
46103 Ace Plus ^{F300}	29.50	117.90	201.50	194.00	189.00	
46109 Wild Card Plus ^{F300}	32.15	128.45	219.50	212.00	207.00	

* Multiple packages may be used to fill orders for these quantities.

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FINANCING AVAILABLE

We offer a variety of financing options including 0% interest with no payments due until December 2022.

The best rates are available before 12/31/2021.

See page 159 for all of the details on how to take advantage of this payment option.



**JOHN DEERE
FINANCIAL**

0%

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FACEBOOK

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ruppseedinc/



WATERMELON		OP							
		Days	Shape	Weight pounds	Rind Type	Flesh Color	Seed Size	Features	
46501	Allsweet	90	Elongated / Oval	25 - 30	Medium Green / Thin Stripes	Bright Red	Small	<i>Excellent fresh market variety. Firm flesh.</i>	
46502	Charleston Grey	90	Elongated / Oval	25 - 35	Light Green / Dark Veins	Medium Red	Large	<i>A popular heirloom variety for the home garden that is especially popular in the South.</i>	
46504	Crimson Sweet	85	Blocky	15 - 30	Light and Dark Stripes	Brilliant Red	Medium	<i>Popular variety for garden, market or shipping.</i>	
46507	Jubilee Improved	95	Elongated / Oval	25 - 35	Light Green / Dark Stripes	Medium Red	Large	<i>Excellent late shipper.</i>	
46533	Moon & Stars	90	Elongated / Oval	20	Dark Green / Various Marks	Red Pink	Large	<i>An Amish heirloom variety with its noted dark green ring with yellow moons and stars. Flesh is pink and sweet.</i>	
46509	Sugar Baby	80	Round	8 - 10	Dark Green	Deep Red	Small	<i>Popular home garden. Also works well as pollinizer for triploid hybrids.</i>	

WATERMELON OP		Priced per package		
		1 oz.	4 oz.	1#
46501	Allsweet	5.35	18.60	49.50
46502	Charleston Grey	4.10	14.20	37.75
46504	Crimson Sweet	4.85	16.70	44.45
46507	Jubilee Improved	3.70	12.70	33.75
46533	Moon & Stars	5.70	19.70	52.50
46509	Sugar Baby	4.35	15.00	40.00

*NOTICE WATERMELON GROWERS: Customers are required to sign a "Waiver of Liability" form, prior to the shipping of any watermelon seed.



DOCUMENTS REQUIRED

Various products in our catalog require signed documents before seed can be shipped.

Look for this document icon with a page number. This will guide you to the page with the appropriate document for the product you are purchasing.

GROWER PREFERRED ALL-STARS ★ WATERMELON



LARGE SEEDED

Estrella is early (80 days) with excellent flavor and texture, nice consistently blocky fruit that has a great look at the market.

TRIPLOID

Fascination is the #1 planted variety in the Eastern US for good reasons: high quality interior and a rich non-fading rind color combined with yield and tolerance to Fusarium and Anthracnose. It provides the flavor that your customers demand. Fascination should be part of any size operation.

Sweet Dawn provides great eating quality in an early season seedless. More consistent size and shape as compared to Melody. Will get you to the marketplace a week earlier than Fascination. This is the melon that I go out and pick when we need one for our own table.

Sweet Gem is a great eating seedless with a "Black Diamond" look and superior flavor that will set your crop apart in the marketplace.

*Brad Paulson
Vegetable Consultant*



RUPP JACKET



RUPP SOFT SHELL



RUPP HOODIE



RUPP CAMO CAP



RUPP KHAKI & BLACK CAP



RUPP RED & GRAY CAP

RUPP CLOTHING

		Regular Sizes	Tall Sizes	Features
PJKT.CAS.W1	Rupp Jacket 11.5 oz	XS - 6XL	LT - 6XLT	This jacket features a shell constructed of wind-proof/water resistant Polyurethane coated heavyweight Toughlan™ nylon, and is fully lined with super heavyweight 11.5 oz. anti-pilling panda fleece. Also features a generous full cut, two front pockets and one inner right chest pocket, all with zippers. Double-stitched seams for added strength. Raglan sleeves with stretch cuff and waistband. The jacket shell is khaki with a black lining. The Rupp logo is embroidered in maroon on the left chest. Men's sizes only.
PJKT.CAS.SF3	Rupp Soft Shell Jacket	S - 4XL		This soft shell jacket is ready to take on rain or wind with a sleek colorblock shell and a warm microfleece interior. Rupp logo on the left chest. Available in men's sizes only.
PJKT.SWT.HD	Rupp Hoodie Sweatshirt	S - 3XL		Charcoal gray pull-over hoodie sweatshirt with the a large Rupp logo on the front.
PHAT.SOLID.G3	Rupp Camouflage Solid Cap	One size fits all		This ballcap features a sloped front and a pre-formed visor. The cap is black with Realtree Hardwoods® camouflage and barbed wire accent. Rupp Seeds logo embroidered in gray.
PHAT.MESH.G5	Rupp Khaki & Black Mesh Cap	One size fits all		This mesh back cap features a Rupp logo patch on the front and has our "See What Good Yields™" tagline on the back.
PHAT.SOLID.G7	Rupp Red & Gray Solid Cap	One size fits all		This ballcap features a sloped front and a pre-formed visor. The cap is red and gray with Rupp Seeds logo embroidered in white on the front and our "See What Good Yields™" tagline on the back.

Please allow 3-4 weeks for delivery on clothing.

RUPP CLOTHING

RECOMMENDED SIZE CHART

	XS	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
Men's Jacket Size	30-32	34-36	38-40	42-44	46-48	50-52	54-56	58-60	62-64	66-68
Ladies Jacket Size	2-4	6-8	10-12	14-16	18-20	22-24	26-28	30-32		
Size Code**	X	S	M	L	1	2	3	4	5	6

** Use item number plus size code. Add a 'T' to the end for tall sizes.

CLOTHING

	Size	XS	S	M	L	XL	2XL	3XL	4XL	5XL	6XL
	Size codes	X	S	M	L	1	2	3	4	5	6
PJKT.CAS.W1	Rupp Jacket ^{11.5 oz}	69.75	69.75	69.75	69.75	69.75	74.00	77.00	80.00	83.00	86.00
PJKT.CAS.SF3	Rupp Soft Shell Jacket		67.75	67.75	67.75	67.75	70.50	73.50			
PJKT.SWT.HD	Rupp Hoodie Sweatshirt		30.00	30.00	30.00	30.00	32.00	32.00			
PHAT.SOLID.G3	Rupp Camouflage Cap	12.50									
PHAT.SOLID.G7	Rupp Red & Gray Cap	12.50									
PHAT.MESH.G5	Rupp Khaki & Black Mesh cap	12.50									
	Tall size codes				LT	1T	2T	3T	4T	5T	6T
CAS.W1	Rupp Jacket ^{11.5 oz}				74.00	77.00	80.00	83.00	86.00	89.00	92.00

Prices include shipping. Allow 3-4 weeks for delivery.

Cash discounts are not available on clothing.

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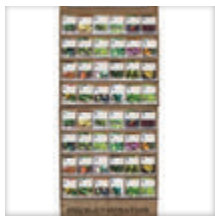
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BENTLEY 500 PACK



BENTLEY 250 PACK



1 OZ. PACKET



4 OZ. PACKET



BIN MARKERS

BENTLEY PACKET STANDS

	Description
VP500A 500 pack Assorted - V,F,H	500 pre-priced (\$1.99) packets of assorted vegetable, flower and herb seeds. 48 different varieties. 60% vegetables, 30% flowers and 10% herbs. Corrugated floor display.
VP500V 500 pack Vegetables	500 pre-priced (\$1.99) packets of assorted vegetable seeds. 48 different varieties. Corrugated floor display.
VP500F 500 pack Flowers	500 pre-priced (\$1.99) packets of assorted flower seeds. 48 different varieties. Corrugated floor display.
VP250H 250 pack Herbs	250 pre-priced (\$1.99) packets of assorted herb seeds. Corrugated counter top display.

These stands contain Bentley home garden quality seed. Orders must be placed by February 28th, 2022. Thirty day lead time is needed. Non-returnable! Pricing includes shipping charges.

BENTLEY PACKET STANDS

	Priced per stand	1 Stand
VP500A 500 pack Assorted - V,F,H		320.00
VP500V 500 pack Vegetables & Herb		320.00
VP500F 500 pack Flowers		320.00
VP250H 250 pack Herbs		180.00

Pricing includes shipping charges.

SEED RETAILERS

Are you interested in pre-packaged beans, peas & sweet corn seed for retail sales?

Select varieties are available pre-packaged in small poly-bags that are ready for retail sales. Give us a call for a list of varieties available and pricing. Orders for pre-packaged seed must be placed by January 29, 2022.

POINT OF SALE

Seed Packets	Priced per box of 500 packets	Box
VPOS.PACKET.1Z 1 oz seed packets - 3 1/4" x 4 3/4"		32.00
VPOS.PACKET.4Z 4 oz seed packets - 4 5/8" x 6 7/8"		48.50
Bin Markers		
VPOS.BINMARK 4 3/4" x 6 3/4" Bin Marker - Pack of 25		2.50

PLANTER PLATES

	Priced per plate	1 plate
B John Deere Plates		50.00
C IH Plates		50.00
F Filler Ring		50.00

Give us a call about your planter plate needs. We have a good stock including blank plates available for you to make your own cells for those hard to fit seeds.

POPPING CORN

Resell in your market!

	Features
VPOP.SUNBURST Rupp Golden Sunburst Ready to pop!	A superior yellow popcorn chosen for its outstanding popping expansion, tenderness and flavor. An exceptional product for home use. Available in cases of 15 - 2 lb. bags in our attractive package ready for retail shelves, or in 50 lb. bags for larger users.
VPOP.WHDELIGHT Rupp White Delight Ready to pop!	A white version of Golden Sunburst. Same great popping and eating quality. Only available in 50 lb. bags.

POPPING CORN

	Priced per case	Case
VPOP.SUNBURST Golden Sunburst Popping Corn	78.50	105.00
VPOP.WHDELIGHT White Delight Popping Corn		107.50

A case consists of 15, 2# packages

Please Note: Prices include shipping.

Naturall™

for Vegetables

ROOT INOCULANT

Naturall™ for Vegetables contains proprietary and patent pending biologicals that colonize the root system of plants. Crop stress such as disease and dry weather can be alleviated, and often systemically, so that root colonization by this treatment can affect the physiology of the whole plant resulting in higher yields.



Enhanced root growth
Healthier plants
Increased seedling vigor
Easy to apply
Higher yields
Improved nutrient and water efficiency

 | abm1st.com

NATURAL™ PB APPLICATION RATES

CROPS	RATE
Cucurbit Vegetables: Pumpkins and Squash	1.0 oz. per 80,000 seeds
Cucurbit Vegetables: Cucumbers and Melons	0.5 oz. per 80,000 seeds
Broccoli, Cabbage and Cauliflower	0.5 oz. per 50,000 seeds
Peppers and Tomatoes: Garlic, Leeks, Onions, Shallots	0.5 oz. per 100,000 seeds
Root Crops: Beets, Sugar Beets, Red Beets, Carrots, Celeriac, Chicory, Horseradish, Parsnip, Radish, Rutabaga, Salsify, Turnips	0.5 oz. per 100,000 seeds

CONTENTS SETTLE SHAKE CONTAINER WELL BEFORE MEASURING



Application rate: SabrEx for corn can be used for field corn, popcorn, sweet corn and sunflowers at a rate of 0.5 oz. per 50 lb. of seed.

