



VEGETABLES CATALOGUE

2016-2017



TAKII SEED

Creating Tomorrow Today

Dear Customer,

We are delighted to present our vegetable seeds catalogue for 2016/2017 that contains our wide range of vegetable varieties for the professional grower. These modern varieties, which have been developed to meet today's highly demanding market requirements, are the result of a long history of plant breeding. As a matter of fact, the 2015/2016 season marks two important milestones for Takii. Our mother company in Japan is celebrating its 180-year anniversary while Takii Europe B.V. is commemorating its establishment 25 years ago.

As always, our area sales managers, exclusive distributors and product specialists in many countries will be available to assist you in achieving the very best results with our varieties.

We thank you very much for the trust and confidence you have shown in us and our varieties over all these years, and we wish you excellent growing conditions in the upcoming season!

Best regards,

Takii Europe B.V.

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Content



Leafy crop

Cabbage white round	6
Cabbage white flat	9
Cabbage savoy	10
Pointed cabbage	11
Collard	12
Tronchuda / Beira	13
Cabbage red	13
Chinese cabbage	14
Broccoli	15
Cauliflower	15
Kohlrabi	16
Stem Celery	17

Root crop

Onion overwintering	20
Onion long day	21
Bunching onion	24
Carrot	24
Turnip	26
Radish	27

Fruit crop

Melon	30
Watermelon	31
Squash	35
Tomato	36

Soil fertilizers

Tagetes	41
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Rootstocks

Eggplant rootstock	44
Pepper rootstock	44
Tomato rootstock	45
Cucumber rootstock	45
Melon rootstock	46
Watermelon rootstock	46

Product specifications	48
General definitions	49
Disease coding	50
General terms and conditions	54
Definition of the terms	56





LEAFY CROP

Cabbage white round

Brassica oleracea (capitata group)

Ortus F1

- **Type:** Slow bolting early cabbage
- **Market:** Early fresh market
- **Maturity:** 55 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 66,000 plants
- **Head size*:** 0.8-1.5 kg

Description: Strong grower with high yield potential. Strong against bolting. Low sensitivity for cracking. Not suitable for protected cultivation.



Ortus F1

Sunta F1

- **Type:** Slow bolting early cabbage
- **Market:** Early fresh market
- **Maturity:** 62 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 66,000 plants
- **Head size*:** 1.0-1.5 kg

Description: Early cabbage with very high uniformity in shape and size with excellent taste. Attractive shiny green colour.



Sunta F1

NEW

TCA-520 F1

- **Type:** Early large size
- **Market:** Fresh market
- **Maturity:** 65-70 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 62,000 plants
- **Head size*:** 1.5-2.0 kg
- **Resistance:** Foc (HR)

Description: Vigorous plant for early season. Strong adaptability under various conditions. Recommended for early processing market and fresh market. Strong against cracking.



TCA-520 F1

Cabbage white round

Brassica oleracea (capitata group)

Shelta F1

- **Type:** All-season medium sized cabbage
- **Market:** Fresh market
- **Maturity:** 70 -80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 62,000 plants
- **Head size*:** 1.5-2.0 kg
- **Resistance:** Foc (HR)

Description: All-season white cabbage with strong bolting tolerance. Very uniform with attractive dark wrapping leaves. Excellent field stand ability.



Shelta F1

NEW

Predeco F1

- **Type:** Summer cabbage
- **Market:** Fresh market
- **Maturity:** 80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 40,000 - 60,000 plants
- **Head size*:** 1.5-2.5 kg

Description: High uniform heads with dense structure and excellent colour makes a nice presentation in boxes possible. Early maturity in its segment. Predeco F1 is strong against cracking and can be kept in the field for larger sized head for processing purpose.



Predeco F1

Verdeco F1

- **Type:** Summer cabbage
- **Market:** Fresh market
- **Maturity:** 80-85 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 40,000 - 60,000 plants
- **Head size*:** 1.5-2.0 kg

Description: Summer cabbage with high uniformity, attractive colour and early maturity. Fresh market variety recommended for spring to autumn. Produces heads with a nice green colour and compact internal structure. Very strong against anthocyanin colouring. Easy to harvest due to slightly higher stem.



Verdeco F1

Cabbage white round

Brassica oleracea (capitata group)

Cheers F1

- **Type:** Large summer cabbage
- **Market:** Fresh market
- **Maturity:** 75 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 30,000-50,000 plants
- **Head size*:** 3.0-4.0 kg
- **Resistance:** Xcc (IR), Foc (HR)

Description: Easy growing variety with strong frame. Grows very vigorous and uniform. Blue-green head and upright wrapping leaves. Strong against cracking under high temperatures. Good for autumn to winter harvesting. High resistance to Fusarium and intermediate resistance to Black rot.



Compass F1

Strukta F1

- **Type:** Early large heading autumn cabbage
- **Market:** Fresh market and processing
- **Maturity:** 110 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 25,000-40,000 plants
- **Head size*:** 3.0-5.0 kg
- **Resistance:** Foc (HR)

Description: Vigorous variety with good quality for salads and processing (sauerkraut); strong in hot and dry conditions with very good field stand ability. Very dense head with good taste and attractive dark green colour. Suitable for short storage and winter crop in moderate areas.



Strukta F1



Cheers F1

Compass F1

- **Type:** Large summer cabbage
- **Market:** Fresh market
- **Maturity:** 80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 35,000 - 40,000 plants
- **Head size*:** 3.0-4.0 kg
- **Resistance:** Xcc (IR), Foc (HR)

Description: All-round cabbage with semi-open internal structure. Easy to grow, also under stressful conditions. Can be grown in different seasons under moderate climate conditions.



Strukta F1

* (under recommended distance)

Cabbage white round

Brassica oleracea (capitata group)

Storka F1

- **Type:** Medium late storage cabbage
- **Market:** Fresh market and processing
- **Maturity:** 130 days
- **Recommended transplanting season:** July - September
- **Storability:** Medium
- **Recommended plant density:** 40,000 - 50,000 plants
- **Head size*:** 3.0-4.0 kg

Description: Dense cabbage with thin smooth leaves. Almost no anthocyanin coloration. Also suitable for high density cultivation for small sized heads. Recommended for processing.



Storka F1

Cabbage white flat

Brassica oleracea (capitata group)

Autumn Queen F1

- **Type:** Early
- **Market:** Fresh market
- **Maturity:** 60 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 50,000 plants
- **Head size*:** 1.5-3.0 kg
- **Plant size:** Medium open
- **Resistance:** Foc (HR)

Description: Bright green flat cabbage. Fast and vigorous grower. Strong against cracking. Recommended for fresh market and early processing.



Green Rich F1

Green Rich F1

- **Type:** Medium
- **Market:** Fresh market
- **Maturity:** 70 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 40,000-60,000 plants
- **Head size*:** 1.5-2.0 kg
- **Plant size:** Compact
- **Resistance:** Foc (HR)

Description: Flat cabbage with attractive colour and excellent taste. Also recommended for high density. Very good weight and size potential. Slow bolting. Semi upright plant habit with large frame. Uniform head even under high density.

* (under recommended distance)

Cabbage white flat

Brassica oleracea (capitata group)

Green Lunar F1

- **Type:** Medium
- **Market:** Fresh market
- **Maturity:** 80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 50,000 plants
- **Head size*:** 1.5-3.0 kg
- **Plant habit:** Medium open
- **Plant size:** Medium
- **Resistance:** Foc (HR), Xcc (IR)

Description: Easy growing variety. Semi flat with bright green colour. Strong against bolting. Uniform grower. Anthocyanin free under cold temperature. Excellent field stand ability. Also recommended for overwintering in moderate areas. Suitable for winter crop.



Green Lunar F1

Cabbage Savoy

Brassica oleracea (capitata group)



Sonho F1

- **Type:** Savoy / Milan
- **Maturity:** 85 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 50,000-70,000 plants
- **Head size:** 2.5-3.5 kg
- **Plant size:** Medium to large
- **Head colour:** Dark green
- **Resistance:** Foc (HR)

Description: Slightly later in maturity compared to Convoy F1. The larger head size makes the variety more productive. Its attractive colour, nice blistering and good uniformity makes Sonho F1 a reliable variety for different seasons.



Sonho F1

Cabbage Savoy

Brassica oleracea (capitata group)

Convoy F1

- **Type:** Savoy / Milan
- **Maturity:** 80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant distance:** 50,000-70,000 plants
- **Head size:** 2.0-3.0 kg
- **Blistering:** Medium
- **Plant size:** Medium to large
- **Head colour:** Medium dark green

Description: Standard variety in South Europe. Can be used in all different sowing seasons. Good producing variety with wide adaptability. The leaves are medium blistered. Strong against cracking.



Convoy F1

Pointed cabbage

Brassica oleracea (capitata group)



TCA-531 F1

- **Type:** Pointed cabbage
- **Maturity:** 68 days
- **Recommended harvest season:** Autumn / Winter
- **Recommended plant density:** 50,000 plants
- **Head size:** 1.2 - 1.5 kg
- **Plant size:** Medium vigorous

Description: Uniform head with short core. The head is smooth and dense (heavy). Due to its resistance to cracking, TCA-531 F1 has a relatively long harvest window.



TCA-531 F1



Collard (non-heading cabbage)

Brassica oleracea (acephala group)

HI-Crop F1

- **Type:** Collard
- **Maturity:** Medium early
- **Plant size:** Medium large
- **Plant height:** 50 - 60 cm
- **Leaf color:** Deep green
- **Leaf structure:** Semi-savoy

Description: HI-Crop F1 has a wide adaptability and can be grown under a wide range of conditions. The leaves have an attractive green colour. Very productive.



HI-Crop F1

TCL-499 F1

- **Type:** Collard
- **Maturity:** Medium early
- **Plant size:** Large
- **Plant height:** 50 - 70 cm
- **Leaf color:** Very dark green
- **Leaf structure:** Semi-savoy

Description: TCL-499 F1 can be grown year round under different conditions. The plant is producing dark green leaves for multiple harvesting periods. TCL-499 F1 is especially bred for its high level of anti-oxydants (sulforaphane, lutein and carotene). High in vitamin C and vitamin K!



Tronchuda / Beira (non-heading cabbage)

Brassica oleracea (acephala group)

TCA-532 F1

- **Type:** Early
- **Plant size:** Large
- **Plant height:** 50 - 70 cm
- **Leaf color:** Dark to dark green with pure white veins
- **Leaf structure:** Waved

Description: Uniform F1 hybrid Tronchuda for autumn and winter cultivation. Thick sweet tasting white veins with attractive dark green leaves. Vigorous grower with open plant habit. Strong against calcium deficiency



TCA-532 F1

Cabbage Red

Brassica oleracea (capitata group)

Pretino F1

- **Type:** Very early
- **Market:** Fresh
- **Maturity:** 65 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 40,000-60,000 plants
- **Head size*:** 1.5-2.0 kg
- **Plant habit:** Open
- **Plant size:** Medium

Description: This red cabbage has a good bolting resistance and makes a round firm head. At maturity stage, the attractive red colour makes Pretino F1 very suitable for the early fresh market cultivations.



Pretino F1

Ruby Perfection F1

- **Type:** Medium early
- **Market:** Fresh market
- **Maturity:** 80 days
- **Recommended transplanting season:** February - March / July - September
- **Recommended plant density:** 40,000-60,000 plants
- **Head size*:** 1.5-2.0 kg
- **Plant size:** Medium

Description: Highly productive. Easy grower with a very solid head. Strong against cracking. Attractive dark internal colour.



