

Blueberry Cultivar Trial Results at Mountain Grove

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Planting Location

Missouri State University, State Fruit Experiment Station
Mountain Grove, Missouri
Latitude 37° 09' Longitude 92° 16"
Hardiness Zone 6 (-10 to 0°F)
Elevation 1450 feet



Soil Characteristics

Wilderness cherty silt loam
silt loam topsoil
silty clay loam subsoil
5 to 20% chert
fragipan horizon
organic matter 2.5 to 3%
5 to 9% slope

Establishment and Growth

Starting in 2009 with additions in 2010 and 2011
Blueray and Jersey planted in 2011 not reported on
Limited land preparation
two seasons of cover cropping and incorporation before planting
sulfur (blueberry) and fertilizer amendments prior to planting
pH initially 6.1 and lowered to 4.8 for blueberries
planted on flat ground with no bedding
peat moss mixed in backfill soil at blueberry planting
Fertilization
initial nitrogen application 40 lbs/A
nitrogen raised to 80 lbs/A, fertigation implemented
higher nitrogen rates used because of mulch
Shredded bark mulch used along plant rows
Drip irrigation lines along rows
Defruited for two growing seasons and selective fruit thinning in blueberries

Blueberry	Highbush	Origin	Season	Berry Size	Nursery Availability
Arlen	Northern	North Carolina	Late	M	Yes
Aurora	Northern	Michigan	Late	M	Yes
Bluecrop	Northern	MD-USDA	Mid	M	Yes
Bluegold	Northern	NJ-USDA	Mid	M	Yes
Blueray	Northern	MD-USDA	Mid	L	Yes
Chandler	Northern	MD-USDA	Late	VL	Yes
Draper	Northern	Michigan	Mid	M	Yes
Duke	Northern	NJ-USDA	Early	M	Yes
Elliott	Northern	MD-USDA	Late	M	Yes
Hannah's Choice	Northern	NJ-USDA	Early	M	No
Jersey	Northern	MD-USDA	Late	S	Yes
Legacy	Northern	MD-USDA	Mid	M	Yes
Liberty	Northern	Michigan	Late	M	Yes
Nelson	Northern	NJ-USDA	Late	M	Yes
Rubel	Northern	Wild selection	Mid	S	Yes

Blueberry Yield (lbs/plant)	2011	2012	2013	2014	4-year Total
Arlen ¹	1.2 abc	2.1 bc	5.1	6.3	14.7
Aurora ¹	2.2 ab	3.3 abc	8.5	9.2	23.2
Bluecrop ¹	1.3 abc	2.8 abc	4.0	6.8	14.9
Bluegold ¹	2.8 a	3.4 abc	8.0	12.1	26.3
Chandler ²	0.5 bc	0.1 c	5.6	8.5	14.7
Draper ¹	0.6 bc	3.0 abc	5.2	8.1	16.9
Duke ¹	0.6 bc	1.9 bc	4.5	4.3	11.3
Elliott ¹	1.3 abc	4.8 a	8.0	6.6	20.7
Hannah's Choice ¹	0.6 bc	3.2 abc	3.9	5.4	13.1
Legacy ¹	2.0 ab	4.5 a	8.5	9.2	24.2
Liberty ¹	2.4 ab	4.1 ab	9.1	11.0	26.6
Nelson ²	0.1 c	2.0 bc	2.5	4.8	9.4
Rubel ¹	1.3 abc	1.6 bc	5.4	6.6	14.9

¹Planted 2009

²Planted 2010

NS NS

Blueberry Yield (lbs/plant)	2011	2012	2013	2014	4-year Total
Arlen ¹	1.2 abc	2.1 bc	5.1	6.3	14.7
Aurora ¹	2.2 ab	3.3 abc	8.5	9.2	23.2
Bluecrop ¹	1.3 abc	2.8 abc	4.0	6.8	14.9
Bluegold ¹	2.8 a	3.4 abc	8.0	12.1	26.3
Chandler ²	0.5 bc	0.1 c	5.6	8.5	14.7
Draper ¹	0.6 bc	3.0 abc	5.2	8.1	16.9
Duke ¹	0.6 bc	1.9 bc	4.5	4.3	11.3
Elliott ¹	1.3 abc	4.8 a	8.0	6.6	20.7
Hannah's Choice ¹	0.6 bc	3.2 abc	3.9	5.4	13.1
Legacy ¹	2.0 ab	4.5 a	8.5	9.2	24.2
Liberty ¹	2.4 ab	4.1 ab	9.1	11.0	26.6
Nelson ²	0.1 c	2.0 bc	2.5	4.8	9.4
Rubel ¹	0.6 bc	1.6 bc	5.4	6.6	14.2
			NS	NS	

¹Planted 2009
²Planted 2010

Blueberry Berry Weight (g)	2011	2012	2013	2014	Average
Arlen ¹	1.9 ab	1.9 abc	1.5 bc	1.9 abc	1.8
Aurora ¹	2.3 ab	1.9 abc	1.5 bc	2.0 abc	1.9
Bluecrop ¹	1.5 ab	1.7 abc	1.3 bc	1.5 abc	1.5
Bluegold ¹	1.4 ab	1.2 c	1.4 bc	1.2 bc	1.3
Chandler ²	2.4 ab	1.5 bc	2.4 a	2.6 a	2.2
Draper ¹	2.0 ab	1.3 bc	1.5 bc	1.7 abc	1.6
Duke ¹	2.4 a	1.4 bc	1.2 bc	1.4 abc	1.6
Elliott ¹	1.7 ab	1.6 bc	1.3 bc	1.4 abc	1.5
Hannah's Choice ¹	2.0 ab	1.3 bc	1.8 ab	1.6 abc	1.7
Legacy ¹	1.9 ab	1.5 bc	1.5 bc	1.5 abc	1.6
Liberty ¹	1.7 ab	1.5 bc	1.2 bc	1.6 abc	1.5
Nelson ²	2.4 a	2.3 a	1.6 bc	2.2 ab	2.1
Rubel ¹	0.9 b	1.2 bc	0.9 c	0.8 c	1.0

¹Planted 2009
²Planted 2010

Nurseries

DeGrandchamp Farms – www.degrandchamps.com
 Fall Creek Farm & Nursery - www.fallcreeknursery.com
 Hartmann's Plant Company – www.hartmannsplantcompany.com
 Nourse Farms – www.noursefarms.com
 Simmons Plant Farm – www.simmonsplantfarm.com

Preliminary Recommendations

Aurora – late, moderate to high yield, medium to large berries, spreading habit
 Bluegold – mid, high yield, small to medium berries, compact habit, cold hardy
 Draper – mid, moderate yield, medium berries, upright habit
 Duke – early, low yield, medium berries, upright habit
 Legacy – mid, moderate to high yield, medium berries, upright habit, disease resistant
 Liberty – late, high yield, medium berries, upright habit

Blueberry	2000-2008 Ave. Yield (lbs)	2000-2006 Berry Wt. (g)
Bluecrop	7.3	1.6
Brigitta Blue	10.3	2.1
Chandler	8.4	3.0
Collins	4.2	1.5
Darrow	9.0	1.7
Duke	6.4	1.6
Legacy	9.7	1.9
Nelson	10.8	2.0
Nui	7.5	2.3
Ozarkblue	7.7	1.9
Reka	9.5	1.3
Sierra	5.5	1.7
Summit	5.5	1.9
Toro	5.1	1.8