Directions for use: Apply as a dry seed treatment prior to planting. Mix until uniform coverage is obtained.

Compatibility: SabrEx is compatible with many common fungicides and insecticides. For current compatibilities, contact your ABM representative or call 877-617-2461.


Product specifications: Contains proprietary and crop-specific combination of patent-pending strains of Trichoderma microorganism spores formulated with an 80/20 talc/graphite carrier.

Minimum specifications: 7x10⁷ cfu/gm.

CONTAINS LIVING ORGANISMS. STORE IN A COOL DRY PLACE OUT OF SUNLIGHT.

Made in the USA

Net Contents: 1 oz.

 ADVANCED BIOLOGICAL MARKETING | P.O. Box 222 | Van Wert, OH 45891 | USA | 877.617.2461 | ABM1st.com

CORN

INOCULANT

	<i>Priced per pouch</i>	Each
TRT.NATRALPB.1Z Naturall PB for Vegetables 1 oz pouch		28.50
TRT.GRAPHEx Graph-Ex SA Pea and Bean Inoculant 4 oz pouch		12.50
TRT.SABREX SabrEx PB for Sweet Corn 1 oz pouch		31.50

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GERMINATION CHART PERCENTAGE OF NORMAL VEGETABLE SEEDLINGS

PRODUCED AT DIFFERENT TEMPERATURES* **

Seeds will germinate at a wide range of temperatures. However, there is an optimal temperature that will maximize production time. This chart shows the percentage of seedlings produced at various temperatures and the number of days until seedling emergence at each temperature: shown in ().

The numbers in red = the optimal daytime soil temperature for maximum production in the shortest time.

Crops	32°F	41°F	50°F	59°F	68°F	77°F	86°F	95°F	104°F
Asparagus	0	0	61% (53 d)	80% (24 d)	88% (15 d)	95% (10 d)	79% (12 d)	37% (19 d)	0
Beans, lima	0	0	1	52% (31 d)	82% (18 d)	90% (7 d)	88% (7 d)	2	0
Beans, snap	0	0	1	97% (16 d)	90% (11 d)	97% (8 d)	47% (6 d)	39% (6 d)	0
Beets	0	53% (42 d)	72% (17 d)	88% (10 d)	90% (6 d)	97% (5 d)	89% (5 d)	35% (5 d)	0
Cabbage	0	27	78% (15 d)	93% (9 d)	97% (6 d)	99% (5 d)	70% (4 d)	0	0
Carrots	0	48% (51 d)	93% (17 d)	95% (10 d)	96% (7 d)	96% (6 d)	95% (6 d)	74% (9 d)	0
Cauliflower	0	0	58% (20 d)	60% (10 d)	62% (6 d)	63% (5 d)	45% (5 d)	0	0
Celery	0	72% (41 d)	70% (16 d)	40% (12 d)	97% (7 d)	65%	0	0	0
Cucumber	0	0	0	95% (13 d)	99% (6 d)	99% (4 d)	99% (3 d)	99% (3 d)	49
Eggplant	0	0	0	0	21% (13 d)	53% (8 d)	60% (5 d)	0	0
Lettuce	98% (49 d)	98% (15 d)	98% (7 d)	99% (4 d)	99% (3 d)	99% (2 d)	12% (3 d)	0	0
Muskmelon	0	0	0	0	38% (8 d)	94% (4 d)	90% (3 d)	0	0
Okra	0	0	0	74% (27 d)	89% (17 d)	92% (13 d)	88% (7 d)	85% (6 d)	35% (7 d)
Onions	90% (136 d)	98% (31 d)	98% (13 d)	98% (7 d)	99% (5 d)	97% (4 d)	91% (4 d)	73% (13 d)	2
Parsley	0	0	63% (29 d)	0% (17 d)	69% (14 d)	64% (13 d)	50% (12 d)	0	0
Parsnips	82% (172 d)	87% (57 d)	79% (27 d)	85% (19 d)	89% (14 d)	77% (15 d)	51% (32 d)	1	0
Peas	0	89% (36 d)	94% (14 d)	93% (9 d)	93% (8 d)	94% (6 d)	86% (6 d)	0	0
Peppers	0	0	1	70% (25 d)	96% (13 d)	98% (8 d)	95% (8 d)	70% (9 d)	0
Radish	0	42% (29 d)	76% (11 d)	97% (6 d)	95% (4 d)	97% (4 d)	95% (3 d)	0	0
Spinach	83% (63 d)	96% (23 d)	91% (12 d)	82% (7 d)	52% (6 d)	28% (5 d)	32% (6 d)	0	0
Sweet Corn	0	0	47% (22 d)	97% (12 d)	97% (7 d)	98% (4 d)	91% (4 d)	88% (3 d)	10
Tomatoes	0	0	82% (43 d)	98% (14 d)	98% (8 d)	97% (6 d)	83% (6 d)	46% (9 d)	0
Turnips	1	14	79% (5 d)	98% (3 d)	99% (2 d)	100% (1 d)	99% (1 d)	99% (1 d)	88% (3 d)
Watermelon	0	0	0	17	94% (12 d)	90% (5 d)	92% (4 d)	96% (3 d)	0

*The above data was taken from a report published in the mid-1980's. Author, affiliation, and publisher are not known.

**The above table was derived from experimental data. Certain logical inconsistencies exist due to crop failure or to bad batches of seed. They do not interfere with the overall interpretation.



PLANTING GUIDE

	Seeding Rate			Seed or Plant Spacing			Recommended Soil Temperature	Days to Germination	
	Seeds per Pound	per Acre by Weight	per Acre in 1000s	Seeds per 1000 foot of Row	In Row	Between Rows			Depth
Asparagus	12,800 - 16,500	7.5 - 11 oz	6.1 - 11.4 M	667 - 1,000	12 - 18"	48 - 60"	.8"	60 - 85°F	10 - 20
Beans Bush Green	1,500 - 1,600	60.5 - 68 lbs	90.8 - 108.9 M	6,000	2"	30 - 36"	.5 - 1"	65 - 85°F	8 - 12
Beet	25,600 - 30,000	5.3 - 6.1 lbs	136.1 - 181.5 M	6,000	2"	18 - 24"	.5 - 1"	60 - 85°F	6 - 10
Broccoli	80,000 - 128,000	2.9 - 3 oz	15.2 - 22.7 M	1,000	12"	24 - 36"	.3 - .5"	60 - 75°F	6 - 10
Brussels Sprouts	80,000 - 128,000	1 - 1.4 oz	7.6 M	500	24"	36"	.5 - 1"	60 - 75°F	6 - 10
Cabbage	107,000 - 128,000	1.9 - 2.2 oz	15.2 M	1,000	12"	36"	.3 - .5"	50 - 60°F	6 - 10
Cantaloupe	15,000 - 20,000	4 - 4.8 oz	3.8 - 6.1 M	500 - 667	18 - 24"	60 - 72"	.5 - 1"	75 - 85°F	7 - 12
Carrots	320,000 - 410,000	2 - 2.1 lbs	653.2 - 871 M	24,000	.5"	15 - 20"	.5"	50 - 85°F	8 - 12
Cauliflower	116,000 - 128,000	1.1 - 1.3 oz	7.6 - 10.1 M	500 - 667	18 - 24"	36"	.3"	50 - 77°F	6 - 10
Celery	960,000 - 1,417,500	0.5 - 0.8 oz	45.4 M	2,000	6"	24"	.1"	65 - 70°F	21 - 25
Collards	90,700 - 144,000	1.3 - 1.8 oz	10.1 - 12.1 M	667 - 800	15 - 18"	36"	.3 - .5"	60 - 75°F	6 - 10
Cucumber	16,000 - 18,000	0.6 - 1 lbs	10.1 - 18.2 M	667 - 1,000	12 - 18"	30 - 36"	.5 - 1"	60 - 95°F	7 - 10
Eggplant	96,000 - 110,000	1 - 1 oz	5.5 - 6.9 M	600 - 750	16 - 20"	60"	.2 - .5"	85 - 90°F	10 - 14
Endive	240,000 - 260,000	1.4 - 2.2 oz	22.7 - 36.3 M	1,000 - 1,200	10 - 12"	18 - 24"	.5"	50 - 75°F	10 - 14
Kale	124,000 - 136,000	1.9 - 2.9 oz	15.2 - 24.2 M	667 - 800	15 - 18"	18 - 24"	.25 - .5"	60 - 75°F	6 - 10
Kohlrabi	123,000 - 144,000	1.9 - 2.7 oz	15.2 - 24.2 M	667 - 800	15 - 18"	18 - 24"	.25 - .5"	60 - 75°F	6 - 10
Leeks	144,000 - 151,000	1.1 - 1.4 lbs	163.3 - 204.2 M	6,000	2"	16 - 20"	.5"	65 - 95°F	10 - 14
Lettuce	364,000 - 432,000	3 - 3.4 oz	68.1 - 90.8 M	3,000	4"	18 - 24"	.3 - .5"	50 - 75°F	2 - 7
Mustard	204,000 - 272,000	4 - 5.3 oz	68.1 M	1,500	8"	12"	.3"	60 - 75°F	5 - 8
Okra	7,800 - 8,000	1.1 - 1.3 lbs	8.7 - 10.1 M	667	18"	36 - 42"	1"	65 - 95°F	7 - 18
Onion	106,000 - 144,000	1.4 - 1.5 lbs	163.3 - 204.2 M	6,000	2"	16 - 20"	.5"	32 - 85°F	10 - 14
Parsley	266,000 - 288,000	8.2 - 13.4 oz	136.1 - 242 M	3,000 - 4,000	3 - 4"	9 - 12"	.3"	50 - 86°F	21 - 25
Parsnips	87,000 - 120,000	1.4 - 1.5 lbs	121 - 181.5 M	4,000	3"	12 - 18"	.3 - .5"	32 - 75°F	18 - 25
Peas	2,200 - 2,400	41.2 - 90.7 lbs	90.8 - 217.8 M	6,000 - 12,000	1 - 2"	30 - 36"	1.5 - 2"	40 - 86°F	6 - 10
Pepper <small>Twin row on plastic</small>	64,000 - 76,000	2.2 - 2.6 oz	9.1 - 12.1 M	500 - 667	18 - 24"	12"	.3 - .5"	65 - 86°F	10 - 14
Pumpkin	3,000 - 3,200	0.6 - 1.2 lbs	1.9 - 3.8 M	333 - 500	24 - 36"	72 - 96"	.5 - 1"	70 - 80°F	7 - 10
Radish	45,000 - 48,000	12.1 - 15.1 lbs	544.4 - 725.8 M	12,000	1"	9 - 12"	.5 - .8"	60 - 85°F	5 - 8
Spinach	39,000 - 48,000	3.7 - 11.3 lbs	145.2 - 544.4 M	4,000 - 12,000	1 - 3"	12 - 15"	.5"	32 - 60°F	7 - 10
Squash Summer	2,500 - 6,000	1.7 - 1.8 lbs	4.6 - 10.1 M	500 - 667	18 - 24"	36 - 60"	.5 - .75"	70 - 80°F	7 - 10
Squash Winter	3,000 - 4,000	1 - 1.3 lbs	2.9 - 5.1 M	500 - 667	18 - 24"	72 - 96"	.5 - .75"	70 - 80°F	7 - 10
Sweet Corn	2,700 - 6,000	4.5 - 6.7 lbs	18.2 - 27.3 M	1,000 - 1,500	8 - 12"	30"	.75 - 1.5"	60 - 75°F	7 - 10
Tomato	140,000 - 165,000	0.8 - 0.8 oz	7.6 M	667	18"	48"	.25 - .5"	60 - 75°F	7 - 10
Turnip	173,000 - 192,000	1.4 - 1.6 lbs	272.2 M	6,000	2"	12"	.3"	60 - 75°F	6 - 10
Watermelon Large	4,000 - 8,000	5.1 - 5.1 oz	1.3 - 2.6 M	333	36"	72 - 144"	.5 - 1"	80 - 95°F	8 - 12
Watermelon Small	8,000 - 10,000	2.6 - 4 oz	1.3 - 2.6 M	333	36"	72 - 144"	.5 - 1"	80 - 95°F	8 - 12

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United States Department of Agriculture

This is to verify that

Rupp Seed, Inc.