Ruby Perfection F1

* (under recommended distance)

Chinese Cabbage

Brassica campestris (pekinensis group)

Questar F1

- **Type:** Spring to early summer
- **Maturity:** 55 days
- **Market:** Fresh market, processing
- **Recommended transplanting season:** March
- **Bolting resistance:** Slow to bolt
- **Head shape:** Cylindrical
- **Weight:** 0.8-1.5 kg
- **Recommended plant density:** 65,000 plants
- **Resistance:** Good resistance to clubroot

Description: F1 Chinese cabbage with a medium-large frame and dark green outer leaves, firm well wrapped heads are elongated and weight up to 1.5 kg. Slow to bolt and can be harvested approximately 55 days after sowing.



Questar F1



Preduro F1

- **Type:** Early
- **Maturity:** 55 days
- **Market:** Fresh market
- **Recommended transplanting season:** April to November
- **Bolting resistance:** Strong
- **Head shape:** Cylindrical
- **Weight:** 0.8-1.1 kg
- **Recommended plant density:** 65,000 plants
- **Resistance:** Pb (IR)

Description: Fast developing cabbage with good weight and dark green colour. Its cylindrical shape makes Preduro F1 easy to pack. Strong against bolting and recommended for the first outdoor cultivation.



Preduro F1

Orient Surprise F1

- **Type:** Medium early
- **Maturity:** 60 days
- **Market:** Fresh market and processing
- **Recommended transplanting season:** April to November
- **Bolting resistance:** Strong
- **Head shape:** Semi cylindrical
- **Weight:** 1.0-1.8 kg
- **Recommended plant density:** 65,000 plants
- **Resistance:** Pb (IR)

Description: Very uniform variety with attractive internal yellow colour. Bolting resistant. Suitable for the early open field- and summer production. Orient Surprise F1 is fast filling, produces the perfect weight for the fresh market and is easy to harvest. Strong against tipburn and pepper spot.



Orient Surprise F1

Broccoli

Brassica oleracea (botrytis group)

Atlantis F1

- **Type:** Fresh market / processing
- **Recommended harvest season:** November - January
- **Maturity:** 75 days
- **Plant habit:** Tall
- **Shape of head:** Smooth
- **Colour of head:** Dark green
- **Bead size:** Medium small
- **Weight:** 400-500 gram

Description: Healthy plant with vigorous growth and high uniformity. Upright plant habit with dark green colour. Nice dome-shaped head with fine beads. Good marketable curd size and strong against hollow stems.



Atlantis F1

Quinta F1

- **Type:** Fresh market
- **Recommended harvest season:** November - January
- **Maturity:** 80 days
- **Plant habit:** Medium tall
- **Shape of head:** Smooth
- **Colour of head:** Medium dark
- **Bead size:** Medium
- **Weight:** 400-500 gram

Description: Medium strong growing variety with high quality curd.



TBR-508 F1

- **Type:** Fresh market
- **Recommended harvest season:** November - April
- **Maturity:** 115-120 days (Italy) / 95-100 days (Spain)
- **Plant habit:** Vigorous
- **Shape of head:** Dome
- **Colour of head:** Medium dark
- **Bead size:** Fine
- **Weight:** 500-600 gram

Description: Strong growing variety with upright plant habit. Recommended for the main harvest season for fresh market and industry. Excellent uniformity with good shelf-life. High productivity.



TBR-508 F1

Cauliflower

Brassica oleracea (botrytis group)

Snow Crown F1

- **Season:** Summer to autumn
- **Maturity:** 70 days
- **Curd size:** 850 gr

Description: Easy grower for Southern Europe. Nice white curd with excellent quality. Performs well under various conditions. Semi dome shape.



Snow Crown F1

Cauliflower

Brassica oleracea (botrytis group)

Snow Prince F1

- **Season:** Late
- **Maturity:** 140 days
- **Curd size:** 900 gr

Description: Late variety with nicely dome shaped curd with pure white colour. Very good texture.



Snow Prince F1



Snow March F1

Snow March F1

- **Season:** Late winter
- **Maturity:** 170 days
- **Curd size:** Dome

Description: Standard variety for the late production season.

Kohlrabi

Brassica oleracea (gongylodes group)

Timpano F1

- **Maturity:** Extra early
- **Colour of tuber:** Light green
- **Colour of foliage:** Medium green
- **Plant habit:** Medium upright
- **Recommended harvest season:** Spring

Description: Earliest maturing kohlrabi. Very strong bolting tolerance. Attractive large light green bulb with a smooth skin.



Timpano F1

Kohlrabi

Brassica oleracea (gongylodes group)

Verano F1

- **Maturity:** Medium
- **Colour of tuber:** Pale green/white
- **Colour of foliage:** Dark green
- **Plant habit:** Upright
- **Recommended harvest season:** Spring

Description: Verano F1 has an erect plant habit with dark green broad leaves. The tuber is flat globe shaped with a nice smooth pale greenish coloured skin. Internally the tuber is white with a firm and crispy texture. The variety has good field stand ability; it keeps its colour well and is strong against cracking. It is easy to cut. The variety has a well-developed root system and although on a long stem the plant is very stable and not lodging. Recommended for open field production.



Verano F1

Stem Celery

Apium graveolens (var. dulce)

Darklet F1

- **Type:** Spring to autumn
- **Maturity:** Early
- **Colour:** Dark green
- **Stems:** Medium

Description: Bolting resistant variety. Dark green colour, uniform and thick leaves. Early and high production.



Darklet F1



Top Seller F1

Top Seller F1

- **Type:** Late spring to autumn
- **Maturity:** Early to medium late
- **Colour:** Medium dark green
- **Stems:** Medium to long

Description: Medium green coloured celery with medium long leaves. Upright plant habit for close planting. Recommended for outdoor cultivation. Suitable for processing.



ROOT CROP

Onion Overwintering

Allium cepa

NEW

Telesto F1 (TTA-715)

- **Type:** Overwintering
- **Maturity:** Early
- **Latitude range:** 30° - 50 °
- **Recommended market:** Fresh market
- **Plant habit:** Medium
- **Bulb shape:** Round
- **Average size:** Large

Description: Telesto F1 (TTA-715) is an early overwintering onion with large uniform round size and attractive dark brown colour. The variety develops a strong foliage.

Sonic F1

- **Type:** Overwintering
- **Maturity:** Early
- **Latitude range:** 30° - 50 °
- **Recommended market:** Fresh market
- **Plant habit:** Medium
- **Bulb shape:** Round
- **Average size:** Medium

Description: Sonic F1 is an early overwintering onion. The variety develops a green foliage with medium long leaves. The bulbs are round to slightly flat round with a nice skin and a thin neck.



Sonic F1

Tough Ball F1

- **Type:** Overwintering
- **Maturity:** Early to medium early
- **Latitude range:** 45° - 55°
- **Recommended market:** Fresh market
- **Plant habit:** Medium strong
- **Bulb shape:** Round
- **Average size:** Medium to large

Description: Tough Ball F1 is a fast growing variety with dark green foliage. The bulbs are round to high round with a thin neck. The flesh is firm and the skins are strong with a yellow brown colour. Tough Ball F1 is a high yielding variety and can be used for sowing at lower density.



Tough Ball F1

Onion Overwintering

Allium cepa

Boreas F1

- **Type:** Overwintering
- **Maturity:** Medium early
- **Latitude range:** 45° - 55 °
- **Recommended market:** Fresh market
- **Plant habit:** Strong
- **Bulb shape:** Globe
- **Average size:** Medium to large

Description: Vigorous growing overwintering onion with wide adaptability and high production. Strong plant with well developed root system. The attractive dark green foliage makes the variety also suitable for green harvesting. Round bulb shape with firm skins.



Boreas F1



Galatea F1

Galatea F1

- **Type:** Overwintering
- **Maturity:** Medium
- **Latitude range:** 45° - 55°
- **Recommended market:** Medium
- **Plant habit:** Medium to strong
- **Bulb shape:** Round
- **Average size:** Medium

Description: A high quality onion for Central / South Europe. Galatea F1 has erect strong healthy foliage with a dark green colour. The bulbs are medium to large with a round, slightly flat shape, thin neck and 3-4 strong brown skins. Galatea F1 is uniform in size.

Onion Long day

Allium cepa

Reks F1

- **Type:** Long Day - Intermediate
- **Maturity:** Very early
- **Latitude range:** 35° - 55°
- **Recommended market:** Fresh market
- **Plant habit:** Medium
- **Bulb shape:** Round
- **Average size:** Medium

Description: Reks F1 belongs to our very early long day onion assortment. This variety is highly productive and produces round, uniform and dark brown bulbs. The taste is mild to sweet. Sowing time starts at the end of September.



Reks F1

Onion Long day

Allium cepa

Verdon F1

- **Type:** Long Day
- **Maturity:** Very early
- **Latitude range:** 35°- 55°
- **Recommended market:** Fresh market
- **Plant habit:** Medium
- **Bulb shape:** Round to high round
- **Average size:** Medium to large

Description: Verdon F1 is a very early productive variety. The variety gives a healthy, half open, dark green plant. The bulb is round to high round with a thin neck and has a high percentage of single center. The variety quickly forms 2-3 dry skins. The colour is dark brown to bronze.



Verdon F1

Bonus F1

- **Type:** Long Day
- **Maturity:** Early
- **Latitude range:** 35°-55°
- **Recommended market:** Fresh market
- **Bulb shape:** Round
- **Average size:** Medium to large

Description: Bonus F1 is an extremely uniform producing medium sized onion with an almost perfect round shape and medium dark skin. The production is high due to its size and uniformity. In Southern Europe sowing of Bonus F1 for the early season is possible from November till February.



Bonus F1

Medusa F1

- **Type:** Long Day
- **Maturity:** Early
- **Latitude range:** 35°-55°
- **Recommended market:** Fresh market
- **Bulb shape:** Globe
- **Skin quality:** Good
- **Average size:** Medium to large

Description: Medusa F1 is especially developed for South- & East part of Europe. The strong root system and powerful plant habit make the variety tolerant against the more stressful conditions, like high temperature. Due to its size, uniformity and easy way of growing, Medusa F1 is a reliable variety with high yielding capacity.



Medusa F1

Onion Long day

Allium cepa



TEON 307 F1

- **Type:** Long day
- **Maturity:** Medium late
- **Latitude range:** 35°-45°
- **Recommended market:** Fresh market/long storage
- **Plant habit:** Erect
- **Bulb shape:** Round to high round
- **Average size:** 60/80 mm - 80+ under low density

Description: TEON 307 F1 is recommended for the mediterranean medium late / storage market. The plant has a strong root system, remarkable erect plant habit and healthy green foliage. The perfectly round shaped bulb has an attractive brown colour right after harvesting which makes the variety suitable for direct sales. Nevertheless, TEON 307 F1 is especially bred for the long storage cycle.

Vuelta F1

- **Type:** Long day
- **Maturity:** Late
- **Latitude range:** 35°-45°
- **Recommended market:** Fresh market/long storage
- **Plant habit:** Medium erect
- **Bulb shape:** Perfect round
- **Firmness:** Firm
- **Skin quality:** Good
- **Average size:** 60/80 mm and 80+ (under low density)

Description: Vuelta F1 is a variety with focus on the Mediterranean market. The plant habit is semi-erect with thick long leaves and a deep green colour combined with thin wax layer. Vuelta F1 can be used for big sized onion production but at normal density it gives perfect round smaller sized bulbs. With both growing techniques Vuelta F1 has a relatively thin neck combined with a smooth and shiny dark brown coloured skin. Its firmness and skin quality gives Vuelta F1 an excellent keeping quality for long storage.



