

Blueberry Cultivars for Missouri



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In appreciation to Dr. Ben Fuqua, Missouri State University



Today's Outline

- Types of blueberries
- The perfect blueberry for Missouri
- Choosing the right blueberry cultivar
- Standard blueberry cultivars
- Up and coming blueberry cultivars to consider
- Summary

Types of Blueberries



- **Northern highbush**

- Northern highbush blueberries (*Vaccinium corymbosum*) are native to much of the eastern and northeastern United States, from the Appalachian Mountains to the Atlantic Ocean.
- Plants grow 5 to 9 feet tall.

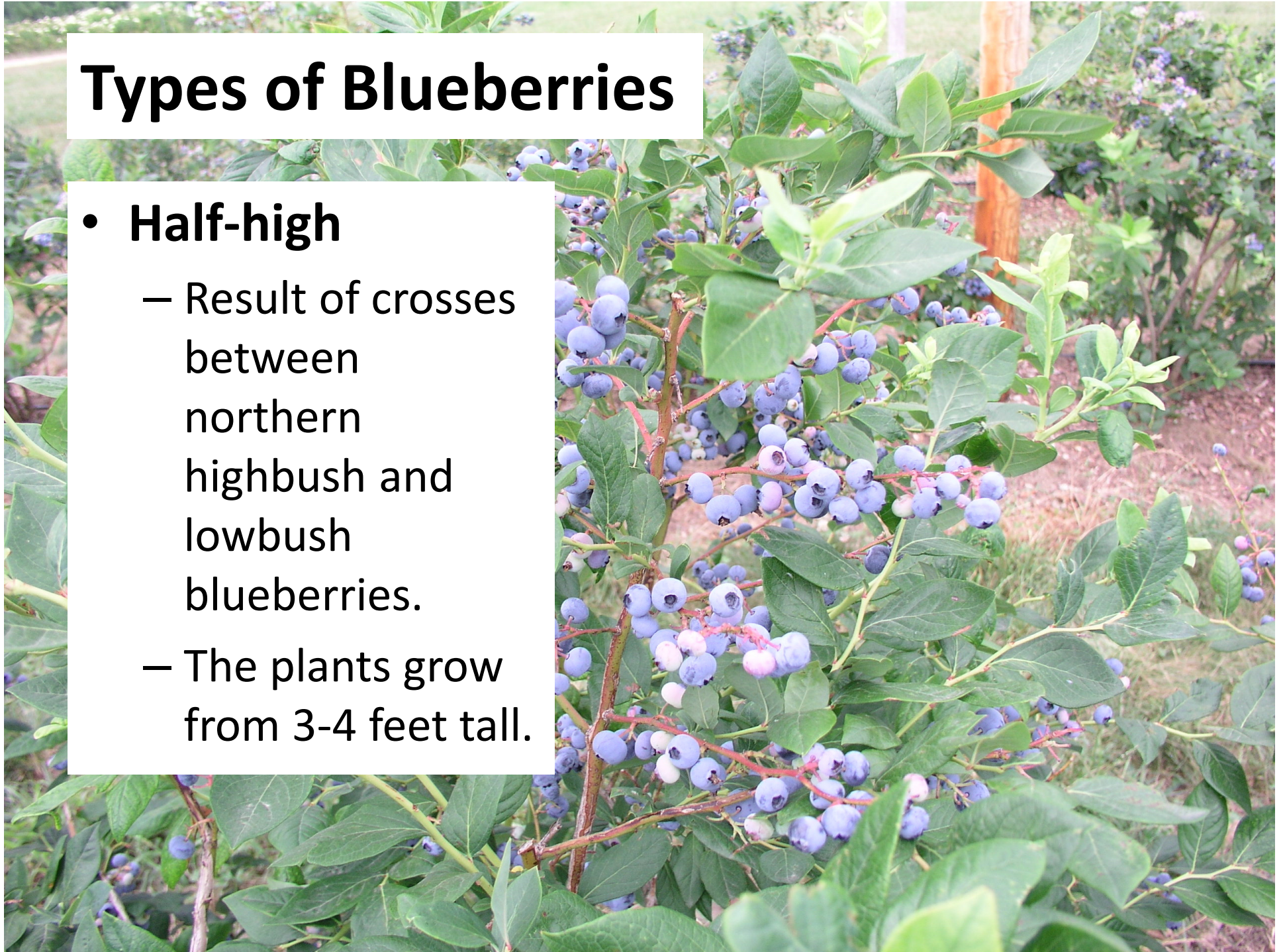


Types of Blueberries

- **Southern highbush**
 - Complex hybrids of *V. corymbosum* and a native, evergreen Florida species (*V. darrowii*).
 - The plants grow about 6 to 8 feet tall.