Pettisville, Ohio

has successfully met USDA's acceptance criteria of the voluntary

USDA Good Agricultural Practices & Good Handling Practices Audit

Wholesale Distribution Center/Terminal Warehouses

Various Seeds

A handwritten signature in black ink, appearing to read "Dennis D. B...".

Acting Chief, Audit Services Branch

Audit ID: 35048

11/6/2020

Audits are valid for one year from date on certificate. To verify continued adherence to the program, please visit www.ams.usda.gov/gapghp



Rupp Seeds Inc.
17919 County Road B
Wauseon, Ohio 43567

419-337-1841
fax 419-337-5491
www.ruppseeds.com

Letter of Guarantee

To whom it may concern,

Rupp Seeds Incorporated was founded in 1946 and is a family owned business now in its third generation of family management.

Rupp Seeds is an active member of the American Seed Trade Association (ASTA) (www.betterseed.org), Independent Professional Seed Association (IPSA) (ipseed.org) and Ohio Seed Improvement Association (OSIA) (www.ohseed.org).

Involvement in these organizations insures that we stay abreast of best practices in managing seed and variety quality throughout production and processing in a manner that meets and exceeds industry standards.

Rupp Seeds is an authorized seed dealer for many of the leading vegetable seed breeders and producers. Rupp Seeds and its seed suppliers employ Good Agricultural Practices in the production of commercial seed lots and every effort is made to minimize microbial contamination during production and processing. Seeds sold to Buyer are of adequate quality for use in raising a crop.

Rupp Seeds has contracted with a third party to manage pest control in its seed storage and processing facilities.

This is a continuing guarantee, subject to revocation only on written notice to Buyer.



Philip Rupp
President

October 1, 2021

NOTICE TO BUYERS

VARIETY DESCRIPTIONS

Variety descriptions and images presented in this catalog serve as a guideline only. They are provided for comparison purposes to help you plan your crop program and can be expected to vary to some degree depending upon location, soil type, environmental conditions, crop management practices, pest or pathogen presence, and other uncontrollable factors that may affect the expected performance. Descriptions in the catalog are the result of favorable growing conditions and identical results are not guaranteed.

Statements regarding a variety's response to a specific pest, pathogen, or stress are based on evaluation under select conditions. These reactions can be affected by the factors mentioned above, as well as new pathogen races, pest types or vectors for disease. Therefore, we give no warranty, express or implied, for crop performance relative to the information given; nor do we accept any liability for any loss, direct or consequential, that may arise from any cause. Read all seed package labeling carefully as it contains terms and conditions of sale.

LIMITATION OF WARRANTY AND LIABILITY

Rupp Seeds, Inc. ("Rupp Seeds") warrants that a representative sample of seed in this container (collectively "Seed") was tested and labeled at the time of initial packaging (or thereafter as indicated) and, at the time of such testing, conformed to the label description within recognized tolerances.

Disclaimer of Warranties: Rupp Seeds makes NO other warranty of any kind. THIS EXPRESS WARRANTY EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREON. Rupp Seeds makes NO warranty that the Seed is free of seed-borne diseases, including but not limited to bacterial fruit blotch, or free of genetically modified organisms. All risks of nonperformance, reduced performance, or crop damage are assumed by User. As permitted by law, the Seed is sold "As Is."

Acceptance of Terms: Any person who buys, receives, opens the package or uses the Seed (collectively the "User") accepts and agrees to this Limitation of Warranty and Liability between User and Rupp Seeds. If User did not purchase the Seed directly from Rupp Seeds, User agrees that Rupp Seeds is a third-party beneficiary and is entitled to enforce this Agreement as if it had been entered into between User and Rupp Seeds. User agrees to accept full responsibility for the performance of the Seed and crop. IF USER DOES NOT ACCEPT THESE TERMS, USER MUST RETURN THE SEED IN THE UNOPENED CONTAINERS TO THE PLACE OF PURCHASE FOR A FULL REFUND WITHIN 30 DAYS OF RECEIPT.

Notice, Waiver and Indemnification Regarding Untreated Seed: Rupp Seeds may apply fungicide and/or insecticide treatments and/or biological seed enhancements to the Seed in an attempt to reduce the loss of plant stand or failure to establish a plant stand due to micro-organisms and insect attack during germination and plant establishment. Rupp Seeds does not warrant that any treatment will be effective. While Rupp Seeds will provide customers with untreated seed at their request, Rupp Seeds does not accept any liability for failure of such untreated seed to establish a stand. User acknowledges the risks associated with untreated seed, including when such seed is planted directly into field soil. User knowingly and voluntarily releases and waives any and all claims related to untreated seed against Rupp Seeds.

User will communicate the risks of use of untreated seed prior to User's sale or transfer of the Seed and will execute the same or similar agreement with any third party. USER WILL INDEMNIFY, DEFEND AND HOLD RUPP SEEDS HARMLESS FROM ANY AND ALL CLAIMS BY THIRD PARTIES ARISING FROM THE PERFORMANCE OF UNTREATED SEED.

Exclusive Remedy: User's Exclusive Remedy and Rupp Seeds' sole liability for any claim or loss, including, without limitation, claims resulting from breach of warranty, breach of contract, tort, fiduciary obligation, strict liability, or negligence resulting from the use of the Seed is limited to a refund of the price paid for the Seed and will not include incidental, consequential, or exemplary damages, such as loss of yield or lost profits. User agrees that Rupp Seeds' refund of the price paid for the Seed will not cause this Agreement to fail of its essential purpose. Allocation of risk between Rupp Seeds and User is reflected in the purchase price.

Immediate Notice: User must give Rupp Seeds immediate notice (no later than 15 days upon discovery) when User believes a Breach of Warranty exists, and User will fully cooperate with Rupp Seeds in any investigation.

Notice of Required Arbitration/Conciliation/Mediation Required by Various States: Under the seed laws of many states, arbitration, conciliation or mediation is required as a prerequisite to maintaining a legal action based upon the failure of seed to which this notice is attached to produce as represented. The User must file a complaint (sworn in some states) along with the required filing fee (where applicable) with the Commissioner or Secretary of Agriculture of the State within such time as to permit inspection of the crops, plants, or trees by the designated agency and the seedsmen from whom the seed was purchased. A copy of the complaint must be sent to Rupp Seeds by certified or registered mail, or as otherwise provided by statute in such State.

Technical Advice: Any technical advice regarding the use of the Seed by Rupp Seeds or any representative shall be with no warranty of results and Rupp Seeds expressly disclaims any warranty and liability for any technical advice or recommendation.

Product Data Limitations: Product data and ratings are based on averages of results from various test locations. They are a summary of past results and not a prediction of future performance. Performance will vary depending on the actual environment, pathogen strain and management conditions in your field. Product data and ratings are the result of favorable growing conditions and identical results are not guaranteed, and Rupp Seeds make no warranty regarding the performance of the Seed in the User's field.

Use Restriction: The Seed is owned by, or licensed to, Rupp Seeds and Rupp Seeds strictly limits the sale and possession of the Seed to a grant to User of a non-exclusive right to use the Seed for the sole purpose of growing a single crop of plant parts for sale or use as a vegetable product. User shall not export, reproduce, multiply or breed the Seed, and shall not genetically analyze or manipulate in any way the Seed for any plants or plant parts produced from the Seed. User shall include this Agreement with any transfer of the Seed.

Jurisdiction and Venue: This Agreement is governed by and shall be construed in accordance with the laws of the State of Ohio. User agrees that all disputes arising out of or in connection with this Agreement must be resolved by a Court of competent jurisdiction in the County of Fulton, State of Ohio. User irrevocably submits to the exclusive jurisdiction of such Court for the purpose of litigating any and all such claims or disputes.

Severability: If any term of this Agreement is held to be unenforceable, all remaining terms will remain in effect and will be fully enforceable.

Entire Agreement: This Agreement is the entire Agreement between Rupp Seeds and User regarding warranties, liabilities and limitations on warranties and liabilities.

TERMS AND PAYMENT INFORMATION

PAYING FOR YOUR ORDER

We accept payment via credit or debit card, check, and wire transfer. Open account terms and financing is available for qualifying customers. Payment discounts are available for select payment methods and products.

Credit Card

We accept the following credit cards as payment: Discover, MasterCard, VISA or John Deere Financial. Please indicate which card you wish to use and furnish a complete card number, expiration date, 3-digit verification code, name on card, and billing address of the account holder. Your credit card will not be charged until your order is shipped. Credit card payments are not eligible for cash discounts.

Check

We accept business or personal checks, money orders, and cashier's checks which are eligible for payment discounts. Please refer to the Cash Discount Program for details.

If paying by check, please allow 10 days for your check to clear the bank before your seed will be shipped.

A fee of \$25.00 will be charged for any check returned by the bank.

Wire Transfer

We do accept payment via wire transfers to our bank. Please contact our office for processing details.

There is a \$25.00 processing fee for wire transfers.

Open Accounts

Open account terms are available to qualifying customers. To establish credit terms, a customer must have a minimum of \$1000 in seed purchases, and a Rupp/JD credit application must be completed and submitted for review. Please allow several weeks to process.

Payments on open account invoices are eligible for payment discounts. Please refer to the Cash Discount Program for details.

Invoice Terms

Payment in full is expected on or before the due date indicated on the invoice, not from the statement date.

Past due invoices will be charged a finance charge of 1.5% per month on the past due amount.

Any fees or legal expenses incurred in collecting unpaid accounts will be charged to the account to the extent permitted by law.

Seed Financing

We offer a variety of financing programs for growers that provide post-harvest payment flexibility. Our premier program features 0% interest and payment isn't due until December 2022. Check the Financing Programs section for more details.

CASH DISCOUNT PROGRAM

Rupp Seeds offers a cash discount program as an incentive for early payment of your seed order or invoice. **Cash discounts are available for orders over \$250.00.**

Use the following table to determine your discount rate for the month in which you are sending payment.