Vuelta F1

Bunching onion

Allium fistulosum

Tycoon F1

- **Type:** All season
- **Maturity:** Medium early

Description: Tycoon F1 is a productive variety with attractive green coloured long erect foliage. Thanks to the erect foliage, Tycoon is easy to harvest and to clean. Tycoon has a good resistance to higher temperatures.

Estafette F1

- **Maturity:** Medium
- **Resistance:** Strong against Downey Mildew.

Description: Very productive variety with good resistance to higher temperatures. Attractive green colour. Harvest period summer-autumn. Single stalk. Attractive green colour. Longer, more erect foliage. Long white stem possible with earthing up.



Feast

Feast

- **Type:** All season
- **Maturity:** Medium

Description: Very productive variety with good resistance to higher temperatures. Harvest period autumn. Attractive green coloured and erect foliage.



Tycoon F1



Estafette F1

Carrot

Daucus carota

Fire Wedge F1

- **Type:** Kuroda
- **Maturity:** 120 days
- **Purpose:** Fresh market / industry
- **Length:** 22 cm
- **Shape:** Conical to cylindrical
- **Foliage:** Strong
- **Density (recommended):** 1.2 million
- **Resistances:** Ad (IR)

Description: High yielding variety. The excellent colour (internal and external) makes the variety suitable both for fresh- and processing market. Recommended for moderate climate conditions.



Fire Wedge F1

Carrot

Daucus carota

NEW

Tangerina F1

- **Type:** Kuroda
- **Maturity:** 110 days
- **Purpose:** Fresh market
- **Length:** 18 cm
- **Shape:** Conical to cylindrical
- **Foliage:** Medium
- **Density (recommended):** 1.2 Million
- **Resistances:** Ad (IR)

Description: Easy growing Kuroda carrot with high yield. Tangerina F1 has a good quality and a juicy taste. Medium strong bolting resistance. Recommended for later sowing in moderate climate zones.



Tangerina F1

NEW

Aurantina F1

- **Type:** Kuroda
- **Maturity:** 110 days
- **Purpose:** Fresh market and industry
- **Length:** 22 cm
- **Shape:** Conical to cylindrical
- **Foliage:** Strong
- **Density (recommended):** 1.3 - 1.8 million
- **Resistances:** Ad (IR)

Description: Conical-cylindrical carrot with excellent coloration, internal and external. Healthy strong developing foliage.

NEW

Prominence F1

- **Type:** Kuroda
- **Maturity:** 120 days
- **Purpose:** Fresh market
- **Length:** 20 cm
- **Shape:** Conical to cylindrical
- **Foliage:** Strong
- **Density (recommended):** 1.2 million
- **Resistances:** Ad (IR)

Description: High quality carrot for fresh market purpose. Recommended for moderate growing areas.



Prominence F1

Turnip

Brassica campestris (rapifera group)

Fuku Komachi F1

- **Colour:** Pure white
- **Bolting resistance:** Strong
- **Recommended harvest season:** Summer to winter
- **Length of foliage:** Semi-long
- **Root diameter:** 5-10 cm
- **Tuber shape:** Globe shape
- **Maturity:** 40-45 days

Description: Semi-long leave type. Suitable for early cropping period. Resistant to bolting. 5 cm diameter, globe root shape.



Natsu Komachi F1

Falko F1

- **Colour:** Purple top
- **Bolting resistance:** medium
- **Recommended harvest season:** Summer to winter
- **Length of foliage:** medium
- **Root diameter:** 10-15 cm
- **Tuber shape:** Globe shape
- **Maturity:** 55 days

Description: Round shaped turnip with high uniformity. Suitable for main season with high yielding capacity. Strong against high temperatures.



Fuku Komachi F1

Natsu Komachi F1

- **Colour:** White
- **Bolting resistance:** Strong
- **Recommended harvest season:** Summer to winter
- **Length of foliage:** Short
- **Root diameter:** 5-10 cm
- **Tuber shape:** Globe shape
- **Maturity:** 40-45

Description: Deep white, smooth turnip with small leave insertion. Short leaves. Also recommended for greenhouse production. Resistant to bolting. Early season.



Falko F1

Radish

Raphanus sativus

April Cross F1

- **Colour:** White
- **Bolting resistance:** Very strong
- **Recommended harvest season:** Late winter, early spring
- **Root length:** 40 cm
- **Root weight:** 800 gr
- **Maturity:** Early

Description: Market leader for early season due to its slow bolting characteristic. White neck, good shape for fresh market. Late pithiness. Root 40 cm in length and 6 cm diameter.



TDA-763 F1

- **Colour:** white
- **Bolting resistance:** Strong
- **Recommended harvest season:** November - April
- **Root length:** 35 cm
- **Root weight:** 800-900 gr
- **Maturity:** early

Description: Highly uniform root in size and shape. The very smooth root has an average length of 30-35 cm and an average diameter of 5-6 cm. Medium strong plant with dark foliage.



Andes F1



April Cross F1

Andes F1

- **Colour:** White
- **Bolting resistance:** Medium strong
- **Recommended harvest season:** Late winter, early spring
- **Root length:** 40 cm
- **Root weight:** 900 gr
- **Maturity:** 60 days

Description: Daikon variety for the late spring sowing. Highly productive quality root with attractive white colour and good internal structure. Strong healthy foliage.

Minowase Summer Cross No. 3 F1

- **Colour:** White
- **Bolting resistance:** Medium
- **Recommended harvest season:** Late Autumn - winter
- **Foliage:** Medium
- **Root length:** 40 cm
- **Root weight:** 800 gr
- **Maturity:** 50 days

Description: Pure white long daikon radish, 6.5 cm diameter. Mino early type radish. Smooth root with rounded point. Popular variety for autumn harvest. Excellent quality for fresh market, cooking, pickling and salad use.





FRUIT CROP



TAKII SEED

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Melon

Cucumis melo

NEW

Pasodoble F1

- **Type:** Galia
- **Cultivation:** Greenhouse
- **Fruit weight:** 1.3-1.5 kg
- **Flesh colour:** Greenish white
- **Resistance:** HR: Fom 0,1/ MNSV/Px1,2,5

Description: Pasodoble F1 is a high yielding Galia melon, recommended for the medium early greenhouse cultivation. Its vigorous plant habit and uniform female flowering makes that the fruits mature equally with good size. The fruit has a deep yellow colour and well covered netting. The flesh colour goes from green to white and has an attractive juicy structure with high brix. Pasodoble F1 has an excellent shelf-life and is especially recommended for long distance transportation.



Pasodoble F1

NEW

Fandango F1

- **Type:** Galia
- **Cultivation:** Open field
- **Fruit weight:** 1.2-1.4 kg
- **Flesh colour:** Greenish white
- **Resistance:** HR: Fom 0,1/ MNSV/Px1,2,5

Description: Galia melon for the medium early harvesting period in open field. Very uniform fruits with attractive yellow colour, elegant netting, high brix and good internal structure. A concentrated flowering period of the female flowers, makes a uniform fruit setting, resulting in a uniform harvest in colour, size and maturity.



Fandango F1

Exalto F1

- **Type:** Cantaloupe
- **Cultivation:** Open field
- **Fruit weight:** 1.5 kg
- **Flesh colour:** Orange
- **Resistance:** HR: Fom 0,2

Description: Easy growing melon with medium vigorous plant growth and very uniform fruit shape. Recommended for the late harvest period. High brix with attractive crispy structure and deep taste.



Exalto F1

Melon

Cucumis melo

Honeycomb F1

- **Type:** Honey Dew
- **Cultivation:** Indoor and open field
- **Fruit weight:** 2.5 kg
- **Flesh colour:** white
- **Resistance:** HR: Fom 0,2

Description: Large fruit with excellent flavour with high brix (15). Firm flesh with small cavity makes the variety especially suited for processing purpose (fruit salad).



SPS-3 F1



Honeycomb F1

SPS-3 F1

- **Type:** Piel de Sapo
- **Cultivation:** Open field
- **Fruit weight:** 2.5-3.5 kg
- **Flesh colour:** White

Description: Easy growing melon with medium vigorous plant growth and very uniform fruit shape. Recommended for the late harvest period. High brix with attractive crispy structure and deep taste.

Watermelon

Citrullus lanatus

Ingrid F1

- **Type:** Dragon - Icebox
- **Maturity:** 65 days after sowing
- **Recommended cultivation:** Greenhouse/tunnel/open field
- **Recommended transplanting season:** Early
- **Fruit weight:** 2-3 kg
- **Fruit colour:** Light green with stripes
- **Fruit shape:** Round

Description: Striped Ice box watermelon with early maturity and medium plant vigour and high production. Shape is round/oval with 2-3 kg in weight. High sugar content with attractive bite (internal structure). Strong against cracking with excellent keeping quality. High brix (12-13). Also recommended as pollinator.



Ingrid F1

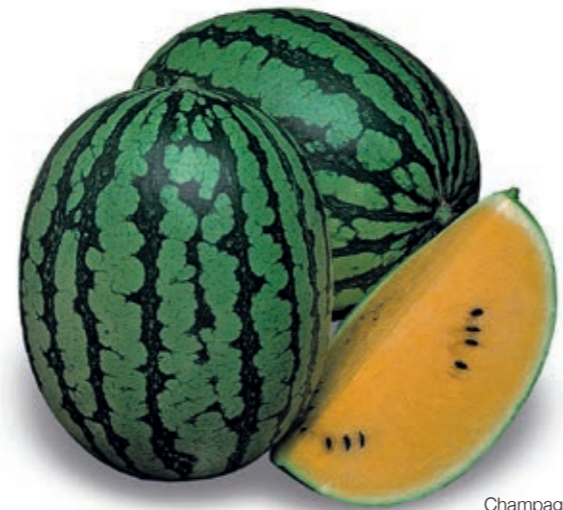
Watermelon

Citrullus lanatus

Champagne F1

- **Type:** Yellow fleshed
- **Maturity:** 73-80 days after sowing
- **Recommended cultivation:** Greenhouse/tunnel/open field
- **Recommended transplanting season:** Medium early
- **Fruit weight:** 2.5-3.5 kg
- **Fruit colour:** Green with light green stripes
- **Fruit shape:** Elongated

Description: Yellow fleshed watermelon. Crispy structure and very sweet, medium-small sized fruit with good fruit setting. Good shipping and shelf-life. Fruit weight 3.5-4.5 kg, deep globe shaped with dark green stripes.



Champagne F1

NEW

Serenade F1 (T-107)

- **Type:** Seedless watermelon (sugar baby)
- **Maturity:** 75 days
- **Recommended cultivation:** Greenhouse
- **Fruit weight:** 7 kg
- **Fruit colour:** Dark green with light striped
- **Fruit shape:** Round

Description: Seedless watermelon for the early cultivation. Especially recommended for the greenhouse production. Good shelf life and transportability. Excellent internal crispy structure with high brix. Serenade F1 can be combined with strong growing rootstock varieties.



Serenade F1 (T-107)

Dulzor F1

- **Type:** Sugar Baby
- **Maturity:** 75-85 days after sowing
- **Recommended cultivation:** Greenhouse/tunnel
- **Recommended transplanting season:** Early
- **Fruit weight:** 5-6 kg
- **Fruit colour:** Black
- **Fruit shape:** Round to slightly elongated

Description: Early Sugar Baby watermelon especially recommended for protected cultivation. Easy to grow. Very high fruit quality with uniform internal colour, high brix and excellent crispy structure.