Types of Blueberries

- **Half-high**
 - Result of crosses between northern highbush and lowbush blueberries.
 - The plants grow from 3-4 feet tall.



Types of Blueberries

- **Rabbiteye**

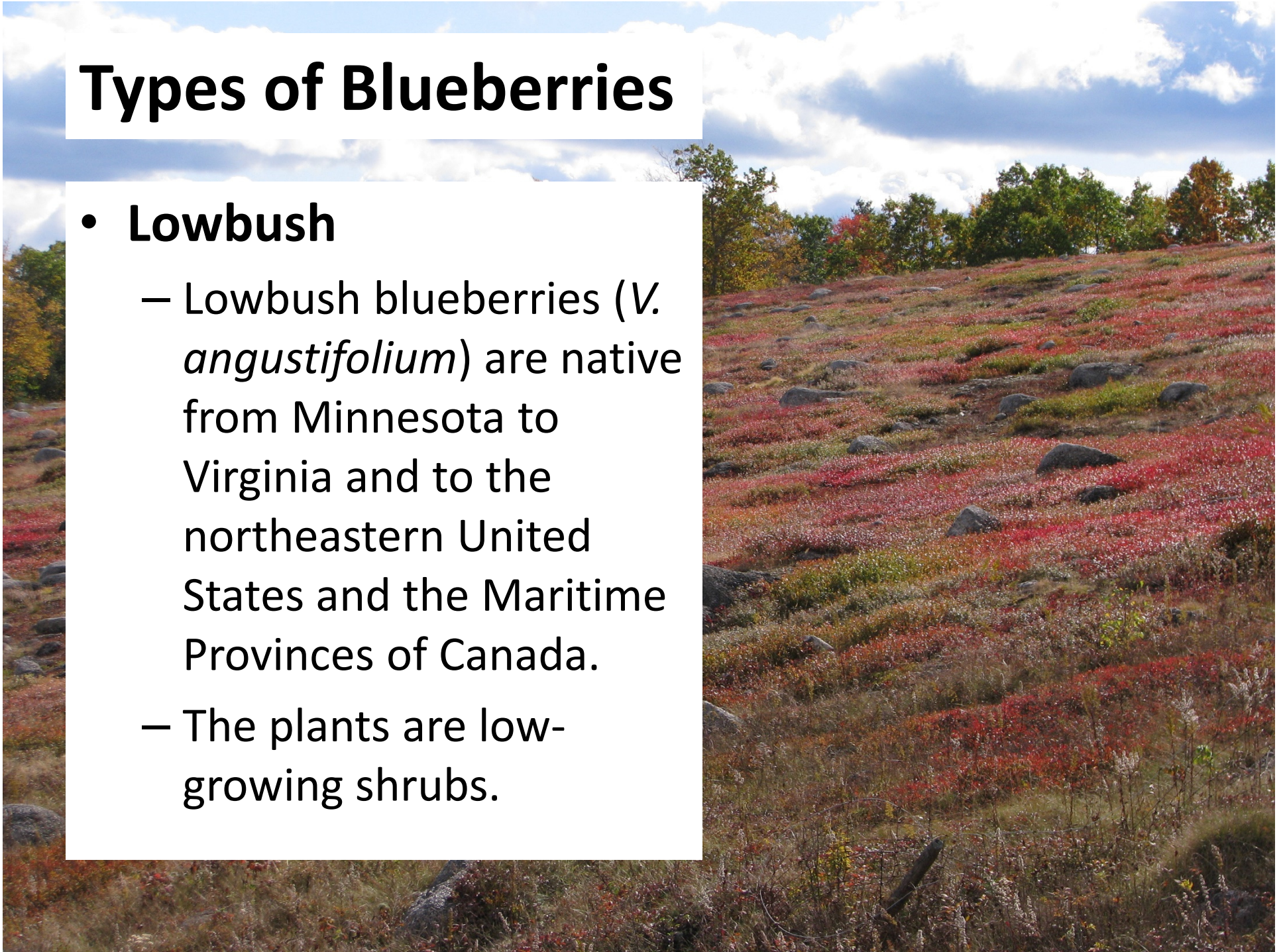
- Rabbiteye blueberries (*V. virgatum* syn. *V. ashei*) are native to the SE United States.
- The plants grow from 6 to 10 feet tall.



Types of Blueberries

- **Lowbush**

- Lowbush blueberries (*V. angustifolium*) are native from Minnesota to Virginia and to the northeastern United States and the Maritime Provinces of Canada.
- The plants are low-growing shrubs.