August	10.0%	January	5.0%
September	9.0%	February	4.0%
October	8.0%	March	3.0%
November	7.0%	April	2.0%
December	6.0%		

Our cash discount program can be used in the following ways:

- A) Prepay on account – Make a payment on your account as prepayment for your expected purchases in the coming season.
- B) Pay with order – After you assemble and total your order, simply calculate and subtract the cash discount amount based on the month of payment and send a payment for the balance.
- C) Pay upon receipt of order acknowledgment – You can also receive a cash discount for payment after receipt of your order acknowledgment. Payment can occur at any time before your seed is shipped.

Please note the following details about cash discounts:

Cash discounts are only available on vegetable and grain seeds. Cash discounts are not available for non-seed items including: seed treatments, clothing, accessories, planter plates, popping corn, supplies, freight charges, etc.

Cash discounts are not available on orders less than \$250 or for credit card, debit card, COD and John Deere Financial orders.

FINANCING PROGRAMS

Our premier John Deere financing program features 0% interest until December 2022 on orders placed before December 31st, 2021.

For orders placed later in the season, we are offering additional financing programs which provide the benefit of low interest rates, with no payment required until the final settlement date of December 2022. Here's a list of all the programs planned for the 2022 sales season:

Availability	Program
Through December 2021	0% Fixed
For January & February '22	1.9% Fixed
For March & April '22	Prime* + 1%
For May through August '22	Prime* + 7.25%

*These are variable rate programs based on the prime rate, which was 3.25% as of 10/12/2021.

Please note the following details about JD financing programs:

- Initial order for the season must total \$1,000 or more. Orders must be placed before December 31st, 2021 to be eligible for 0% financing program.
- John Deere Financial orders are not eligible to receive cash discounts.
- You must have a John Deere Financial Preferred Account with Special Terms Financing to be eligible. Call our office at 800-700-1199 to find out if your account is ready to take advantage of this new financing option.
- If not, all you need to do is fill out a credit application (on page 173) and John Deere Financial will fast track the approval, or you can apply online at www.ruppseeds.com/JDFApp, or call 800-356-9033. Be sure to indicate to John Deere Financial that you need a **Special Terms credit limit** and let them know an expected crop input budget. If you fill out the form online you will need to visit a John Deere equipment dealer with two forms of identification before your account is accessible.
- Currently John Deere Financial options are only available for U.S. based customers.



5 WAYS TO ORDER*

Phone: 1-800-700-1199
(Monday - Friday, 8 am - 5pm EST)

Fax: 419-337-5491

Mail: Rupp Seeds
17919 County Road B
Wauseon, OH 43567
(envelope provided in the back
of the catalog)

Email: orders@ruppseeds.com

Online: Online ordering is arriving soon! Scan the QR code or visit this link to receive a notice when online ordering is available. www.ruppseeds.com/GoLive



* Please pick only 1 method of ordering to avoid duplication of your order. (i.e. if faxing in your order, do not mail in a copy as well).

HOW TO ORDER

- Print clearly. Please correct any errors in your name and/or address and phone number. Be sure to provide both your billing address and your physical (911) address (where seed should be shipped) and phone number. If you have moved since your last order, please check mark the box for change of address and include your old address as well.
- For each item ordered, print the item number, quantity, package size (ex. 1/4lb. etc.), name of item and price for quantity ordered.
- Shipping and handling charge applies to each shipping address for orders under \$250.00.
- If the order is to be shipped to a different address, please indicate the name and address.
- Please include any required waivers or licensing information with your order.
- Please send check, money order, VISA, Mastercard, Discover or John Deere account number for payment. Do NOT send cash.
- To avoid delay in delivery, we advise ordering early. Our peak season runs from February through April. During this time orders received may take longer to be processed and shipped.

ORDERING INFORMATION

The majority of our seeds are **treated**. Items that are available untreated are indicated in the price tables with a 'U' at the end of the item number. Please be sure to include the 'U' when filling out your order form, if you desire untreated seed.

In case of either partial or total crop failure, we reserve the right to pro-rate delivery.

Prices are in US dollars. Prices are subject to change without notice.

Products are sold by the package size. For example: if you are ordering 7 pounds of sweet corn, you will need to order one - 5 pound package and two - 1 pound packages. These package sizes will be at different price breaks.

PAYING FOR YOUR ORDER

We accept payment via credit or debit card, check, and wire transfer. Open account terms and financing are available for qualifying customers. Payment discounts are available for select payment methods and products. See page 158 for more details on cash discounts and financing options.

Cash Discounts!
on orders
over \$250.00
see page 158 for details

SHIPMENT OF YOUR ORDER

All orders will be shipped after payment has been received. If you are paying by check, please allow 7-10 business days for your check to clear.

A \$15.00 shipping and handling charge will be added to all orders less than \$250.

Orders shipped to Alaska, Hawaii, Puerto Rico and International shipments will be charged actual shipping charges.

Our preferred and standard method of shipping is UPS Ground. Other UPS service levels (Next Day Air, 2nd Day Air and 3 Day Select) are available at the customer's expense.

Orders for priority shipping must be placed by 12:00 noon EST.

We reserve the right to ship your order via the most economical carrier, so in addition to UPS we also utilize our own delivery trucks, truck line and the US Postal Service.

Free Shipping!
on orders
over \$250.00

PICKING UP YOUR ORDER

If you would like to pick up your order, we require 24 hour advanced notice.

ON RECEIPT OF YOUR ORDER

INSPECT YOUR SHIPMENT

Please review the packing slip and contents upon receipt to confirm you have everything you need before planting time.

DAMAGED SHIPMENTS

A small percent of shipments may get damaged during transit. If you receive a damaged shipment, please be prepared to take action so you can receive proper credit or replacement. Our Customer Service department will file a claim with the shipping company and will need some information from you.

Here are guidelines to keep in mind and actions you should take to help expedite a claim.

- Take time when unloading. Count the packages and pieces received and look for any damaged shipping containers and packages.
- Tell the driver to note any shortage or damage on all copies of the freight bill, take pictures, and to sign their full name clearly.
- Immediately contact our office at 800-700-1199 and fax a copy of the freight bill along with a description of the damage, along with any pictures of other documents to 419-337-5491, or email it to us at orders@ruppseeds.com or mail it to us within 10 days.
- Include a note identifying the name and quantity of each variety that is missing or damaged.

RETURNS

Rupp Seeds has no control over the handling and care of the seed once it leaves our warehouse. In order to ensure quality seed for all of our customers, **we will not accept any seed returns** except in situations where an error has been made in fulfilling your order. In the event of an error, contact our office within 15 days of receipt of the order to obtain approval for the return.



Rupp Seeds Inc.
17919 County Road B
Wauseon, Ohio 43567

Watermelon Waiver

800.700.1199

FAX 419.337.5491

waivers@ruppseeds.com

NOTICE, WAIVER and COMPLETE RELEASE AGREEMENT

Bacterial Fruit Blotch (BFB) and Gummy Stem Blight (GSB) are serious diseases that have become significant risk factors in many areas where watermelons are grown. The Pathogens causing these diseases (Acidovorax avenae subsp. citrulli for BFB and Didymella bryoniae for GSB), and other watermelon diseases, can be introduced into a field by infested seed, infected transplants, volunteer watermelons, mechanical means, or natural spread from alternate hosts, or may already be present in the field on crop debris or in the soil. While it is impossible to conduct testing procedures that will give 100% reliable results with regard to the identification of any seedborne pathogen, Rupp Seeds' suppliers test all of their watermelon seed lots for commercial sale.

Depending on the supplier, a representative sample of seeds from each watermelon seed lot has been tested pursuant to current industry standards, and no symptoms of these Pathogens were found to be present within the known limits of detection in the sample tested. Rupp Seeds understands that its suppliers have tested representative samples of all watermelon seed lots covered by this agreement and have not detected the presence of the Pathogens in any such representative samples. Notwithstanding the above, Rupp Seeds cannot and does not guarantee or warrant that such tests are totally conclusive nor that the seeds are free of the Pathogens and, further, cannot and does not guarantee or warrant that the Pathogens may not be introduced to such seeds and/or watermelon plants from outside sources at a later time.

GROWER'S RELEASE OF ALL LIABILITY FOR BACTERIAL FRUIT BLOTCH.

Acknowledging the above, Grower still wishes to purchase watermelon seeds, and Grower is willing to assume all risks of loss associated with these Pathogens. Accordingly, Grower hereby fully and unconditionally releases Rupp Seeds and its suppliers from any and all liability with respect to the presence of the Pathogens on or within such seeds, or the vulnerability of such seeds, to the Pathogens. Grower acknowledges and agrees that Rupp Seeds and its suppliers shall have no responsibility or liability for any losses or damages relating in any way to the Pathogens under any legal theory including, but not limited to, negligence, breach of warranty, breach of contract, or strict products liability.

Rupp Seeds acknowledges that all other aspects of its express warranty, as contained on the label, do apply, and that any waiver or limitation on the Rupp Seeds express warranty resulting from the terms and conditions of this Agreement, only apply to the presence on or within, or vulnerability of such seeds, to the Pathogens. Grower further agrees that Rupp Seeds and its suppliers also have no liability or responsibility for its watermelon seeds or plants grown therefrom if they are contaminated with the Pathogens after the seeds are delivered to Grower. Grower acknowledges that contamination may occur in a transplant house, in the field, or under circumstances beyond the control of Rupp Seeds and for which Rupp Seeds is not liable to Grower.

GROWER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM WITH RESPECT TO THE SALE OF SEEDS IS LIMITED IN ALL EVENTS TO A REFUND OF THE PURCHASE PRICE OF THE SEEDS. Grower shall not be entitled to any incidental or consequential damages, including planting or replanting costs, lost profits, or any other expenses, losses or damages. Notice of any claim must be received by Rupp Seeds by registered mail within thirty (30) days after the alleged defect in the seeds becomes apparent to Grower.

GROWER'S AGREEMENT NOT TO RESELL SEEDS OR PLANTS.

In consideration for Rupp Seeds or its suppliers agreeing to sell watermelon seeds to Grower, Grower hereby agrees that it/he/she will only use such seeds for plantings on its/his/her own holdings, and will not, under any circumstances, sell, transfer, distribute or in any way dispose of any such seeds or seedlings grown from the seeds, with or without consideration, to any third party.

GROWER'S INDEMNIFICATION AGREEMENT.

Grower acknowledges that in the event it/he/she breaches the terms and conditions of the fourth paragraph of this Agreement with respect to the distribution of such watermelon seeds to a third party, Rupp Seeds and their suppliers could incur liability to such third parties. Therefore, Grower hereby unconditionally agrees to defend and indemnify Rupp Seeds and any of its suppliers, from any and all loss, liability, or damage which Rupp Seeds and any of its suppliers, may incur, including, but not limited to reasonable attorney's fees, relating to any claim by a third party who received any portion of the watermelon seeds which are covered by this Agreement as sold by Rupp Seeds to Grower.

ADDITIONAL NOTICE regarding TRIPLOID HYBRID WATERMELON.