Dulzor F1

Watermelon

Citrullus lanatus

Carmen F1

- **Type:** Crimson Sweet
- **Maturity:** 75-85 days after sowing
- **Recommended cultivation:** Greenhouse/tunnel/open field
- **Recommended transplanting season:** Early
- **Fruit weight:** 8.0 kg
- **Fruit colour:** Green with dark green stripes
- **Fruit shape:** Round

Description: Early round shaped Crimson Sweet F1 type with average fruit weight of 7-9 kg. Excellent uniformity and fresh green colour. The red flesh is crispy with a high sugar content. Recommended for early harvest. Suitable for grafting with Lagenaria or Maxima x Moschata.



Carmen F1

NEW

E-48 F1

- **Type:** Crimson Sweet
- **Maturity:** Early
- **Recommended cultivation:** Greenhouse/tunnel/open field
- **Fruit weight:** 7-10 kg
- **Fruit colour:** Green with dark green stripes
- **Fruit shape:** Round to Oblong

Description: E-48 F1 has medium vigorous but easy growing plant with early fruit setting. The oblong shaped fruits are uniform with a weight of around 7-10 kg (depending on fertilization) and attractive green striped. E-48 F1 has a deep red coloured flesh, high brix and an attractive crispy structure. For its earliness, quality and size is E-48 F1 especially recommended for the supermarket sales. To maximise the production, It is recommended to graft E-48 F1 with a vigorous rootstock.



E-48 F1



Watermelon

Citrullus lanatus

E-42 F1

- **Type:** Crimson Sweet
- **Maturity:** Early
- **Recommended cultivation:** Tunnel/open field
- **Fruit weight:** 12-14 kg
- **Fruit colour:** Green rind with dark green broad stripes
- **Fruit shape:** Oblong shape

Description: E-42 F1 is a medium vigorous variety with uniform large fruits for the early and main growing season. The fruit has a high brix and attractive crispy structure. It is recommended to grow E-42 F1 without rootstock only.

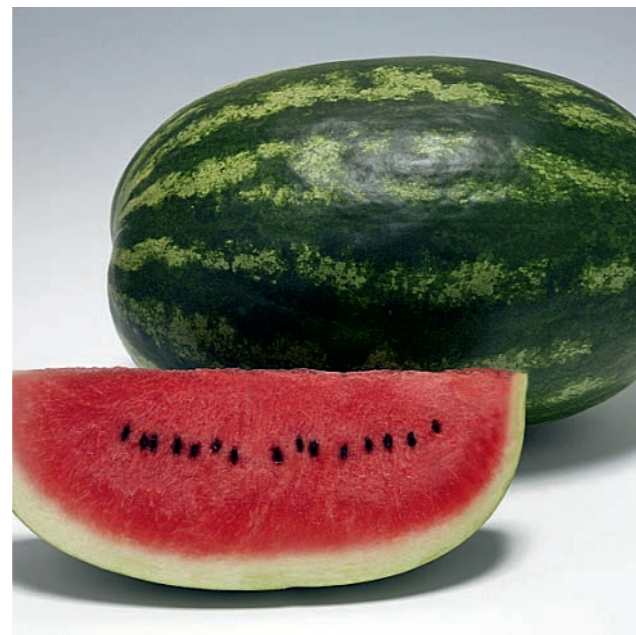


E-42 F1

Amphion F1

- **Type:** Crimson Sweet
- **Maturity:** Medium early
- **Recommended cultivation:** Tunnel/open field
- **Fruit weight:** 10-12 kg
- **Fruit colour:** Green rind with dark green broad stripes
- **Fruit shape:** Oblong shape

Description: Amphion F1 is an early productive variety and develops vigorously even without grafting. The weights is 10-12 kg on average, but can reach 14-18 kg under optimum conditions and grafting. The fruit shape is oblong and has an outstanding beautiful dark skin colour and attractive deep internal red colour with a very good taste and high sugar content (Brix 11-13). It is recommended to grow Amphion F1 without rootstock only.



Amphion F1



Phoenix F1

Phoenix F1

- **Type:** Asian stripe
- **Maturity:** Early
- **Recommended cultivation:** Greenhouse/tunnel/open field
- **Fruit weight:** 14-18 kg
- **Fruit colour:** Pale colour with sharp dark green stripe
- **Fruit shape:** Elongated

Description: Large sized fruit with attractive presentation. Medium strong plant with good fruit setting. Excellent fruit quality with high brix and crispy structure.

Squash

Cucurbita spp. Citrullus lanatus

Uchiki Kuri F1

- **Maturity:** 40 days after flowering
- **Fruit weight:** 1.5 kg
- **Skin colour:** Orange
- **Internal colour:** Orange
- **Shape:** Round elongated
- **Plant habit:** Vine

Description: Very attractive deep orange pumpkin. Very vigorous grower and highly productive. Recommended for kitchen use but also for decoration purpose.



Uchiki Kuri F1

Constanza F1 (TI-151)

- **Maturity:** 40 days after flowering
- **Fruit weight:** 1.5 kg
- **Skin colour:** Dark green
- **Internal colour:** Orange
- **Shape:** Flat-round
- **Plant habit:** Vine

Description: High quality pumpkin with wide adaptability to various growing conditions. Excellent structure with sweet taste. Good shelf life.



Constanza F1 (TI-151)

Delica F1

- **Maturity:** 45-50 days after flowering
- **Fruit weight:** 1.7-2.2 kg
- **Skin colour:** Dark green
- **Internal colour:** Orange
- **Shape:** Flat-round
- **Plant habit:** Vine

Description: First class fruit with good size. Wide adaptability to various growing conditions. Very sweet fruit with good taste and structure. Maturity is medium early. Dark green skin, flat globe shape, thick yellow flesh.



Delica F1

Tomato

Solanum lycopersicon

NEW

TETM-352 F1

- **Plant type:** Indeterminate
- **Type:** Medium
- **Maturity:** Medium early
- **Recommended transplanting season:** Autumn
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 150-170 grams
- **Fruit colour:** Deep red
- **Fruit shape:** Round
- **Resistance:** HR: ToMV 0-2, TSWV, Fol: 0,1, For, Va: 0, Vd: 0, IR: TYLCV

Description: TETM-352 F1 has a very good cold tolerance making it an excellent variety for the long cycle production through winter. It is vigorous and is very well balanced. Even in colder conditions the variety continues to set well and produces fruits that have a deeper red colour than average in winter. TETM-352 F1 produces 4-5 fruits per cluster. The fruits are round to flat round with a slight rough rib and a thick slight erect curly calyx. The fruits change very evenly from medium green to a deep dark red. TETM-352 F1 has very firm fruits with long shelf life.

TETM-352 F1



NEW

TETM-436 F1

- **Plant type:** Indeterminate
- **Type:** Large Beef
- **Maturity:** Medium early
- **Recommended transplanting season:** Spring
- **Recommended cultivation:** Short cycle
- **Fruit weight:** > 250 grams
- **Fruit colour:** Deep red
- **Fruit shape:** Oblate - flat
- **Resistance:** HR: ToMV 0-2, Fol: 0,1 Va: 0, Vd: 0, IR: TYLCV

Description: TETM-436 F1 is a typical large beef tomato with a unique touch. The fruits colour in a Pintón characteristic, but more even way, from bright red externally to deep red internally. It produces four to five fruits per cluster of each 250 grams or over. The fruit shape is oblate with smooth wide ribs on the shoulder and a large slightly thin calyx. The firmness is excellent resulting in a long shelf life. TETM-436 F1 has a very strong vigorous plant habit making it also suitable for long cycle cropping. The internodes are medium long. The slight dragging leaves give the plant a compact structure.

Tomato

Solanum lycopersicon

NEW

TI-169 F1

- **Plant type:** Indeterminate
- **Type:** Beef Momotaro
- **Maturity:** Early
- **Recommended transplanting season:** Spring
- **Recommended cultivation:** Short cycle
- **Fruit weight:** 180-250 grams
- **Fruit colour:** Yellow
- **Fruit shape:** Oblong - flat round
- **Resistance:** HR: ToMV 0-2, Ff: A-E, Fol: 0,1, For, Va: 0, Vd: 0, IR: Ma/Mi/Mj

Description: TI-169 F1 is a Momotaro tomato with a deep yellow to orange colour and high on Cis-Lycopen. The flavour is well balanced with a sweet Umami taste. The variety produces a compact cluster with 3-5 fruits. The fruit shape is oblong to flattish round with a bit short erect calyx. The variety has a strong root system allowing a good setting under colder temperatures.



TI-169 F1

NEW

Pink Treat F1 (TEX2721)

- **Plant type:** Indeterminate
- **Type:** Single pick
- **Maturity:** Early
- **Fruit weight:** 180-250 grams
- **Fruit colour:** Pink
- **Fruit shape:** Flattish globe shaped
- **Resistance:** HR: ToMV 0-2, Ff: A-E, Fol: 0,1, For, Va: 0, Vd: 0, Sl, IR: Ma/Mi/Mj

Description: Pink Treat F1 is an early pink tomato variety with slightly flattened fruits with smooth ribbed shoulders. Internally the fruits are multi loculars (real beef). Pink Treat F1 colours very easily and quickly. The fruits are deep pink and uniform in colour, throughout the whole fruit. The wall of the fruit is medium thick making the variety suitable for transportation. The internal quality is delicate of texture and taste. The variety combines sweetness with a light acidity making it an example of Umami taste experience. The plant is well balanced with medium long internodes and a semi open character. It produces clusters of 4-5 fruits that are suitable for loose harvest only. The first 3 clusters have averagely 3 fruits with weights' up to 250 grams.



Pink Treat F1 (TEX2721)

Tomato

Solanum lycopersicon

NEW

TTM-075 F1

- **Plant type:** Indeterminate
- **Type:** Beef Momotaro
- **Maturity:** Early
- **Recommended transplanting season:** Spring & autumn
- **Recommended cultivation:** Short cycle
- **Fruit weight:** 220-290 grams
- **Fruit colour:** Pink
- **Fruit shape:** Round - flat round
- **Resistance:** HR: ToMV 0-2, Ff: A-E, Fol: 0,1, For, Va: 0, Vd: 0, Sl, IR: Ma/Mi/Mj

Description: TTM-075 F1 fits the early Momotaro segment. It has a strong, vigorous yet open plant habit with short to medium long internodes and small leaves. It produces on a very compact cluster, 4 to 5, very uniform smooth, round to flat round, fruits. The internal quality is of typical multi locular, fleshy and almost no gel, beef structure with a medium to deep pink colour. The external colour is vivid dark pink. The calyx is slim and semi erect. TTM-075 F1 has a strong root system for good setting under higher temperatures.



TTM-075 F1



Pepe F1

Pepe F1

- **Plant type:** Indeterminate
- **Type:** Cherry - Loose
- **Recommended transplanting season:** Early spring
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 10 grams
- **Fruit colour:** Deep red
- **Fruit shape:** Round
- **Resistance:** HR: ToMV 0-2, Fol:0

Description: Pepe F1 is a strong producing variety with quite open plant habit. The fruits are deep red in colour and are easy to harvest. The excellent taste and colour make that Pepe F1 belongs to the upper class of cherry tomatoes.

Tomato

Solanum lycopersicon

NEW

TETM-323 F1

- **Plant type:** Indeterminate
- **Type:** Cherry - Truss
- **Maturity:** Early
- **Recommended transplanting season:** Autumn
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 12-14 grams
- **Fruit colour:** Red
- **Fruit shape:** Round
- **Resistance:** HR: ToMV 0-2, Fol:0,1, Va: 0, Vd: 0, IR: TYLCV

Description: TETM-323 F1 has a relatively open, medium vigorous plant habit. It clearly shows bright red fruits. The fruits have a very uniform, round to oblong, fruit shape with healthy star shaped flat calyx. The cluster is very nice compact flat, containing 10-14 fruits, giving it a very beautiful presentation on flow-pack tray.