Types of Blueberries

- Chilling requirements – most blueberries require a certain amount of cold weather during winter in order to leaf and flower normally the following spring. 45°F is the general threshold temperature.
 - High chill (900 to 1200 hours) – most northern highbush and half high cultivars
 - Mid chill (400 to 900 hours) – higher chill southern highbush
 - Avoid low or no chill blueberry cultivars in MO

The Perfect Blueberry for Missouri

- Adapted to growing conditions
 - High pH soils
 - Mineral soils that have low to moderate organic matter
 - Soils that have drainage issues



The Perfect Blueberry for Missouri

- Hardiness
 - Plant hardiness
 - Flower bud hardiness
- Heat tolerance
- Drought tolerance



The Perfect Blueberry for Missouri

- Disease resistance



The Perfect Blueberry for Missouri

- Bush characteristics



The Perfect Blueberry for Missouri

- Fruit characteristics
 - Firm
 - Large
 - Flavor
 - Attractive
 - Storage potential
 - Mechanical harvest?



Choosing the Right Blueberry Cultivar

- Ripening date
- Yields and duration of harvest
- Berry characteristics – flavor, berry size, firmness
- Type of market to be used
- Availability of labor for harvest
- Intended use of fruit
- Potential for mechanical harvesting

Standard Blueberry Cultivars



Standard Blueberry Cultivars

- **Duke**
 - 1987 USDA release.
 - Early ripening.
 - Fruit medium size, medium blue, firm with small, dry stem scar and good flavor.
 - Moderate yields.
 - Upright, spreading, open bush.
 - Sensitive to high pH soils



Standard Blueberry Cultivars

- **Brigitta Blue**
 - 1977 Australian release.
 - Midseason ripening.
 - Fruit medium to large, medium blue, very firm with small, dry stem scar and good flavor. High yields.
 - Upright, spreading, dense bush.



Standard Blueberry Cultivars

- **Berkeley**
 - 1949 USDA and New Jersey release.
 - Midseason ripening. Fruit large, very light blue, firm with large stem scar and good flavor. Loose fruit clusters. Very high yields.
 - Upright, spreading bush.



Photo credit <https://www.americanmeadows.com>

Standard Blueberry Cultivars

- **Bluejay**
 - 1978 Michigan release.
 - Midseason ripening.
 - Fruit medium size, light blue, and very firm with small stem scar and good flavor.
 - Moderate yields.
 - Upright, spreading bush.



Photo credit: <https://www.ecrater.com>

Standard Blueberry Cultivars

- **Blueray**
 - 1955 USDA and New Jersey release.
 - Midseason ripening.
 - Fruit large, light blue, firm with medium stem scar and good flavor.
 - Small, tight fruit clusters.
 - Moderate yields.
 - Upright, spreading bush.



Photo credit <https://www.burpee.com>

Standard Blueberry Cultivars

- **Bluecrop**
 - 1952 USDA and New Jersey release.
 - Midseason ripening.
 - Fruit medium, very light blue, very firm with small stem scar and good flavor. Loose fruit clusters.
 - High yields and consistent producer.
 - Upright, spreading, open bush.
 - Issues with overbearing



Standard Blueberry Cultivars

- **Legacy**
 - 1993 USDA and New Jersey release.
 - Midseason ripening.
 - Fruit medium to large, medium blue, firm with small stem scar and good flavor. High yields.
 - Upright, spreading, open bush.
 - Considered a southern highbush cultivar, so it may be cold tender in northern climates.



Standard Blueberry Cultivars

- **Sierra**
 - 1988 USDA release.
 - Midseason ripening.
 - Fruit medium to large, medium blue, firm with small stem scar and good flavor. Moderate yields.
 - Upright, spreading, open bush.



Standard Blueberry Cultivars

- **Chandler**
 - 1994 USDA release.
 - Mid to late ripening.
 - Fruit large to very large, light blue, firm with small, dry stem scar and good flavor.
 - High yields.
 - Upright, spreading, open bush.



Standard Blueberry Cultivars

- **Nelson**
 - 1988 USDA release.
 - Late ripening.
 - Fruit medium to large, light blue, firm, good flavor. High yields.
 - Upright, spreading, open bush.



Standard Blueberry Cultivars

- **Jersey**
 - 1928 USDA release.
 - Late ripening.
 - Fruit small, medium blue, firm with medium stem scar and good flavor. Loose fruit clusters. Moderate yields.
 - Upright, spreading bush.



Photo credit <https://www.starkbros.com>



Standard Blueberry Cultivars

- **Darrow**
 - 1965 USDA and New Jersey release.
 - Late ripening.
 - Fruit medium, light blue, firm with medium stem scar and good flavor. High yields.
 - Upright, spreading, open bush.