Triploid hybrid watermelons are sterile hybrids which characteristically produce fruits with few or no true seeds. Because the absence, or relative absence, of hard or true seeds in the flesh of the melon is its chief distinguishing characteristic, the triploid hybrid watermelon is often referred to as a "seedless" watermelon. Despite this popular perception, triploid hybrid watermelons are not true "seedless" watermelons. The first melons to ripen in a field of triploid hybrid watermelons often contain small, undeveloped seeds. In addition, certain genetic, cultural and climatic factors are known to cause the formation of empty seed coats (small, white, undeveloped seeds), also called "pips", and/or hard seeds in the flesh of the melons. Due to the wide variety of possible causes of hard seed formation, TRIPLOID HYBRID WATERMELONS ARE NOT GUARANTEED TO PRODUCE SEEDLESS FRUIT.

GROWER UNDERSTANDS THIS AGREEMENT.

Grower represents and warrants that it/he/she has consulted with or had an opportunity to consult with an attorney, and that Grower fully understands the meaning and legal effect of this Agreement.

Continued on the back side.

Continued from the other side.

ALL OTHER TERMS OF THE LABEL APPLY.

Except as expressly provided within this Agreement, all remaining terms, disclaimers, limitations, and conditions of purchase as disclosed and set forth on the Rupp Seeds label and on the Rupp Seeds Notice to Purchase Regarding Liability shall apply to the Grower's purchases of watermelon seed.

CHOICE OF LAW AND CHOICE OF FORUM.

The parties agree that this Agreement is entered into the County of the applicable Rupp Seeds supplier and shall be construed in accordance with the laws of that state. It is further agreed that any litigation by and between Grower and Rupp Seeds, or with a Rupp Seeds supplier, relating to the sale of all such watermelon seeds hereunder, shall take place in the county of the applicable Rupp Seeds supplier.

ATTORNEY'S FEES.

In the event that Rupp Seeds or its supplier enforces any terms of this agreement in any litigation with Grower, Rupp Seeds and its supplier shall be entitled to recover reasonable attorney's fees from Grower.

SEVERABILITY.

The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and the Agreement shall be construed in all respects as if such invalid or unenforceable provisions was omitted. Grower has read the above Notice, Waiver, and Complete Release Agreement, understands it, and agrees to be bound by all of its terms. Grower understands this Agreement is part of the contract and a condition of sale, and that no shipment from will occur until Rupp Seeds receives this signed notice.

Rupp Seeds Inc.

Signature _____

Date _____

I have read and understand this release agreement and I agree to be bound by all of its terms. Please fill out completely and sign below.

Customer Number _____

Customer Name _____

Address 1 _____

Address 2 _____

City _____

State _____ Zip _____

Phone # _____

Fax # _____

Printed Name _____

Title _____

Signature _____

Date _____



SEE WHAT GOOD YIELDS®

Release Agreement – Gold Dust

For seed below Rupp quality standards

We are informing you that Gold Dust pumpkin, lot number PCH1518 (herein Seed) is below Rupp Seeds (herein Rupp) quality standards, in that it contains offtypes and may produce up to 15% fruit that vary in shape, color and size. Rupp is offering the Seed at a 15% discount.

By signing this agreement, the Customer understands the Seed is below standard, agrees to purchase the Seed and understands the Seed is not returnable. The Customer further agrees to release Rupp of any and all claims or liability arising from the use of the Seed, and to indemnify and hold harmless Rupp from any claims by third parties arising out of the planting of the Seed.

CUSTOMER

Signature: _____

Printed: _____

Date: _____

Farm/Business
Name: _____

Address: _____

Phone: _____



STEWARDSHIP AGREEMENT

Section A GROWER INFORMATION – Complete This Section - PLEASE PRINT CLEARLY																	
YOU, THE UNDERSIGNED GROWER, HEREBY ACKNOWLEDGE AND AGREE THAT: (1) YOU HAVE READ, UNDERSTAND, AND AGREE TO THE TERMS AND CONDITIONS OF THIS STEWARDSHIP AGREEMENT; (2) THIS IS A LEGALLY BINDING CONTRACT; (3) YOU ARE FULLY AUTHORIZED TO ENTER INTO THIS STEWARDSHIP AGREEMENT; AND (4) YOU ARE VOLUNTARILY ENTERING INTO THIS STEWARDSHIP AGREEMENT.																	
Grower Name (Last, First, MI) _____ Farming or "Doing Business As" (d/b/a Name): _____ Address: _____ City: _____ State: _____ Zip Code: _____ Business Phone: _____ County: _____ E-mail Address: _____ Customer ID #: <i>(Assigned by Syngenta)</i> Technology #: <i>(Assigned by Syngenta)</i> Dealer Name: Rupp Seeds, Inc. Dealer Number: _____ (Office Use Only) Dealer Phone: 419-337-1841 Third Party Syngenta-Licensee: _____ (Office Use Only)	<table border="1"> <tr> <td>Grower Signature</td> <td>Date</td> </tr> <tr> <td colspan="2">(individual at farm level responsible for planting)</td> </tr> <tr> <td colspan="2">Grower Name (Please Print Clearly)</td> </tr> <tr> <td colspan="2"> Thank you for choosing one or more of the Licensed Technology. Return this Stewardship Agreement to the address shown below. If You have any questions regarding the Licensed Technology or this Stewardship Agreement please call: 1 (877) GRO-CORN or 1 (877) 476-2676. </td> </tr> <tr> <td colspan="2">Please return the agreement back to your Dealer at:</td> </tr> <tr> <td>Fax to :</td> <td>419-337-5491</td> </tr> <tr> <td>Mail to :</td> <td>Rupp Seeds, Inc. 17919 County Road B Wauseon OH 43567</td> </tr> <tr> <td>Email :</td> <td>waivers@ruppseeds.com</td> </tr> </table>	Grower Signature	Date	(individual at farm level responsible for planting)		Grower Name (Please Print Clearly)		Thank you for choosing one or more of the Licensed Technology. Return this Stewardship Agreement to the address shown below. If You have any questions regarding the Licensed Technology or this Stewardship Agreement please call: 1 (877) GRO-CORN or 1 (877) 476-2676.		Please return the agreement back to your Dealer at:		Fax to :	419-337-5491	Mail to :	Rupp Seeds, Inc. 17919 County Road B Wauseon OH 43567	Email :	waivers@ruppseeds.com
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Fax to :	419-337-5491																
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Email :	waivers@ruppseeds.com																

This Stewardship Agreement ("Stewardship Agreement") is entered into between you ("Grower") and Syngenta Seeds, LLC ("Syngenta"). By signing and returning this Stewardship Agreement without modification (other than Section A above), Syngenta grants Grower a limited license to use the proprietary technology Bt11 and/or the Bt11 x MIR162 x GA21 stack (each, a "Licensed Technology") embedded in Syngenta's sweet corn seed product or in any seed product distributed by a third party Syngenta-licensee (collectively, "Seed Product"). Any proposed changes to this Stewardship Agreement other than in Section A are hereby rejected by Syngenta and shall have no effect unless approved in writing by Syngenta.

STEWARDSHIP

Grower acknowledges receipt of the applicable Attribute® Grower Guide ("Stewardship Guide") which is incorporated herein by this reference and may be updated from time to time and found at http://www.syngenta-us.com/seeds/vegetables/sweet_corn/sweet_corn.aspx under the "Insect Protection" tab. Grower agrees to periodically check the website for the current Stewardship Guide and to read and comply with the then current Stewardship Guide. If Grower uses any Licensed Technology after Syngenta's release of a new version of the Stewardship Guide or Stewardship Agreement then Growers use shall be deemed an acknowledgement of receipt and agreement to comply with the then current: (i) Stewardship Guide, (ii) Stewardship Agreement, and (iii) the terms and conditions on the Seed Product packaging (collectively, the "Agreement"). The collective Agreement constitutes the entire agreement between Grower and Syngenta regarding the purchase and/or use of Licensed Technology and supersedes any other terms and conditions whether express or implied.

GROWER'S LIMITED USE LICENSE(S). Grower agrees that the Licensed Technology is protected under one or more U.S. patents (the "Patents"). Once this Stewardship Agreement is signed by the Grower then the Grower is granted the limited right, under the applicable Patents, to purchase and plant sweet corn Seed Products containing the Licensed Technology in the United States or Canada (the "Territory") but strictly according to the terms of the entire Agreement. Grower agrees that any Seed Product acquired in the Territory shall only be planted in the Territory. Further, Grower agrees not to plant Seed Product in the Territory which was acquired outside of the Territory.

GROWER RESPONSIBILITIES. Grower shall: (a) use Seed Products solely for planting a single commercial crop of fresh produce, forage or grain for food, feeding or processing; (b) not supply, transfer, resell, license or sublicense any Seed Products to any other person or entity for planting or any other purpose; (c) not to save any crop produced from Seed Products for planting by Grower or any other person or entity; (d) abide by the terms of the entire Agreement, as it may be updated from time to time as described above; (e) report to Dealer listed above, the number of acres and the location (county and state) where the Seed Product is planted within 45 days of planting; (f) communicate all applicable stewardship requirements and obligations to any of its employees and agents with respect to handling of or work involving Seed Products and/or the crop produced from Seed Products, and monitor such employees' and agents' compliance with Grower's responsibilities under the entire Agreement; and (g) not use or allow others to use Seed Products, the crop produced from Seed Products, the Licensed Technology or any plant material containing the Licensed Technology for: (i) crop breeding, (ii) research (including, without limitation, agronomic testing or generation of cooperative data against sweet corn seed not containing the Licensed Technology), (iii) generation of registration data or production of Seed Product (unless Grower has entered into a valid, written production agreement with a licensed seed company expressly authorizing one of more of these actions).

TERM AND TERMINATION. This Stewardship Agreement, once signed by Grower and accepted by Syngenta, will remain in effect until terminated by Grower or Syngenta. This Stewardship Agreement may be terminated by either party at any time for any reason by sending written notice of termination to the other party at the address for such party specified herein. In the case of termination of this Stewardship Agreement by Grower, such notice of termination must include Grower's full name and address. Further, Syngenta may terminate this Agreement for failure of Grower to fully comply with the Grower Responsibilities described above. If Grower violates any terms of this Stewardship Agreement, in addition to other remedies available to Syngenta and any owner of the Patents listed above, Grower may forfeit any right to obtain a license to the Licensed Technology in the future. If this Stewardship Agreement is terminated then Grower will no longer have a right to purchase or use Seed Products, but, Grower's obligations (including but not limited to the above Grower Responsibilities) and Syngenta's rights that arose under the Agreement prior to termination shall remain in effect.

LIMITATIONS OF WARRANTIES AND REMEDIES. Grower agrees that the Limitations of Warranties and Remedies expressly stated on the Seed Product packaging shall be incorporated in this section as if set forth in full.

GENERAL PROVISIONS.

- This Stewardship Agreement and the parties' relationship shall be governed by the laws of the state of Illinois and the United States (other than the choice of laws rules).
- Grower's rights may not be transferred to any other person or entity without the prior written consent.
- Attribute® is a trademark of a Syngenta Group Company. LibertyLink® is a registered trademark of Bayer.