TETM-323 F1

NEW

TETM-904 F1

- **Plant type:** Indeterminate
- **Type:** Cherry - Loose
- **Maturity:** Early
- **Recommended transplanting season:** Autumn
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 8-12 grams
- **Fruit colour:** Yellow
- **Fruit shape:** Round
- **Resistance:** HR: ToMV 0-2, Fol: 0,1, Va: 0, Vd: 0, IR: Ma/Mi/Mj

Description: TETM-904 F1 is a very productive bright vibrant yellow cherry variety. It produces clusters of 14-18 fruits per cluster. The fruits are very uniform round, juicy and with a fresh sour taste and a deep sweet undertone. The bright yellow to slightly orange combined with the deep green calyx makes the TETM-904 F1 very attractive. The variety has an long open cluster and is not suitable for cluster harvest in southern European conditions. The variety is not sensitive to (star) cracking even if the packing requests removal of the calyx.



TETM-904 F1



Tomato

Solanum lycopersicon

NEW

Motto F1

- **Plant type:** Indeterminate
- **Type:** Cluster
- **Maturity:** Medium early
- **Recommended transplanting season:** July - August
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 130 grams
- **Fruit colour:** Deep red
- **Fruit shape:** Round to round-flat shaped
- **Resistance:** HR: ToMV 0-2, Fol: 0,1, Va: 0, Vd: 0, IR: TYLCV

Description: Vigorous growing plant with good balance with medium long internodes and dark green leaves. The fruit is smoothly shaped with a medium thick wall. The fruit has 3-4 loci, an attractive internal colour and is firm with a good shelf-life. The cluster contains six to eight fruits per cluster and can be used for both single pick or cluster harvesting.



Motto F1

Takumi F1

- **Plant type:** Indeterminate
- **Type:** Cluster
- **Maturity:** Medium early
- **Recommended transplanting season:** August - October in south Europe
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 90-120 grams
- **Fruit colour:** Deep red
- **Fruit shape:** Round to round-flat shaped
- **Resistance:** HR: ToMV 0-2, Fol: 0,1, Va: 0, Vd: 0, IR: TYLCV

Description: Medium vigorous growing tomato variety with good balance, medium long internodes and dark green leaves. The plant habit is open. The fruit is smooth with a medium thick wall. The fruit has 3-4 loci, and an excellent colour at harvesting stage. The shelf-life is good. The cluster contains six to eight fruits per cluster and can be used for both single pick or cluster harvesting.



Takumi F1



Tomato

Solanum lycopersicon

NEW

TETM-901 F1

- **Plant type:** Indeterminate
- **Type:** Pintõn
- **Maturity:** Medium early
- **Recommended transplanting season:** Autumn
- **Recommended cultivation:** Long cycle
- **Fruit weight:** 200-280 grams
- **Fruit colour:** Red
- **Fruit shape:** Round
- **Resistance:** HR: ToMV 0-2, Fol: 0,1, Va: 0, Vd: 0, IR: TYLCV

Description: TETM-901 F1 has a good stamina for long cycle production. The plant stays healthy during the whole season. Even in colder conditions it sets well and continues to give good yield. The fruits are very uniform, round to flat round with the typical dark green shoulder. TETM-901 F1 should be harvested when the external colour just starts to give red hints. The internal colour then is already red to deep red. The variety has a full flavour with subtle sour hints. TETM-901 F1 is very firm and has a very good shelf life.



TETM-901 F1

Tagetes

Tagetes patula

Ground Control

Description: Most effective way to fight nematodes *Pratylenchus penetrans* biologically. Is reducing the population with 95% after a growing period of 3 months (based on research of Regionale Onderzoekcentra in Horst and Breda, 1995). Recommended for strawberry, carrot, endive and lettuce cultivation. Beside the reduction of nematodes, Ground Control contributes to a significant increase of organic matter and soil condition.



Ground Control

Ever Green

Description: Effective way to fight nematodes *Pratylenchus penetrans* biologically. Evergreen makes a compact plant and an earlier covered field to make weed control easier. Evergreen does not flower, which results in less weeds in the following year.



Ever Green



ROOT STOCKS



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Rootstocks

Eggplant

Javah F1

- **Vigour:** Medium to strong
- **Sowing time compare to scion:** 0-3 days
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Vd/Fom

Description: Solanum type rootstock with very uniform germination. Can be sowing at almost same time as most of the scion variety. Javah F1 is especially recommended for its strong growth under low temperatures. Due to its root development, Javah F1 can stand certain infection of nematode but the variety is not resistant.

Elementa F1

- **Vigour:** Extra strong
- **Sowing time compare to scion:** 12-14 days earlier (with primed seed)
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Rs/Vd/Fom, IR: Mi/Ma/Mj

Description: Extra strong solanum rootstock. Strong against nematode. Free from spined rootstock shoots.

Funda F1

- **Vigour:** High
- **Sowing time compare to scion:** 12-14 days earlier (with primed seed)
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Rs/Vd/Fom, IR: Mi/Ma/Mj

Description: Solanum rootstock with strong vigor, recommended for stressful conditions. Medium-strong growth under low temperatures. Strong against nematode.

Astro F1

- **Vigour:** Medium to strong
- **Sowing time compare to scion:** 3 days earlier
- **Growth under low temperatures:** Medium to strong
- **Resistance:** HR: Fom, Ir: Rs

Description: Solanum hybrid rootstock. High and uniform germination. Astro F1 gives extra tolerance to cold growing conditions; continues growth and produces high fruit quality. Especially recommended for growing areas where ralstonia is a problem. Its root system makes that Astro F1 can stand a certain level of nematode infection but the variety is not resistant.

Rootstocks

Pepper

NEW

Kiso F1 (TI-135)

- **Vigour:** Medium
- **Sowing time compare to scion:** 3 days earlier
- **Growth under low temperatures:** Medium vigorous
- **Resistance:** HR: Tm:0-2, IR: Rs/Pc/Ma/Mi/Mj

Description: Vigorous pepper rootstock for longer cultivation period. Especially recommended for production regions with phytophthora capsicii problems.

Rootstocks

Tomato

NEW

Radar F1

- **Vigour:** Strong
- **Sowing time compare to scion:** 3 days earlier
- **Resistance:** HR: ToMV/Fol0-2/For/Va:0/Vd:0/Ma/Mi/Mj/PI, IR: Rs

Description: Strong growing tomato rootstock, recommended for the long soil - and hydroponic cultivation. Radar F1 keeps a balanced development of the plant throughout the whole production cycle. Radar F1 is especially recommended where Fusarium 3 is required.

Armada F1

- **Vigour:** Medium
- **Sowing time compare to scion:** 3 days earlier
- **Resistance:** HR: ToMV/Fol/Va:0/Vd:0/Ma/Mi/Mj/PI, IR: Rs/Pc.

Description: Medium vigorous tomato rootstock. Strong resistance level. Recommended for short production cycles and too vigorous scion varieties.

Rootstocks

Cucumber

NEW

Status F1

- **Vigour:** Strong
- **Sowing time compare to scion:** 0 days
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Foc

Description: Cucumber rootstock with strong generative growth. Keeps the fruit quality of the scion with highly shiny fruits and dark green colour. Recommended for all seasons. Also suitable a watermelon rootstock

Custodian F1

- **Vigour:** Strong
- **Sowing time compare to scion:** 0 days
- **Growth under low temperatures:** Very strong
- **Resistance:** HR: Foc

Description: Cucumber rootstock with strong vigour for excellent fruit quality. Uniform germination for easy grafting.

Ancora F1

- **Vigour:** Extra strong
- **Sowing time compare to scion:** 0 days
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Foc, IR: Px

Description: Cucumber rootstock with strong generative growth. Recommended for autumn to spring cultivation. Ancora F1 improves the fruit quality, also under more stressful growing conditions. Recommended for several soil types and hydroponics.

Rootstocks

Melon

Assisto F1

- **Vigour:** Medium to strong
- **Sowing time compare to scion:** 2 days earlier
- **Resistance:** HR: Fom0-2, IR: MNSV/Fom1,2y

Description: Melon rootstock with medium vigor with a balanced plant development. Recommended for all seasons. High and uniform germination and easy to graft. Assisto F1 keeps the taste and quality of the original scion variety.

Rootstocks

Watermelon

Tetsukabuto F1

- **Vigour:** Strong
- **Sowing time compare to scion:** 2 days
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Fom:0,1,2, IR: For/Fom:0-2

Description: Strong vigorous watermelon rootstock. Easy to graft. Good development in early plant stage. Also recommended for cucumber and melon.

Consista F1

- **Vigour:** Extra Strong
- **Sowing time compare to scion:** 2 days
- **Growth under low temperatures:** Strong
- **Resistance:** HR: Fom:0,1,2, IR: For/Fom:0-2

Description: Strong vigorous watermelon rootstock. Fast growing and easy to graft. Especially recommended for watermelon cultivation under stressful conditions.



Vegetable growing has become a highly specialized and labour and knowledge intensive activity. As a result of an ever-increasing demand for quality, growers and plant raisers require an improved quality of the basic material. The demand for specific seed forms and more information about seed quality resulted into a strong increase to better influence emergence and required number of plants.

Seed is a natural product. The often-varying environmental conditions have influence on the final result. Therefore, it is often not possible to give detailed information about emergence and other physical seed characteristics. To meet the wishes of clients as much as possible Takii Europe BV has made up quality standards for the various seed categories.

Germination

The germination figures as mentioned are minimum requirements and made up according to ISTA methods and tolerances. In case where the seed does not apply with these product specifications Takii Europe BV will inform their clients.

Varietal purity

Varietal purity is defined as: the percentage of plants from a seed-lot that meets the variety description.

Product specifications of precision seed and pellets

Crop	Germination Precision seed	Minimum % varietal purity for precision seeds	Seed size
Brassica:	90%	93%	0.25 mm
Cauliflower:	90%	90%	0.25 mm
Carrots	85%		0.2 mm
Celery	90%		0.2 mm
Eggplant	90%	98%	
Melon	90%	98%	
Onion	90%		2.0-2.75 mm
Radish	92%		0.2/0.25 mm
Tomato	92%	98%	
Watermelon normal	90%		
Watermelon seedless	85%		

GMO Declaration

Our commercial varieties, which are listed in the E.C. variety catalogue, are originated from traditional breeding activities. At this moment we do not have any application procedure pending which is the result of any genetic modification technique. If the use of GMO (Genetically Modified Organism) is pressing on in the future, Takii Europe BV will inform their customers.

Normal Seed

In general, normal seed has not been subjected to special processes. It is sold by weight and/or by seed count, depending on the product. Normal seed complies with EC standards.

Precision Seed

Precision seed has been subjected to additional processes. It has a uniform size and high germination. Precision seed is sold by seed count.

Priming

Priming is defined as an activation of the germination process with the purpose to obtain faster or more uniform emergence after sowing. Primed seed is sold by seed count.

Pelleting

Pelleting is defined as the process of changing the seed form by covering it with a material, the main purpose being to improve uniformity of size and shape resulting in improved sowing ability. Also additional ingredients may be added. Pelleted seed is sold by count.

Film coating

Film coating is a full covering, usually pigmented layer around the seed. The original seed form remains intact. Additional ingredients may be added. Film coating treatments that contain insecticides are normally identifiable by colour coding. Film coated seed is sold by seed count.