Standard Blueberry Cultivars

- **Coville**
 - 1949 USDA and New Jersey release.
 - Late ripening.
 - Fruit large, very firm with medium stem scar and good flavor but tart until ripe. Loose fruit clusters.
 - Very high yields.
 - Upright, spreading bush.

Standard Blueberry Cultivars

- **Lateblue**
 - 1967 USDA and New Jersey release.
 - Late ripening.
 - Fruit medium, light blue, firm with medium stem scar and good flavor. Loose fruit clusters. High yields.
 - Upright, spreading bush.

Standard Blueberry Cultivars

- **Elliot**
 - 1973 USDA release.
 - Late ripening.
 - Fruit medium, light blue, very firm with small stem scar and good flavor. Loose fruit clusters. Moderate yields.
 - Upright, spreading bush.



Photo credit <https://shop.tomscreeknursery.com>

Up and Coming Cultivars



Up and Coming Cultivars

- **Gupton (SH)**
 - 2012 USDA/ARS release
 - Early season
 - Fruit light blue, firm
 - Bushes upright with narrow crowns
 - Susceptible to mummy berry!
 - Possible machine-harvest cultivar.



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

- **New Hanover (SH)**
 - 2005 NCSU release
 - Early to midseason
 - Large-fruited cultivar for hand harvest. Very productive. Some stem tearing will occur.
 - Bush spreading



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

- **Blue Ribbon**
 - Fall Creek Nursery exclusive
 - Early to midseason
 - high yields of firm, flavorful large berries and good post-harvest shelf life
 - Spreading bush



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

- **Top Shelf**
 - Fall Creek
Nursery exclusive
 - midseason
 - very large,
flavorful, firm
fruit



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

- **Ozarkblue (SH)**
 - 1996 UA release
 - Midseason to late
 - high yields of quality fruit
 - plants are semi-upright and vigorous,



Photo credit <https://www.simmonsplantfarm.com>

Up and Coming Cultivars

- **Echota**
 - NCSU release
 - Mid to late season
 - Light blue high quality fruit
 - Bush vigorous, upright



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

- **Aurora**
 - 2003 Release
 - Late ripening
 - Berries medium blue, firm, tart
 - Bush rounded, spreading, vigorous



Photo credit <http://www.fallcreeknursery.com>

Up and Coming Cultivars

- **Liberty**
 - 2003 Release
 - Late ripening
 - The berries are slightly flat, sky-blue in color, and have a balanced appealing flavor.
 - Open, Upright, Vigorous bush



Photo credit <http://www.fallcreeknursery.com>

Up and Coming Cultivars

- **Cargo**
 - Fall Creek Nursery exclusive
 - Late season
 - Berries round, uniform and maintain their firmness and flavor during refrigerated and freezer storage.
 - Narrow crown, upright, vigorous



Photo credit Dr. Bill Cline, NCSU

Up and Coming Cultivars

Others to consider...

– Early

- Hannah's Choice
- Misty (SH)
- O'Neal (SH)
- Revielle (SH)
- Draper

– Midseason

- Cara's Choice
- Hardyblue

– Late

- Bluegold

In Conclusion...

- The tried and true cultivars are still good!
- Consider on farm trials before planting large numbers of new cultivars
- Choose blueberry cultivars based on your realities!
- Be careful with low chill or no chill cultivars
- Be careful with southern highbush cultivars in northern regions

Resources

- **Midwest Blueberry Production Guide (ID-210).**
<http://www2.ca.uky.edu/agcomm/pubs/id/id210/id210.pdf>
- **Highbush Blueberry Production Guide (NRAES-55).**
http://host31.spidergraphics.com/nra/doc/Fair%20Use%20Web%20PDFs/NRAES-55_Web.pdf
- **The Southern Region Small Fruit Consortium.**
<http://www.smallfruits.org/crops/blueberries.html>

Any Questions?



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Blue Ribbon – Fall Creek patented NHB, shown 8Jun16 in SE NC



Top Shelf -- Fall Creek Patented NHB -- shown 8Jun16 in SENC



Cargo -- Fall Creek Patented NHB shown 6 Jul 16 in SENC mid-late season



Some potential northern highbush and higher-chill southern highbush for Missouri:

- Southern highbush
 - Legacy
 - New Hanover
 - Gupton
 - Sweetheart
 - Ozarkblue
- Northern highbush
 - Duke
 - Echota
 - Cargo
 - Top Shelf
 - Blue Ribbon

Standard Blueberry Cultivars

The Perfect Blueberry for the Ozarks

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Northern highbush

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Up and Coming Cultivars

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