REMEDY SWEET CORN – SUPPLEMENTAL AGREEMENT

<p>Section A GROWER INFORMATION – Complete This Section - PLEASE PRINT CLEARLY</p> <p>Grower Name (Last, First, MI) _____</p> <p>Farming or “Doing Business As” (d/b/a/ Name): _____</p> <p>Address: _____</p> <p>City: _____ State: _____ Zip Code: _____</p> <p>Business Phone: _____ County: _____</p> <p>E-mail Address: _____</p> <p>Customer ID #: <u>(Assigned by Syngenta)</u> Technology #: <u>(Assigned by Syngenta)</u></p> <p>Dealer Name: Rupp Seeds, Inc.</p> <p>Dealer Number: _____ (Office Use Only)</p> <p>Dealer Phone: 419-337-1841</p> <p>Third Party Syngenta-Licensee: _____ (Office Use Only)</p>	<p>YOU, THE UNDERSIGNED GROWER, HEREBY ACKNOWLEDGE AND AGREE THAT: (1) YOU HAVE READ, UNDERSTAND, AND AGREE TO THE TERMS AND CONDITIONS OF THIS SUPPLEMENTAL AGREEMENT; (2) THIS IS A LEGALLY BINDING CONTRACT; (3) YOU ARE FULLY AUTHORIZED TO ENTER INTO THIS SUPPLEMENTAL AGREEMENT; AND (4) YOU ARE VOLUNTARILY ENTERING INTO THIS SUPPLEMENTAL AGREEMENT.</p> <hr/> <p>Grower Signature _____ Date _____ (individual at farm level responsible for planting)</p> <hr/> <p>Grower Name (Please Print Clearly) _____</p> <p>Thank you for choosing one or more of the Licensed Technology. Return this Supplemental Agreement to the address shown below. If you have any questions regarding the Licensed Technology, your Stewardship Agreement or this Supplemental Agreement please call: 1 (877) GRO-CORN or 1 (877) 476-2676.</p> <p>Please return the agreement back to your Dealer at:</p> <p>Fax to : 419-337-5491 Mail to: Rupp Seeds, Inc. 17919 County Road B Wauseon OH 43567 Email: waivers@ruppseeds.com</p>
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This Supplemental Agreement (“Supplemental Agreement”) is entered into between you (“Grower”) and Syngenta Seeds, LLC (“Syngenta”) and supplements the terms and conditions of your Stewardship Agreement with Syngenta (by its predecessor-in-interest, Syngenta Seeds, Inc.). By signing and returning this Supplemental Agreement without modification (other than Section A above) and pursuant to the terms of this Supplemental Agreement and the Stewardship Agreement, Syngenta grants Grower a limited license to use the proprietary technology Bt11 x MIR162 x GA21 stack (the “Licensed Technology”) embedded in Syngenta’s “Remedy” sweet corn seed product or in any seed product distributed by a third party Syngenta-licensee (collectively, “Seed Product”). Any proposed changes to this Supplemental Agreement other than in Section A are hereby rejected by Syngenta and shall have no effect unless approved in writing by Syngenta.

TERM AND TERMINATION. This Supplemental Agreement, once signed by Grower and accepted by Syngenta, will remain in effect until either terminated by Grower or Syngenta, or will be terminated automatically upon the termination of your Stewardship Agreement. This Supplemental Agreement may be terminated by either party at any time for any reason by sending written notice of termination to the other party at the address for such party specified herein. In the case of termination of this Supplemental Agreement by Grower, such notice of termination must include Grower’s full name and address. If Grower violates any terms of this Supplemental Agreement and/or Grower’s Stewardship Agreement, in addition to other remedies available to Syngenta and any owner of the Patents (as defined in the Stewardship Agreement), Grower may forfeit any right to obtain a license to the Licensed Technology in the future. If this Supplemental Agreement is terminated then Grower will no longer have a right to purchase or use Seed Product, but, Grower’s obligations (including but not limited to the Grower Responsibilities as set forth in the Stewardship Agreement) and Syngenta’s rights that arose under the Stewardship Agreement and this Supplemental Agreement prior to termination shall remain in effect.

ACKNOWLEDGEMENT; LIMITATION OF WARRANTIES AND REMEDIES. Grower acknowledges and understands that Grower has been informed that under certain stress conditions, Remedy sweet corn may exhibit tassels and or glumes (male parts) growing out of the ear (female part) (the “Notice”). By its signature on this Supplemental Agreement, Grower acknowledges and agrees:

- Grower has been duly informed of the Notice;
- Grower accepts the Seed Product “as is”, “where is” and with all faults and to assume all risks associated with use of the Seed Product and any actual or perceived impact on any crop yield or quality, and Grower will indemnify and hold harmless Syngenta and Syngenta authorized Distributors, and their respective directors, officers, employees and affiliates from any claims related, directly or indirectly, to the performance or non-performance of the Seed Product and its impact on any crop yield or quality; and
- Grower waives any and all claims and releases Syngenta and Syngenta authorized Distributors, and their respective directors, officers, employees and affiliates, from any and all liabilities relating, directly or indirectly, to the Notice and the use of the Seed Product.

GENERAL PROVISIONS.

- This Supplemental Agreement and the parties’ relationship shall be governed by the laws of the State of Minnesota and the United States (other than the choice of laws rules).
- Grower’s rights may not be transferred to any other person or entity without the prior written consent of Syngenta.

Syngenta Seeds, LLC Attn: Attribute Stewardship 11055 Wayzata Blvd., Minnetonka, MN 55305
 Email: syngenta.stewardship@syngenta.com
 Fax: 1-800-858-8664

MULTI-USE ACCOUNT AGRICULTURAL, COMMERCIAL & GOVERNMENTAL APPLICATION

CR3910357 Litho in U.S.A. (21-08)

When your application is completed your John Deere Financial Merchant can fax it to 1-800-732-0251.

PLEASE TELL US ABOUT YOUR BUSINESS. Fields marked with an asterisk (*) are required by law (USA PATRIOT ACT). Your application cannot be processed without this information.

Your Business Structure Sole Proprietor Corporation General Partnership Limited Partnership Limited Liability Company Non-Profit Government

Your Primary Use Agricultural Commercial (Non-Ag) Governmental Other _____

Estimated Annual Expenses: Parts & Service \$ _____ Seed \$ _____ Crop Protection \$ _____

*Organization Legal Name (Do not abbreviate) _____

(Or) *Individual's Legal First Name _____ Middle Initial _____

*Last Name _____ Suffix _____ *Date of Birth _____

*Social Security # _____ *Tax ID # _____

Applicant's Phone # _____ Alternate Phone # _____

Email Address _____

*Applicant's Physical Street Address _____

*City _____ *State _____ *ZIP _____

County _____ Mailing or P.O. Box # (if different than Physical Street Address) _____

PRIMARY OWNER INFORMATION REQUIRED FOR PARTNERSHIPS, LLCs AND CORPORATIONS (Required for all applications submitted on behalf of an organization. If applicable, signature required below.)

*First Name _____ Middle Initial _____ *Last Name _____

*Physical Street Address _____

*City _____ *State _____ *ZIP _____

*Social Security # _____ *Date of Birth _____

CO-APPLICANT/SPOUSE INFORMATION (Required if spouse or person other than Primary Owner identified above has an interest in farming operation or assets listed on page 2 and is also a co-applicant. If applicable, signature required below.)

*First Name _____ Middle Initial _____ *Last Name _____

*Physical Street Address _____

*City _____ *State _____ *ZIP _____

*Social Security # _____ *Date of Birth _____

APPLICANT FINANCIAL INFORMATION (Individual applicants are not required to disclose income derived from alimony, child support, or separate maintenance payments unless the applicant wants John Deere Financial, f.s.b. to consider it in determining creditworthiness.)

Assets _____ Liabilities _____ Net Worth (assets - liabilities) _____

Gross Sales _____ Net Business Income _____ Years In Business _____

Primary Financial Institution _____ City _____ State _____

Phone Number _____ Primary Operating Lender _____

Contact Name: _____ Phone Number _____

Notice to applicant or Representatives of Applicant(s): (1) You represent that the information given in the entire application, including all applicant names and any other information provided on any attached page(s) is complete and accurate, is provided for the purpose of obtaining credit in an amount set by the credit policies and practices of John Deere Financial, f.s.b. and, if applicable, Deere & Company ("JDF", "we", "us" and "our"). You authorize us to check with reporting agencies, credit references, and any other sources in investigating the information given, in reviewing or taking collection action on the account, or for other legitimate purposes, and each such source is authorized to provide us with such information. You further authorize us to share all information obtained with our affiliates and other companies which may offer or provide services to you. (2) You grant us permission to obtain a credit report on you for all legitimate purposes including assisting in making a credit decision, reviewing your account, and assisting in taking collection activity. (3) Applicant(s) requests a revolving credit account upon our approval of the application. You certify the account will be used for agricultural, commercial or governmental use only. (4) You understand that any decision to grant or deny credit will be made by us in Wisconsin. (5) You agree that any notices and disclosures can, at our option, be provided electronically to the last email address that you provided us. (6) Married applicants can apply for an individual account. (7) You agree that, by providing us any telephone number, including mobile phone number, we, and any third party we retain to provide services to us, can contact you using that number. (8) You consent to the recording and monitoring of your telephone conversations by us and any third parties who provide services to us. (9) You authorize us and our affiliates to send you information on our products and services by internet, facsimile transmissions and other electronic means. (10) You grant all lenders authorization to provide a copy of your financial statements, including but not limited to your balance sheet, cash flow statement, and income statement to JDF. (11) You also authorize us to disclose financial information about you as described in the credit agreement and future notices we may send you. **YOU CERTIFY THAT YOU HAVE READ AND ACKNOWLEDGE RECEIPT OF A TRUE COPY OF THIS AGREEMENT WHICH CONTAINS THE TERMS AND CONDITIONS APPLICABLE TO THE REVOLVING CREDIT ACCOUNT, AND YOU AGREE TO THOSE TERMS AND CONDITIONS.**

SIGN HERE

X _____ Title _____ Date _____
Applicant's Signature (required)

X _____, Individually Print Name _____ Date _____
Primary Owner Signature Individually - Required for Corporation, LLC & Partnership in addition to the signature on behalf of the Organizational Applicant above (by signing, such Primary Owner shall be personally liable for all transactions and obligations arising under any John Deere Financial account that may be approved by JDF pursuant to this Application).