Disease coding

Crop	Agent	Scientific name	English common name	Code	Level	Race or resistance gene
Brassica spp	B	Xanthomonas campestris pv. campestris	Black rot	Xcc	IR	
Brassica spp	F	Albugo candida	White rust	Ac	HR	
Brassica spp	F	Fusarium oxysporum f.sp. conglutinans	Fusarium yellows	Foc	HR	race 1
Brassica spp	F	Mycosphaerella brassicicola	Ring spot	Mb	IR	
Brassica spp	F	Peronospora parasitica	Downy mildew	Pp	HR	
Brassica spp	F	Plasmodiophora brassicae	Clubroot	Pb	HR	
Carrot	I	Psila rosae	Carrot fly	Pr	IR	
Carrot	B	Xanthomonas hororm pv. Carotae (ex Xanthomonas campestris pv. Carotae)	Bacterial leaf blight	Xhc	IR	
Carrot	F	Alternaria dauci	Alternaria leaf blight	Ad	IR / HR	
Carrot	F	Cercospora carotae	Carrot leaf blight	Cc	IR	
Carrot	F	Erysiphe heraclei	Powdery mildew	Eh	IR	
Carrot	F	Pythium sulcatum	Cavity spot	Ps	IR	
Carrot	F	Pythium violae	Cavity spot	Pv	IR	
Carrot	F	Aster Yellows	Aster Yellows	Ay	IR	
Celery , Celeriac	F	Fusarium oxysporum f.sp. apii	Fusarium yellows and wilt	Foa	HR	1
Celery , Celeriac	F	Fusarium oxysporum f.sp. apii	Fusarium yellows and wilt	Foa	IR / HR	2
Cucurbita maxima x Cucurbita moschata	F	Fusarium oxysporum f.sp. cucumerinum	Fusarium wilt	Foc	HR	1,2,3
Cucurbita maxima x Cucurbita moschata	F	Fusarium oxysporum f.sp. melonis	Fusarium wilt	Fom	HR	0, 1, 2, 1.2
Cucurbita maxima x Cucurbita moschata	F	Fusarium oxysporum f.sp. niveum	Fusarium wilt	Fon	IR / HR	0,1,2
Cucurbita maxima x Cucurbita moschata	F	Fusarium oxysporum f.sp. radicis-cucumerinum	Fusarium crown and root rot	For	IR / HR	
Cucurbita maxima x Cucurbita moschata	F	Colletotrichum orbiculare (ex Colletotrichum lagenarium)	Anthraxnose	Co	IR	1,2,3
Cucurbita maxima x Cucurbita moschata	F	Verticillium dahliae	Verticillium wilt	Vd	IR / HR	
Cucurbita maxima x Cucurbita moschata	F	Verticillium albo-atrum	Verticillium wilt	Va	IR / HR	
Cucurbita maxima x Cucurbita moschata	F	Phomopsis sclerotoides	Black root rot	Ps	HR	
Cucurbita maxima x Cucurbita moschata	F	Rhizoctonia solani	Rhizoctonia root and crown rot	Rs	IR	

Disease coding

Crop	Agent	Scientific name	English common name	Code	Level	Race or resistance gene
Cucurbita maxima x Cucurbita moschata	N	Meloidogyne incognita	Root-knot	Mi	IR	
Cucurbita maxima x Cucurbita moschata	N	Meloidogyne javanica	Root-knot	Mj	IR	
Eggplant Rootstock	F	Verticillium dahliae	Verticillium wilt	Vd	IR	
Eggplant Rootstock	F	Verticillium albo-atrum	Verticillium wilt	Va	IR / HR	
Eggplant Rootstock	N	Meloidogyne arenaria	Root-knot	Ma	HR	
Eggplant Rootstock	N	Meloidogyne incognita	Root-knot	Mi	HR	
Eggplant Rootstock	N	Meloidogyne javanica	Root-knot	Mj	HR	
Eggplant	F	Fusarium oxysporum f.sp. melongenae	Fusarium wilt	Fom	HR	
Eggplant	B	Ralstonia solanacearum	Bacterial wilt	Rs	IR	
Melon	V	Cucumber mosaic virus	Cucumber mosaic	CMV	IR	
Melon	V	Melon Necrotic Spot Virus	Melon necrotic spot	MNSV	HR	
Melon	V	Papaya ringspot virus (ex WMV-I)	Papaya ringspot	PRSV	IR	
Melon	V	Watermelon mosaic virus (ex WMV-II)	Watermelon mosaic	WMV	IR	
Melon	V	Zucchini yellow mosaic virus	Zucchini yellows	ZYMV	IR	
Melon	F	Fusarium oxysporum f.sp. melonis	Fusarium wilt	Fom	HR	0, 1, 2, 1.2
Melon	F	Golovinomyces cichoracearum (ex. Erysiphe cichoracearum)	Powdery mildew	Gc	IR	1
Melon	F	Podosphaera xanthii (ex. Sphaerotheca fuliginea)	Powdery mildew	Px	IR	1,2,3,5, 3.5
Melon	I	Aphis gossypii	Melon aphid	Ag	IR	
Onion	F	Fusarium oxysporum f.sp. cepae	Basal rot	Foc	IR	
Onion	F	Peronospora destructor	Downy mildew	Pd	HR	
Onion	F	Pyrenochaeta terrestris	Pink root	Pt	IR	
Solanaceous rootstock for pepper	V	Tobamovirus (ToMV, TMV, PMMoV)	Tobacco mosaic	Tm	HR	0
Solanaceous rootstock for pepper	V	Tobamovirus (ToMV, TMV, TMGMV, PMMoV)	Tobacco mosaic	Tm	HR	0,1, 1.2
Solanaceous rootstock for pepper	V	Phytophthora capsici	Buckeye fruit and root rot	Pc	IR	
Solanaceous rootstock for pepper	N	Meloidogyne arenaria	Root-knot	Ma	IR	
Solanaceous rootstock for pepper	N	Meloidogyne incognita	Root-knot	Mi	IR	

Disease coding

Crop	Agent	Scientific name	English common name	Code	Level	Race or resistance gene
Solanaceous rootstock for pepper	N	Meloidogyne javanica	Root-knot	Mj	IR	
Radish	F	Fusarium oxysporum f.sp. raphani	Yellows	For	IR / HR	
Radish	F	Peronospera parasitica	Downy mildew	Pp	IR	
Radish	F	Plasmodiophora brassicae	Clubroot	Pb	IR / HR	
Radish	V	Turnip mosaic virus	Turnip mosaic	TuMV	HR	
Squash and Pumpkin	F	Podosphaera xanthii (ex Sphaerotheca fuliginea)	Powdery mildew	Px	IR	
Squash and Pumpkin	V	Cucumber mosaic virus	Cucumber mosaic	CMV	IR	
Squash and Pumpkin	V	Papaya ringspot virus (ex WMV-I)	Papaya ringspot	PRSV	IR	
Squash and Pumpkin	V	Squash Leaf Curl Virus	Squash Leaf Curl	SLCV	IR	
Squash and Pumpkin	V	Watermelon mosaic virus (ex WMV-II)	Watermelon mosaic	WMV	IR	
Squash and Pumpkin	V	Zucchini yellow mosaic virus	Zucchini yellows	ZYMV	IR	
Solanaceous rootstock for tomato	V	Tomato mosaic virus	Tomato mosaic	ToMV	HR	0,1,2,
Solanaceous rootstock for tomato	F	Fusarium oxysporum f.sp. lycopersici	Fusarium wilt	Fol	HR	0,1,2,
Solanaceous rootstock for tomato	F	Fusarium oxysporum f.sp. radicis-lycopersici	Fusarium crown and root rot	For	HR	
Solanaceous rootstock for tomato	F	Pyrenochaeta lycopersici	Corky root rot	PI	HR / IR	
Solanaceous rootstock for tomato	F	Verticillium dahliae	Verticillium wilt	Vd	HR	0
Solanaceous rootstock for tomato	F	Verticillium albo-atrum	Verticillium wilt	Va	HR	0
Solanaceous rootstock for tomato	B	Ralstonia solanacearum	Bacterial wilt	Rs	HR / IR	
Solanaceous rootstock for tomato	N	Meloidogyne arenaria	Root-knot	Ma	IR	
Solanaceous rootstock for tomato	N	Meloidogyne incognita	Root-knot	Mi	IR	
Solanaceous rootstock for tomato	N	Meloidogyne javanica	Root-knot	Mj	IR	
Tomato	V	Tomato marchitez virus / Tomato Apex Necrosis	Tomato chocolate spot	ToMarV / ToANV	HR	
Tomato	V	Tomato torrado virus	Tomato torrado	ToTV	HR	
Tomato	V	Tomato mosaic virus	Tomato mosaic	ToMV	HR	0,1,2

Disease coding

Crop	Agent	Scientific name	English common name	Code	Level	Race or resistance gene
Tomato	V	Tomato spotted wilt virus	Tomato spotted wilt	TSWV	HR	
Tomato	V	Tomato yellow leaf curl virus	Tomato yellow leaf curl	TYLCV	IR	
Tomato	F	Alternaria alternata f.sp. lycopersici	Alternaria stem canker	Aal	HR	
Tomato	F	Fulvia fulva (ex Cladosporium fulvum)	Leaf mold	Ff	HR	A,B,C,D,E
Tomato	F	Fusarium oxysporum f.sp. lycopersici	Fusarium wilt	Fol	HR	0,1,2
Tomato	F	Fusarium oxysporum f.sp. radicis-lycopersici	Fusarium crown and root rot	For	HR	
Tomato	F	Leveillula taurica (anamorph; Oidiopsis sicula)	Powdery mildew	Lt	HR / IR	
Tomato	F	Oidium neolycopersici (ex O. lycopersicu)	Powdery mildew	On	IR	
Tomato	F	Phytophthora infestans	Late blight	Pi	IR	
Tomato	F	Pyrenochaeta lycopersici	Corky root rot	PI	HR / IR	
Tomato	F	Stemphylium solani	Gray leaf spot	Ss	HR	
Tomato	F	Stemphylium botryosum f.sp. lycopersici	Gray leaf spot	Sbl	HR	
Tomato	F	Stemphylium lycopersici (ex Stemphylium floridanum)	Gray leaf spot	Sl	HR	
Tomato	F	Verticillium dahliae	Verticillium wilt	Vd	HR	0
Tomato	F	Verticillium albo-atrum	Verticillium wilt	Va	HR	0
Tomato	B	Pseudomonas syringae pv. Tomato	Bacterial speck	Pst	HR	
Tomato	B	Ralstonia solanacearum	Bacterial wilt	Rs	HR / IR	
Tomato	B	Xanthomonas campestris pv. vesicatoria	Bacterial spot	Xcv	IR	
Tomato	N	Meloidogyne arenaria	Root-knot	Ma	IR	
Tomato	N	Meloidogyne incognita	Root-knot	Mi	IR	
Tomato	N	Meloidogyne javanica	Root-knot	Mj	IR	
Tomato	AS	Silvering		Si	T	
Tomato	AS	Blossom End Rot		BER	T	
Tomato	AS	Blotching		Bl	T	
Tomato	AS	Cracking		Cr	T	
Tomato	F	Colletotrichum orbiculare (ex Colletotrichum lagenarium)	Fusarium wilt	Co	HR	1,2,3
Tomato	F	Fusarium oxysporum f.sp. niveum	Fusarium wilt	Fon	HR	0
Tomato	F	Fusarium oxysporum f.sp. niveum	Fusarium wilt	Fon	IR	1,2

GENERAL TERMS AND CONDITIONS OF TAKII EUROPE B.V.