X _____ Print Name _____ Date _____
Co-Applicant's Signature

August 2021

FOR MERCHANT USE ONLY:

Merchant Name: **Rupp Seeds Inc.** Merchant Email: _____ Contact Name: **800-700-1199**

Merchant Number: **56000152** Phone Number: _____ Customer Account Number: _____ Patron Number: _____

¹John Deere Financial reserves the right to request additional information if needed.
CR3910357 Litho in U.S.A. (21-08)

Multi-Use Account Application - Page 2 **Applicant Name** _____

Balance Sheet Date _____ Cash, Checking, Savings \$ _____ Securities \$ _____ Accounts Receivable \$ _____ Investment in Growing Crop \$ _____ Feed & Grain Inventory \$ _____ Market Livestock \$ _____ Government Payments Receivable \$ _____ Other Current Assets \$ _____ Specify _____ Total Current Assets \$ <u>0</u> Breeding Livestock \$ _____ Machinery & Equipment \$ _____ Vehicles \$ _____ Other Intermediate Assets \$ _____ Specify _____ Total Intermediate Assets \$ <u>0</u> Real Estate Value \$ _____ Buildings \$ _____ Other Long-Term Assets \$ _____ Specify _____ Total Long-Term Assets \$ <u>0</u> TOTAL ASSETS \$ <u>0</u>	ASSETS	CCC Loans \$ _____ Operating Principal \$ _____ Accounts Payable \$ _____ Intermediate Debt Due in Next 12 Months \$ _____ Long-Term Debt Due in Next 12 Months \$ _____ Leases \$ _____ Misc. Current Liabilities \$ _____ Specify _____ Total Current Liabilities \$ <u>0</u> Notes Payable – Specify _____ \$ _____ Machinery & Equipment Loans \$ _____ Vehicle Loans \$ _____ Other Intermediate Debt \$ _____ Specify _____ Total Intermediate Liabilities \$ <u>0</u> Mortgage Loans \$ _____ Other Long-Term Debt \$ _____ Specify _____ Total Long-Term Liabilities \$ <u>0</u> TOTAL LIABILITIES \$ <u>0</u>	LIABILITIES
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Continue for a total credit limit request over \$120,000¹. In addition, please attach the most recent years' lender-prepared balance sheets with supporting schedules and the most recent year income statement (or equivalent such as a schedule F).²

For a credit limit over 500,000¹, please attach the two most recent years' lender-prepared balance sheets with supporting schedules and the two most recent income statements (or equivalent such as a schedule F).²

² If applicable, include the same information for co-applicant, including spouse. If a Partnership, Corporation or LLC, include for both the entity and the general partners, president, owner or managing member(s).

Crop Production Information

1. Owned Acres: _____	2. Owned Tillable Acres: _____
3. Total Share Rent Acres: _____	4. Your Share Rent Acres: _____ + _____
5. Total Cash Rent Dollars Paid Per Year: \$ _____	6. Total Cash Rent Tillable Acres: _____ + _____
	Your Share of Total Crop Production (2+4+6): = <u>0</u>

First Crop	Acres	Estimated Cost/Acre	% Irrigated	Avg Yield	Double Crop	Second Crop	Crop Insurance Coverage Type & %	Contracted Crops Price	%
Corn	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
Soybeans	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
Wheat	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
Cotton	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
Peanuts	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
_____	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %
_____	_____	_____	_____ %	_____	Y / N	_____	CAT/YP/RP/RPE/GRIP/GRP _____ %	\$ _____	_____ %

Crop Insurance Agent Information

Agent Name _____ Phone: (_____) _____

Other Crop Production Funding Sources (e.g., trade suppliers)

Name of Provider _____	Credit Limit _____	Current Balance _____	Repayment Terms _____
Name of Provider _____	Credit Limit _____	Current Balance _____	Repayment Terms _____
Name of Provider _____	Credit Limit _____	Current Balance _____	Repayment Terms _____

Livestock Production Information

Herd Size	Annual Production	Estimated Annual Revenue
_____ Sows	_____ #of market sold annually _____ #of feeder sold annually	\$ _____
_____ Beef Cattle	_____ #of market sold annually _____ #of feeder sold annually	\$ _____
_____ Dairy Cattle	_____ lbs. of milk sold annually	\$ _____
_____ Poultry	_____ #sold annually	\$ _____
_____ Other	_____ #sold annually	\$ _____
(specify) _____		

MULTI-USE AGRICULTURAL/COMMERCIAL OR GOVERNMENTAL USE CREDIT AGREEMENT

TERMINOLOGY. In this Agreement the words *you*, *your*, and *yours* mean each person and/or business entity who applies for and is granted a Multi-Use Account, including any co-applicant identified on the application, as well as any person permitted to use the Account. *JDF* means John Deere Financial, f.s.b., or any subsequent holder of the Account or any balances arising under the Account. When the terms “finance charge” and “interest charge” are used in this agreement and on other documents related to your account, they have the same meaning.

MULTI-USE ACCOUNT. You request a Multi-Use Account from JDF, and further authorize JDF to issue a Multi-Use Account card to each merchant from whom you may make a purchase. By applying for a Preferred Account, or by using a Merchant Authorized Account to make a purchase from a merchant who requests JDF to open one for you, you agree that this Credit Agreement will apply to all purchases made through your Multi-Use Account by you or any person you authorize. You authorize JDF to honor any purchases you make by mail, telephone, Internet, facsimile transmission (fax) or other electronic means on your Account. You agree that a signature is not necessary as identification in such cases. You agree that any authorized use of your Account constitutes your acceptance of all the terms and conditions of this Agreement, as it may be amended from time to time. If you submit your application to JDF by Internet, facsimile transmission (fax) or other electronic means, you agree that the application will have the same effect as a signed original. You agree that you will promptly notify JDF in writing of any suspected loss, theft, or unauthorized use of the Account. You may be liable for the unauthorized use of your Multi-Use Account before you notify JDF in writing at John Deere Financial, P.O. Box 5328, Madison, Wisconsin 53705-0328 of the unauthorized use. In any case, your liability will not exceed \$50. You agree to give JDF prompt notice of any change in your name, mailing address, or place of employment. You agree that until JDF receives notice of your new address, JDF may continue to send statements and other notices to the address you gave JDF on the application for this Account. You agree that, for the purposes of this Agreement, you will be deemed to “reside” in the state of your billing address as shown on JDF’s records. You consent and agree that your telephone conversations with JDF may be recorded to further improve JDF’s customer service. You agree that JDF and any affiliate and any retained debt collector may place phone calls to you using any telephone number, including a mobile phone number, you have provided to JDF, any affiliate or any retained debt collector, including calls using an automatic dialing and announcing device and prerecorded calls, and that such calls are not “unsolicited” under state or federal law. If more than one person or entity signed the application, each is jointly and severally responsible for all obligations, and amounts due, under this agreement. This agreement is not binding on JDF until JDF has approved your credit and given you notice of approval. If Maryland law applies, Subtitle 9 of Title 12 of the Maryland Commercial Law will apply.

ACCOUNT TYPE. If your Multi-Use Account arose through JDF’s purchase of your existing account balance with a merchant, or at the request of one or more merchants, your Account may be classified as a *Merchant Authorized Account*. Certain special features or promotions that JDF may offer from time to time may be made available only to Preferred Accounts. Merchant Authorized Accounts are useable only at a merchant who asked JDF to finance your purchases from them. JDF may, in its sole discretion, classify your account as a Preferred Account. When JDF opens your Account, and on each monthly statement, JDF will indicate whether your Account is either a Preferred or Merchant Authorized Account.

ACCOUNT USE. By applying for or accepting a Multi-Use *Agricultural, Commercial or Governmental Account* you agree to use your Account *primarily* to make purchases for agricultural, commercial or governmental use, and not for personal, family or household use. You agree to pay JDF all amounts charged by the use of the Account, plus Finance Charges, and the other charges described below, as provided in this Agreement.

You agree that JDF is not responsible for the refusal of anyone to allow a purchase to be made through your Multi-Use Account.

CREDIT LIMITS. JDF will establish and advise you of your credit limit(s) when JDF opens your Account and on each monthly statement. JDF may, in JDF’s sole discretion, establish and advise you of a special terms credit limit. JDF may also, in its sole discretion, establish separate additional credit limits with special conditions. The special conditions of any special terms or additional credit limit will be disclosed to you when JDF opens your Account, by a merchant at the time of purchase or on your monthly statement. Your use of any such special terms or additional credit limit(s) shall constitute your agreement to any disclosed special conditions.

You agree that JDF may increase or decrease your credit limit(s) at any time, in JDF’s sole discretion, without prior notice to you.

You agree to promptly prepare and provide to JDF any financial and Account information that JDF may, in its sole discretion, request from you.

MONTHLY STATEMENT. JDF will send you a monthly statement whenever there is activity on your Account, unless the only activity is a payment in full. Your monthly statement will show your New Balance, any Finance Charge, any Late Fees, the Minimum Required Payment and the Payment Due Date. In addition, it will show your Credit Limit(s), an itemized list of current Purchases, Payments, and Credits, as well as other information concerning your Account. JDF will send your monthly statements on dates and in intervals determined by JDF. Such statement shall be deemed correct and accepted by you unless JDF is notified to the contrary in writing within 60 days of the date of that statement.

If you think your monthly statement is incorrect, write to JDF on a separate sheet at the address shown on the back of your billing statement. Describe the error as best you can and include your Account number in all correspondence.

PAYMENT. The Payment Due Date is the date the payment must be received at the address shown on the front of your monthly statement. You may at any time pay your entire New Balance or pay more than the Minimum Required Payment, and you may avoid or reduce Finance Charges by doing so. However, payment of more than the Minimum Required Payment, while reducing your balance will not prepay your Account or be applied against future Minimum Required Payments. If your Payment Due Date falls on a Saturday, Sunday or holiday, the Payment Due Date will not be extended. All payments must be in U.S. dollars and drawn on funds

on deposit in the United States. Payments must be sent to John Deere Financial, at the address designated on your monthly payment stub or to any other payment address JDF later designates on your monthly statement payment stub.

FINANCE CHARGE RATES. Finance Charges on your Multi-Use Account may be calculated using **variable rates** that will be determined by reference to a “**Base Rate**.” The **Base Rate** from which your variable rates will be determined is the annual percentage rate of interest announced publicly from time to time by Citibank, N.A., in New York, New York, as the base rate it uses for interest rate determinations, which was in effect at the close of business on the fifteenth (15th) calendar day of each month, or the next succeeding business day if the fifteenth is not a business day (“Reference Day”).

Finance Charges on your Account will be calculated by adding a “**Spread**” to the Base Rate to arrive at the current rate. The **Spreads** added to the **Base Rate** to determine the **ANNUAL PERCENTAGE RATES (APRs)** that will apply to your Account will be:

	Preferred	Merchant Authorized
Spreads	11.9%	13.9%

Rate increases and decreases that result from changes in the Base Rate will take effect on the first day of the month, or the next succeeding business day if the first day is not a business day, after the Reference Day on which the Base Rate changes.

Changes in your variable rates will apply to your existing balance as well as to future purchases under your Account. An increase in your rate will increase the total Finance Charge accruing on your Account and the balance on which your Minimum Required Payment is calculated.

Currently effective rates are shown below:

	Daily Periodic Rate(s)		Annual Percentage Rate(s)	
	Preferred Regular Purchases	Merchant Authorized Purchases	Preferred Regular Purchases	Merchant Authorized Purchases
Rate:	.041507%	.046986%	15.15%	17.15%

The above rates are correct as of the date of printing, 08/17/2021, but are subject to change after that date.

FINANCE CHARGE CALCULATION. FINANCE CHARGES will accrue on your Account Balance as follows:

JDF will add a FINANCE CHARGE, calculated as shown below, if your New Balance is not paid in full on or before the Payment Due Date. To avoid additional Finance Charges on purchases, you must pay the New Balance in full on or before the Payment Due Date.

The amount of your **FINANCE CHARGES** will be determined as follows:

JDF uses the daily periodic rates and corresponding **APRs** shown in this Agreement. The applicable periodic rate is applied to the “Average Daily Balance” of your purchases, including current transactions, during the current billing cycle.

To get the “Average Daily Balance,” JDF takes the beginning balance of your purchases each day, starting with any Previous Balance outstanding on the first day of the monthly billing cycle, adds new purchases and debits, and subtracts payments or credits. This determines the daily balance. Unless JDF elects to use a later date, purchases are added to the daily balance as of the date of purchase.

JDF totals the daily balances for the billing cycle and divides the total by the number of days in the billing cycle. This gives JDF the “Average Daily Balance,” which is shown on your monthly statement. Finance Charges may accrue on Special Promotions Transactions at a different rate, as explained in the Special Promotions section of this Agreement.

DEFAULT FINANCE CHARGE RATE. If you are in default, you may no longer qualify for any reduced interest rate Special Promotions and you agree that, at JDF’s option, the APR applicable to any outstanding reduced interest rate Special Promotion(s), may be increased to the APR described in this agreement.

A MINIMUM FINANCE CHARGE of One Dollar will be made when the result of the application of the periodic rate(s) to the “Average Daily Balance,” is less than One Dollar.

MINIMUM REQUIRED PAYMENT. Except as provided below, you agree to pay each month a combined Minimum Required Payment equal to:

1. Any late payment fee due; **plus**
2. Any additional fees due; **plus**
3. Any amount past due; **plus**
4. For Purchases on your Account:
 - (a) **Either** the greater of: \$25, or 10% of your New Balance (less any Conversion Balance {balances transferred to John Deere Financial from a merchant’s accounts receivable} and less any Special Promotions Transaction(s) balances on which no payment is due) if it exceeds \$25;
 - (b) Or your entire New Balance (less any Conversion Balance and Special Promotions Transaction(s) balances on which no payment is due), if it is less than \$25.
5. The amount of any Special Promotions transaction that is due;
6. For Conversion Balances:
 - (a) **Either** the greater of: \$25, or 10% of your Conversion Balance, if that balance exceeds \$25;
 - (b) **Or** your entire Conversion Balance, if it is less than \$25.

DUE-IN-FULL PROVISION FOR GOVERNMENTAL ACCOUNTS. If you are a local, state or federal government agency or department, you agree to pay the entire balance of your account on the date shown on your monthly statement.

SPECIAL PROMOTIONS. For some transactions, special promotional financing terms, such as extended free periods, incentive interest rates on certain purchases or for limited time periods or other promotions may be available, at the discretion of JDF. These special terms will be disclosed by the merchant at the time of purchase. Purchases you make during these special promotions will be separately identified on your monthly statement and will become part of the balance on which your FINANCE CHARGE and Minimum Requirement Payment are calculated at the time provided in the special promotions terms disclosure. These transactions include:

NO-PAYMENTS/NO-INTEREST TRANSACTIONS. Unless otherwise disclosed, minimum monthly payments will be deferred and Finance Charge will not accrue during any disclosed No-Payments/No-Interest period described. Finance Charges will accrue at the APR applicable to your Account after the due date of your No-Payments/No-Interest transaction, unless otherwise disclosed.

SPECIAL TERMS TRANSACTIONS. Unless otherwise disclosed, Finance Charge will accrue from the date of purchase, which may be prior to your receipt of the merchandise, and throughout any special terms period. A special terms transaction may include that no payment on that transaction will be due until the end of the special terms period, which will be disclosed to you. Otherwise, payment will be due as described in this Agreement. Accrued Finance Charge must still be paid by you if the entire special terms balance is paid in full by the end of the special terms period. A reduced special terms finance charge rate may apply to the transaction, which will be disclosed to you. Otherwise, the finance charge rate will be the APR applicable to your Account. The entire balance of the special terms transaction, plus any accrued finance charge, will be due in full by the disclosed due date.

SAME AS CASH TRANSACTIONS. Unless otherwise disclosed, minimum monthly payments will be deferred and Finance Charge will accrue during any Same As Cash period. No Finance Charge will be due until the end of the Same As Cash period and any accrued Finance Charge will be waived if the entire Same As Cash balance is paid in full by the end of this Same As Cash period.

OTHER FEES and CHARGES.

LATE PAYMENT FEES. If within 20 days after the Payment Due Date, JDF has not received payment of at least the current portion of your Minimum Required Payment (Minimum Required Payment plus unpaid late payment fees and past due amounts), JDF will add to your Account a late payment fee of \$39.

RETURNED PAYMENT FEE. If you send JDF a check or electronic payment authorization that is dishonored upon first presentment, JDF will add to your Account a fee of \$35.

COLLECTION COSTS. Upon default, you will pay for expenses incurred in connection with the enforcement of our remedies, without limitation, repossession, repair and collections costs, any attorney's fees plus court costs and related fees including any bankruptcy fees and costs, to the extent permitted by applicable law.

CREDIT BALANCES. Any credit balance in excess of \$5 on your account will be refunded within 30 business days from JDF's receipt of your written request. Otherwise, JDF will refund to you any credit balance remaining on your account after six months. You agree that JDF may retain any credit balance if it is less than \$5 or if JDF does not know your address and it cannot be traced through the last address or telephone number provided to JDF.

ACCEPTING PAYMENT. You agree that JDF can accept late or partial payments, as well as payments marked "paid in full" or with other restrictive endorsements, without losing any of its rights under this Agreement.

DISCLOSURE OF FINANCIAL INFORMATION. You agree that JDF may report your performance under this Agreement to credit reporting agencies and others who request a credit reference from JDF. You agree that JDF may ask credit reporting agencies or others you list as a credit reference for consumer reports or information regarding your credit history at any time for all legitimate purposes, including credit decisions and the review and collection of your account. You authorize JDF to share information regarding your Account with its corporate affiliates and other companies that offer products and services JDF believes may be of interest to you. **JDF's affiliates may use certain consumer report information as a factor in establishing your eligibility for credit. If you object to this, you must notify JDF by calling John Deere Financial Customer Service at 1-800-356-9033, and providing your name, Social Security number, address and account number; and, after a reasonable processing time of up to 30 days, certain information will not be provided to those affiliates.**

CLOSING YOUR ACCOUNT. You may close your Account at any time by notifying JDF in writing. You agree that JDF may close or suspend your Account to future purchases at any time without prior notice. You agree that JDF may close or suspend your Account to future purchases if your Account has no activity for 12 or more months. You agree that, regardless of the closing or suspension of your Account, you remain responsible for paying the amount you owe JDF according to the terms of this Agreement.

SECURITY INTEREST. You grant JDF a purchase money security interest in all merchandise purchased through your Account, and its proceeds, including insurance proceeds, but this provision does not apply if you reside in NC and the APR on a purchase or transaction exceeds 15%. JDF's security interest continues until such merchandise is paid for in full by application of your payments in the manner described in this Agreement.

PAYMENT APPLICATION. You agree that your payments will be applied as JDF determines in its sole discretion. You agree that JDF has this discretion and that JDF may exercise it to suit its own convenience and interests, without further notice to you. You also agree that JDF may change how it applies payments at any time without notice to you. You acknowledge that the exercise of this discretion by JDF may result in cases in which the application of your payments to the Account creates higher Finance Charges than other payment application methods and that this may include payments allocated to balances with lower APRs before balances with higher APRs and/or to balances with longer promotional periods before balances with shorter or no promotional periods.

You agree that your payments will be credited as of the date of receipt at the address on the payment stub of your Monthly Statement if received by 11:00 a.m. Central Time Monday through Friday (otherwise next business day); but if payment is not accompanied by the payment stub, is not sent in the envelope we provided, includes other items, such as other checks, staples or paper clips, or is not received at that location, credit may be delayed up to five days.

MERCHANT CHARGEBACKS. JDF may charge back to a merchant who sold goods or services to you on your Account, any part of your Account balance related to those purchases. In that event, this Agreement will be deemed assigned to the merchant to the extent of the chargeback. You agree to such an assignment and further agree to pay the merchant the amount of such chargeback in accordance with the terms of this Agreement.

DEFAULT. You agree that you will be in default if: (a) you fail to pay the Minimum Required Payment within 20 days after the Payment Due Date; (b) the value of JDF's security interest in any collateral is materially impaired; (c) your ability to repay is materially reduced by your exceeding your credit limit, by a change in your employment, by a change in your other obligations, by bankruptcy or insolvency proceedings involving you, or (for community property state residents only) by a change in your marital status or domicile; (d) you die or become incompetent; (e) you have provided JDF false or misleading information relating to your credit application or Account; (f) you fail to perform any other of your obligations under the terms of this Agreement as it may be amended; or (g) you are in default under any other agreement you have with JDF or any of its affiliates.

You agree that, upon your default, JDF may close your Account to future purchases and that JDF may demand immediate payment of your entire Account balance, after giving you any notice and opportunity to cure the default required by applicable law. In addition, you agree that JDF shall have all the rights of a secured creditor under the Uniform Commercial Code and other applicable law.

DELAY IN ENFORCEMENT. You agree that JDF can delay enforcing its rights under this Agreement without losing them.

ELECTRONIC DISCLOSURE. You agree that any notices and disclosures related to your account can be delivered to you in printed form or by electronic means if you provided an electronic mail address to JDF when you applied for this Account or at a later date. Until JDF receives notice of a new electronic mail address, JDF may continue to send such notices and disclosures to the electronic mail address you most recently provided to JDF.

GOVERNING LAW. This Agreement must be approved, and all charges and payments to your Account processed by JDF at its office in Madison, Wisconsin. Therefore, this Agreement and your account will be governed by the substantive law of the United States and to the extent state law applies to this Agreement the substantive law of the State of Wisconsin; regardless of whether or not you reside in Wisconsin. The law of your state of residence will apply to JDF's recovery of any collateral located there.

This is the entire Agreement between you and JDF relating to your Multi-Use Account and no oral changes can be made.

Invalidity of any provision of this Agreement shall not affect the validity and enforceability of the remainder of its terms.

CHANGING THIS AGREEMENT. IMPORTANT: READ BEFORE SIGNING. THE TERMS OF THIS AGREEMENT SHOULD BE READ CAREFULLY BECAUSE ONLY THOSE TERMS IN WRITING ARE ENFORCEABLE. NO OTHER TERMS OR ORAL PROMISES NOT CONTAINED IN THIS WRITTEN CONTRACT MAY BE LEGALLY ENFORCED. YOU MAY CHANGE THE TERMS OF THIS AGREEMENT ONLY BY ANOTHER WRITTEN AGREEMENT. You agree that JDF may change this Agreement, including the Finance Charge Calculation and the APR, at any time, by providing prior notice to you. To the extent that the law permits and JDF indicates in the notice, the changes will apply to your existing Account balance as well as to future transactions.

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT. To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. What this means for you: When you open an account, you will be asked for your name, address, date of birth, and other information that will allow JDF to identify you. You may also be asked to show your driver's license or other identifying documents.

Your choice to limit marketing.

- John Deere Financial, f.s.b. ("JDF"), and its credit affiliates are providing this notice. They include Deere & Company, Deere Credit, Inc., and John Deere Construction & Forestry Company.
- You may limit the JDF affiliate Deere companies, such as the manufacturing, credit, leasing and insurance affiliates, from marketing their products or services to you based on your personal information that they receive from JDF. This information may include your income, account history, and credit score.
- Your choice to limit marketing offers from the JDF affiliate Deere companies will apply for at least 5 years from when you tell us your choice. Once that period expires, you will receive a renewal notice that will allow you to continue to limit marketing offers from JDF affiliate Deere companies for at least another 5 years.
- To limit marketing offers, contact us (1-800-356-9033).





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THUNDERSTRUCK pg. 76 **NEW**



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