Article 1. Applicability of these General Terms and Conditions and definitions:

- These General Terms and Conditions are applicable to all quotations and all contracts between Takii Europe BV (hereinafter referred to as "Takii") acting as the seller, and a buyer, to the extent that one or more of these conditions are not expressly altered in writing.
- The applicability of the general conditions of the buyer or any other general terms and conditions used or referred to by buyer is expressly rejected and excluded.
- Should a stipulation included in these General Terms and Conditions not be applicable if and in so far as mandatory rules and regulations oppose such applicability, then all other stipulations shall remain in full force.
- The buyer shall inform about his customers the content of these General Terms and Conditions and make them also applicable in the agreements he is concluding with his customers regarding the products.
- The term "products" as used herein shall mean seeds, plants, parts of plants and any other form of genetic material of flower and vegetable seed varieties.

Article 2. Offers and conclusion of agreements

- All offers made by Takii are without engagement and can be withdrawn at any time.
- Offers can only be accepted by the buyer in writing. Takii nevertheless reserves the right to treat a verbal acceptance as if it were given in writing.
- If the Buyer accepts an offer, Takii nevertheless reserves the right to withdraw the offer within 3 working days of acceptance (either verbally or in writing), in which case no agreement is concluded between the parties.
- Verbal offers automatically expire if the Buyer does not accept them in writing within 7 days and written offers automatically expire if not accepted by the Buyer in writing within 30 days.
- Takii reserves the right to refuse orders with an order value per item less than € 25 or with a total order value of €400 or less (exclusive VAT). However if Takii accepts such an order it is entitled to charge an administrative fee of €25.
- An agreement is concluded by:
 - Written and total acceptance by the buyer of Takii's offer, provided that Takii does not exercise the right stipulated in article 2.3 of these General Terms and Conditions. In so far as the buyer accepts Takii's offer with deviations of minor significance, these deviations shall be not part of the agreement and an agreement is concluded in accordance with Takii's offer. In so far as the buyer accepts Takii's offer with deviations that are not of minor significance then such deviations shall only be part of the agreement in the event that and in so far as Takii has accepted these deviations in writing.
 - Written acknowledgement and total acceptance by Takii of an order submitted by the buyer, unless this order has previously been revoked by the buyer in writing, on condition that this confirmation is signed in Takii's name by one or more persons authorised to conclude the agreement.
 - Delivery of the products by Takii and only for those products supplied in accordance with the packing list, when no explicit order confirmation has been given in writing.

Article 3. Prices

- The prices specified in an offer are exclusive of VAT, other taxes and levies and are Ex Works (EXW) (most recent version of the Incoterms) De Kwakel. All prices stated in price lists or offers are in EURO (€), unless it is explicitly stated otherwise in the offer.
- Takii reserves the right to change its prices. All new price listings supersede the previous prices with regard to orders placed following the new price listing.

Article 4. Harvest and processing proviso

- Deliveries shall be made under the usual harvest and processing proviso. In the event of Takii invoking the harvest or processing proviso, Takii shall not be obliged to deliver but shall if possible endeavour to deliver products on a pro rata basis according to the ordered quantity or comparable alternatives.
- The buyer shall not be entitled to any compensation for damages in the event of Takii invoking this proviso.

Article 5. Delivery

- In the event that the ordered quantity deviates from the standard quantity applied by Takii or a multiple thereof, Takii shall be free to deliver the next highest quantity.
- Takii shall act to the best of its ability in meeting its delivery obligation.
- Takii's correct compliance with its delivery obligation include also deliveries with a minor deviation in terms of size, packaging, number or weight.
- Takii shall be permitted to deliver the products in partial batches. In the event of the products being delivered in partial batches, Takii shall be entitled to invoice each batch separately.
- Takii undertakes to deliver within a reasonable period of time after order confirmation in accordance with the sowing season or the planting season.
- An agreed delivery time shall not be regarded as a firm/fixd date and shall not be deemed to be a term to be observed on penalty of forfeiture of rights. In the event of late delivery, the buyer shall be required to give Takii written notice of default and a reasonable period of time in which to meet the provisions of the contract.
- Upon placing an order, the buyer shall indicate in writing the dates, specifications and documents that are necessary to meet the regulations of the country of destination upon delivery, such as, but not limited to, those in relation to:
 - Invoices
 - Phytosanitary certificates
 - International certificates
 - Other import documentsTakii cannot be held liable for any losses suffered if the buyer does not make these details correctly available, thus causing the order to be delayed or impossible to implement.
- Delivery shall take place Ex Works (EXW) De Kwakel in accordance with the Incoterms applicable at the moment of the conclusion of the agreement. Takii will have met its delivery obligation at the moment at which the products are issued to the shipping company. The risk of loss of and damage in or to the products (whether or not as a result of loading or transport) shall pass to the buyer immediately upon the issuance of the products to the shipping company and shall consequently be the sole liability of the buyer. From that moment Takii can no longer be held liable for late delivery, non-delivery, other hindrances or damage caused during shipment.

- The costs of shipment and insurance of the shipment are for the account of the buyer. Notwithstanding the foregoing, Takii shall be free in the choice of shipment and packaging of the products, unless differently agreed upon with the buyer in writing. Additional costs resulting from special requirements of the buyer relating to the shipment and packaging shall be charged to the buyer.
- The costs of certificates and other documents that Takii is required to provide shall be charged to the buyer unless otherwise agreed.
- In view of the high quality standards, delivered products can only be returned with the prior written permission of Takii and provided that the products are returned in the undamaged original packaging within 15 working days of the invoice date. Takii will not accept return deliveries that are made after 60 days of the invoice date. Crediting shall take place at 75% of the invoice amount, not including VAT. Returned primed seed and seed contaminated with insecticides will not be accepted or credited. Transport costs that are incurred for returns shall be for the buyer's account.
- All deliveries shall be made or take place from Takii's stocks. In the event of products not being in stock and must be delivered urgently on the buyer's request by Takii & Company Ltd. in Japan, the additional delivery costs incurred will be charged to the buyer.
- Orders that have been confirmed by Takii can only be fully or partially cancelled by the buyer following (written) agreement between Takii and the buyer.
- All seed treatments that are carried out on the buyer's request shall be charged to the buyer unless otherwise agreed.
- No packaging materials, including containers, can be returned to Takii.

Article 6. Suspension

- In the event of the buyer failing to comply with one or more of his obligations correctly or on time:
 - The obligations of Takii shall be automatically and immediately suspended until the buyer has fully met all of his obligations, financial or otherwise (including payment of any extra judicial costs).
 - Takii can require the buyer to remit full payment and/or furnish sufficient security, e.g. in the form of a bank guarantee issued by a reputable Dutch bank institute in respect of the buyer's compliance.
- Takii shall at all times be entitled to require the buyer to remit full payment and/or furnish adequate security before meeting his obligations if it is likely that the buyer will not (be able to) meet his obligations correctly and/or on time.

Article 7. Intellectual Property and promotion material

- All Intellectual Property related to the products, including amongst others, plant variety rights, patent rights, as well as the variety names for the products, copyrights and trademarks used by Takii for the promotion of its products and photographic material, are and shall remain the sole and exclusive property of Takii. The buyer shall not acquire nor claim any right, title or interest in or to the Intellectual Property of Takii, and nothing shall be construed as constituting such right, title or interest. Without the prior written approval of Takii the buyer shall not make use of any of Intellectual Property of Takii, with exception of the following. The buyer shall only (i) trade/resell the products under their original variety name and (ii) trade/resell the products in the original Takii packaging. In both cases the buyer will comply with the instructions and manner specified by Takii thereto.
- The buyer shall not remove, cover or change any trademark, lettering, numbering, coding, or any other designation applied or attached by Takii to the package of the products, nor shall he change the variety name or trademark of the product.
- Photographic and other material supplied by Takii may be used only as support and illustration material for the Takii products upon prior written approval by Takii.

Article 8. Circumstances beyond Takii's control (force majeure)

- If Takii cannot meet one or more of its obligations due to circumstances reasonably beyond its control, the buyer and Takii are entitled to dissolve the agreement in its entirety or partially by means of a written notification sent to the other party to this extent.
- The buyer and Takii are in any case entitled to dissolve the agreement if Takii, as a consequence of circumstances reasonably beyond its control, cannot carry out its part of the agreement within 30 days after such circumstances arose.
- Neither in the case of article 8.1 nor in case of article 8.2, is Takii obligated to compensate buyer or any other party for any damage and/or costs incurred or compensation of possible benefit derived.
- Circumstances beyond Takii's control are events which cannot be attributed to Takii such as, but no limited to, reasonably war, threat of war, terrorist attacks, rebellion, fire, catastrophes, strikes, blockades, exclusion, traffic disorder, factory disorder, impeding government measures, disorder in the supply of energy, raw materials or semi-finished products, personnel illness, non-compliance or late compliance with their obligations on the part of its suppliers or (sub)contractors called in.
- In the event that Takii has already partially complied with its obligations at the time when circumstances beyond its control arise or have only been able to comply partially with them, then Takii shall be entitled to invoice separately the batch already delivered or the batch deliverable and the buyer shall be obliged to settle this invoice as if this were a separate agreement.

Article 9. Retention of title

- The products delivered by Takii shall remain the property/ownership of Takii until the buyer has remitted the purchase amount and/or any other amounts due in full. The retention of title/ownership shall also be applicable to claims that Takii may have against the buyer in respect of non-compliance of the buyer with one of his obligations to Takii.
- The products delivered that resort under the retention of title as provided for in this article, may only be sold on or used within the scope of normal business practice. Should this be the case, then the buyer shall be obligated to have Takii subrogated to his rights vis-à-vis his purchaser(s) until the purchase has completely paid for the products and has observed his other obligations on the basis of this agreement or of similar agreements concluded with Takii. The rights mentioned herein before shall expressly include any and all claims and any possible (future) claims on account of damage to or loss of products delivered. The buyer shall transfer such rights to Takii, a transfer that Takii hereby accepts, now for then, already, and in so far as this is necessary.
- The buyer is not permitted to establish a pledge on the products or encumber them with any other rights.

Article 10. Payment

- Takii must receive payment within 30 days of the invoice date unless otherwise agreed in writing. Once that period has elapsed, the buyer shall be in default without any notice of default being required. From that moment onwards the buyer shall be obliged to pay interest of 1% over the payable amount per month.
- In the event the buyer has adopted a resolution in order to dissolve buyer/the company, or has been declared bankrupt or has been granted suspension of payment or in case a silent trustee (i.e. not publicly disclosed trustee) has been designated/appointed after the buyer has filed a so called "pre-pack petition/request" with the court, all payment obligations of the buyer shall become immediately due and payable and Takii shall be authorised to suspend the further implementation of the contract or to dissolve the contract, without prejudice to Takii's right to claim compensation for damages.
- In the event of payment in instalments having been agreed, late payment of an instalment will result in the entire remaining amount becoming immediately due and payable without notice of default being required. The provisions of the last sentence of article 10.1, are applicable mutates mutandis.
- Takii shall at all times be entitled to require security for the buyer's compliance with his payment obligation and/or to consign products exclusively on a cash on delivery basis and to suspend compliance with the contract until the aforementioned security has been furnished to the satisfaction of Takii.
- Payment must be made without deducting any discount and whereby setting off debts is not permitted.
- Any complaints about an invoice must be made in writing to Takii within 14 days after the invoice date. No complaints whatsoever or any other dispute between the buyer and Takii shall entitle the buyer to suspend payment of the invoices and/or otherwise invoke a right or suspension and/or retention against Takii.
- Article 10.2 shall also be applicable in the event of the situation set forth in that article arising at any parent, daughter and/or sister company belonging to the buyer's group and/or any company otherwise affiliated with that of the buyer, irrespective of its legal form. In those cases, Takii shall be authorised to set off its claims and debts within the group context of the buyer.

Article 11. Debt collection costs

In the event of the buyer being held in default or failing to comply with one or more of his obligations, all extra judicial (but with a minimum of 15% of the amount due) and judicial debt collection costs shall be charged to the buyer.

Article 12. Dissolution

- If Takii uses its right to dissolve the agreement either partially or entirely, then a written notification to that effect shall be sent to the buyer as a result of which dissolution shall take place.
- In the event that Takii dissolves the agreement, the buyer shall be obliged to compensate the damage and costs incurred by Takii, unless dissolution has occurred on the basis of the stipulations included in article 8. The Buyer shall not be entitled to any compensation of damage and costs towards Takii.
- If the agreement is dissolved, products already delivered must be returned to Takii free of charge. In addition, Takii is entitled to require immediate release of the products to Takii from the party in whose possession they may be. The products remain at the risk of the buyer until Takii has received and approved them.
- In the event that Takii dissolves the agreement or if Takii suspends the execution of the agreement, Takii shall remain entitled to receiving payment of the invoices of deliveries carried out by Takii until the dissolution.
- Rights and obligations of the parties included in article 16 (liability), article 19 (disputes), article 20 (applicable law) shall remain applicable even after the dissolution of an agreement.

Article 13. Usage and guarantee

- Takii guarantees that the delivered products will meet the relevant product specifications to as great an extent as possible. The product specifications cannot however be regarded as a guarantee. In the event of the delivered products not meeting the product specifications, the buyer will be informed as such. Neither does Takii guarantee that the delivered products meet the purpose envisaged for them by the buyer.
- All quality information provided by Takii is based exclusively on tests that can be replicated. No direct relationship can be assumed between the information provided and the result received by the buyer. The information provided merely gives the result at the time at which the test was carried out and the conditions under which the test was carried out. The result depends, among other things, on the location, cultivation measures or the weather conditions at the company of the buyer.
- All guarantees given by Takii shall be null and void if the buyer treats the products or has them retreated, repackages them or has the repackaged, or uses them incorrectly.
- Takii will rely on the information given to Takii by a third party on products, which Takii has purchased from this third party. Takii can never be held liable for products, which have been supplied to Takii by third parties. If the products delivered do not comply with the product specifications, the buyer will be informed. Takii furthermore does not guarantee that performances rendered by the product will comply with the purpose it is used by the buyer.

Article 14. Defects; complaint periods

- The buyer must inspect the purchased products immediately upon delivery. The buyer must establish whether the delivered products meet the specifications, i.e.:
 - whether the correct products have been delivered
 - whether the quantity of the delivered products is in keeping with the agreement
 - whether the delivered products meet the agreed quality requirements or – in the absence of such agreements – the requirements that can be set for normal usage and/or trading purposes.
- In the event of visible defects or deficiencies being established, the buyer shall report them in writing to Takii within 5 working days of delivery, stating the batch, consignment slip and/or invoice details.
- The buyer must report non-visible defects in writing to Takii within 5 working days after the buyer should have reasonably discovered them, but in any case within two months after delivery, stating the batch, consignment slip and/or invoice details.
- The buyer shall inform Takii of complaints regarding defects and deficiencies within the set period of time by registered mail.
- Complaints must be described in such a way that Takii or a third party can verify them. For this purpose, the buyer must also keep records of the use of the products and, in the event of the products being sold on, of his buyers. If the buyer has not reported defects within the aforementioned periods, his complaint will not be accepted and his rights will be null and void.
- If a complaint is justified then Takii shall only be obliged to deliver the products that are short, to replace the delivered products or to take back the products and to credit the buyer for the invoice amount concerned. It shall be entirely at Takii's discretion which of these options Takii shall exercise. In no event shall Takii be obliged to fulfil any other obligation or can Takii be held liable for compensation of costs and/or damage.

- In the event of a lasting dispute arising between the parties concerning the germination, trueness to type, the varietal purity, the technical purity and the health of the products, an analysis can be carried out on the request of one of the parties by the NAKTuinbouw (ISTA Station), established in Roelofarendsveen, the Netherlands, at the expense of the party against whom the ruling is made. The analysis will be carried out on the basis of the reference sample taken before sale and managed by Takii. The result of the analysis shall be binding to both parties, notwithstanding the right of the parties to refer disputes on the implications of that result to the bodies provided for in article 19.

Article 15. Provision of information

- All information provided by Takii in any form whatsoever does not lead to any obligation. Descriptions, prognoses, recommendations and illustrations in brochures and leaflets are geared as accurately as possible to experiences in trials and in practice. Takii does not however accept any liability whatsoever on the grounds of such information for deviating results in the cultivated product on the basis of such information. The buyer must himself judge whether the products are suitable for the envisaged crops and/or for use under the local conditions.
- In the information supplied by Takii, "immunity, resistance and susceptibility" shall mean the following:
 - "Immunity": not subject to attack by a specified pest or pathogen.
 - "Resistance": the ability of a plant variety to limit growth and development of specified pest or pathogen and/or damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure. Two levels of resistance are defined:
 - High resistance (HR): plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.
 - Intermediate resistance (IR): plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to high/standard resistant varieties. Moderately/intermediately resistant plant varieties will show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest of pathogen pressure.
 - "Susceptibility": the inability of a plant variety to restrict the growth and development of a specified pest or pathogen.
- All information that is provided about immunity, resistance and susceptibility is based on results that were obtained from analyses performed by the refinement stations of Takii & Company Ltd. in Japan. These analyses were performed with local knowledge of pathogens known at that time and do not guarantee the same results in other parts of the world. Takii cannot therefore be held liable for any form of loss caused by the information provided.

Article 16. Liability

- Takii's liability resulting from any cause whatsoever, including the damage caused by defective products that have been delivered, shall be explicitly limited to the liability arising from this article 16. Under no circumstances shall Takii be liable for any further compensation of damages, costs and losses. Takii shall not be liable in any case for an amount higher than the invoice value of the defective products and neither will Takii be liable for compensation of any type of indirect or consequential damages, costs and losses.
- Takii cannot be held liable for damages, costs and losses caused as a result of a defect in the delivered products other than in the event of deliberate act or omission (wilful misconduct) and/or gross negligence on the part of Takii and/or its employees.
- Takii is never liable for damage, costs and losses which are a result of deviations in growth and flowering of the plants grown from the products delivered.
- The buyer is obliged to limit the loss in respect of the products about which he has lodged a complaint with Takii to as great an extent as possible.
- Takii does not accept any liability for damage caused by seeds and planting material that has not been multiplied and/or reproduced by or on behalf of Takii, or that has been repacked without the written approval of Takii.
- The buyer shall indemnify Takii against claims from third parties, including claims for compensation of damage, costs and losses that arise from or are in connection with the products supplied by Takii to the buyer.

Article 17. Use of the Products

- Without the prior written approval of Takii, products that are supplied by Takii may only be used or resold for the production of horticultural products for consumer purposes.
- The buyer is obliged to grant immediate access to his company, administrative records and the crops of the products delivered to him so that inspection bodies can perform relevant verification actions to check if the buyer is in compliance with the prohibition stipulated in paragraph 1 of this article. In the event the buyer finds a mutant in the products, he shall immediately inform Takii hereof with confirmation by mail and provide Takii with test material from the mutant. The buyer shall not exploit the mutant for whatever purpose soever without the written permission of Takii. The buyer is also in particular aware that he requires the written permission of Takii to perform the following acts in respect of the mutant: production or reproduction (multiplication); conditioning for multiplication; offering for sale, selling or otherwise trading, implementing; importing, storing for one of the purposes set forth above.

Article 18. Conversion

- Should a stipulation in these General Terms and Conditions become invalid, that stipulation shall be automatically (legally) replaced by a valid stipulation that is as much as possible in line with the tenor of the invalid stipulation. The parties are obliged to enter into reasonable consultation with each other concerning the text of that new stipulation if necessary.
- Notwithstanding the provision of the foregoing article 18.1, all other stipulations of these General Terms and Conditions shall remain unchanged and in full force.

Article 19. Disputes

- Unless the parties have agreed upon arbitration under mutual consultation, all disputes shall be settled in the first instance by the competent court in Amsterdam.
- In the event of a dispute arising the parties will however initially attempt to find a solution under mutual consultation or by other means of mediation before referring the dispute to an arbitration tribunal or the civil court.

Article 20. Applicable law

- Dutch law shall govern all contracts between Takii and the buyer.
- The applicability of the 'United Nations Convention on the International Sales of Seeds' (the Vienna Purchasing Treaty) is hereby explicitly excluded.

Definition of the Terms Describing the Reaction of Plants to Pests¹ and Abiotic Stresses for the Vegetable Seed Industry

(Adopted by the ISF Vegetable and Ornamental Crops Section in June 2012)

1. Introduction

The relationship between a plant and a pest is very complex. The terms that describe the reaction of a plant variety to a pest are determined by tests under controlled environmental conditions with known and characterized biotypes, pathotypes, races or strains of the pest in question.

In practice however, the ability of a pest to cause disease in a plant depends on environmental conditions, the properties of the organism itself and the capacity of the plant to defend itself. Varieties within a plant species can differ in their ability to defend themselves. Under different conditions, such as age of the plant, pest pressure and virulence or adverse environmental conditions, the interaction between the same plant and pest may have different outcomes.

Pests are known to develop and form new biotypes, pathotypes, races or strains that can cause damage to plants that remain unaffected by the original form of the pest.

To promote consistency in the terms used to describe the reaction of a plant to a pest, ISF Vegetable and Ornamental Crops Section has defined the following terms.

2. Definitions

Susceptibility is the inability of a plant variety to restrict the growth and development of a specified pest.

Resistance is the ability of a plant variety to restrict the growth and development of a specified pest and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest pressure.

Resistant varieties may exhibit some disease symptoms or damage under heavy pest pressure.

Two levels of resistance are defined.

High resistance (HR*): plant varieties that highly restrict the growth and development of the specified pest under normal pest pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest pressure.

Intermediate resistance (IR*): plant varieties that restrict the growth and development of the specified pest but may exhibit a greater range of symptoms or damage compared to high resistant varieties. Intermediately resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest pressure.

¹ FAO defines a pest as: Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products.

Pathogens (microorganisms such as bacteria, viruses and fungi that cause a disease) are, therefore, included in the term "pest".

* The standard abbreviations HR (high resistance) and IR (intermediate resistance) shall be used in all languages.

It is to be noted that if a resistance is claimed in a plant variety it is *limited to the specified biotypes, pathotypes, races or strains of the pest*.

If no biotypes, pathotypes, races or strains are specified in the resistance claim for the variety, it is because no generally accepted classification of the cited pest by biotype, pathotype, race or strain exists. New biotypes, pathotypes, races or strains that may emerge are not covered by the original resistance claim.

Immunity is when a plant is not subject to attack or infection by a specified pest.

3. Statement

The ISF Vegetable and Ornamental Crops Section recommends that vegetable seed companies use the terms susceptibility, high or intermediate resistance, and immunity to describe the reaction of plants to pests in communication with their customers. They should avoid the term tolerance for this purpose.

Vegetable seed companies will continue to use the term tolerance to describe the ability of a plant variety to endure abiotic stresses without serious consequences for growth, appearance and yield. The definitions and recommendation will be reviewed in five years.



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