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Vegetable Variety Trials 2018

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VT 2018-01

Vegetable cultivar trials were conducted in the summer of 2018 at the Georgeson Botanical Garden (GBG) at the Alaska Agricultural and Forestry Experiment Station (64° 51'N, 147° 52'W). The goal of the trials is to help gardeners and farmers choose varieties that perform well in the Tanana Valley and perhaps other locations in Interior Alaska. Plot sizes are small and different results are likely on a larger scale. Gardeners and farmers can help document how different varieties perform in their own gardens and farms using the Grow&Tell mobile app.

Weather

Weather data were compiled from a U.S. Weather Service station, elevation 475 feet (145 m), located approximately 350 feet (107 m) west of the garden. The growing season got off to a slow start with a cool first half of June. There were quite a few hot days in late June and July. August was rainy and cold, followed by a sunny September.

Heidi Rader, project director, with celery varieties

2018 Growing Season					
Temperature (degrees F)	May	June	July	August	Sept.
Average daily maximum	60	69	75	64	56
Monthly high	73	87	90	84	64
Average daily minimum	37	45	49	46	38
Monthly low	27	33	38	37	27
Rainfall (inches)	1.52	1.11	1.39	5.05	2.08

2018 Frost		
Last frost	**Frost-free days**	**First frost**
5/17/18	107	9/1/18

Experimental Design

In 2018, beets, carrots and celery were grown in replicated trials in a randomized complete block design (RCBD). Brussels sprouts, beans, corn, and watermelon were grown in unreplicated or preliminary trials.

Fertilizer

Prior to planting, plots were rototilled and 20-10-10 slow-release fertilizer was applied at a rate of 4 pounds per 100 square feet based on results of soil tests. Composted steer manure was applied to beds that were in need of additional organic matter because of their high clay content.

Planting

Celery, Brussels sprouts, corn and watermelon were started in the Arctic Health Research Greenhouse at the University of Alaska Fairbanks (UAF). See Tables 1 and 2 for seed starting dates. Germination rates were uniform for celery and Brussels sprouts. Corn seeds were soaked prior to planting. Yukon Chief #612 had poor germination. Watermelon was seeded indoors on May 14 and required a heat mat for germination. The plants would likely have had a better chance of

maturing if they had been planted earlier. They were transplanted June 21, when they seemed big enough to transplant. All seedlings were hardened off a week or more prior to planting outside.

Beets, beans and carrots were all direct seeded (see Tables 1 and 2 for planting dates) in twin rows. All beet varieties had acceptable to excellent germination rates. Bean seeds were soaked in water for six hours and inoculated with mycorrhizae. Romano Gold and Royal Burgundy bean varieties emerged the fastest. Jade II beans germinated poorly. Carrots were all slow to germinate, and some plots experienced low or no germination, in particular Hercules.

Crops were planted according to recommended commercial spacing guidelines in 30-inch-wide beds with 18-inch aisles. The watermelon was planted in 3-by-10-foot raised beds that were insulated on the bottom. Plot sizes were big enough to grow at least 10 plants of each variety.

Growing

Crops were irrigated using drip irrigation and hand-weeded, as needed, throughout the summer. Corn, Brussels sprouts and watermelon were planted into infrared-transmitting (IRT) plastic mulch, which acted as a weed barrier and soil warmer. Brussels sprouts, celery, corn and watermelon plots were fertigated midway through the growing season with a 23-13-8 water-soluble fertilizer at an approximate rate of 1 pound per 2,000 square feet.

Trial Evaluation

Harvest began in mid-July and continued twice a week until September. Mature vegetables were harvested each week. Diseased or very deformed vegetables that would be considered unmarketable at a farmers market were not included in the yield. Data was collected using an iPad. This worked well except that a poor wireless connection resulted in some data not being collected.

Each cultivar was evaluated at least once in terms of plant vigor, bolting sensitivity (or susceptibility to bolt), uniformity, pest resistance and disease resistance. These traits were evaluated on a scale from 1 to 9, 1 being very poor and 9 being excellent. Taste tests were conducted with volunteers who participated in a workshop. As many varieties of each crop as possible were rated for flavor and texture on a scale of 1 to 5 (1 being very poor and 5 being excellent). Carrots, beets, beans, celery, Brussels Sprouts and corn were evaluated by 26, 19, 17, 14, 10 and 9 taste testers, respectively.

Statistics

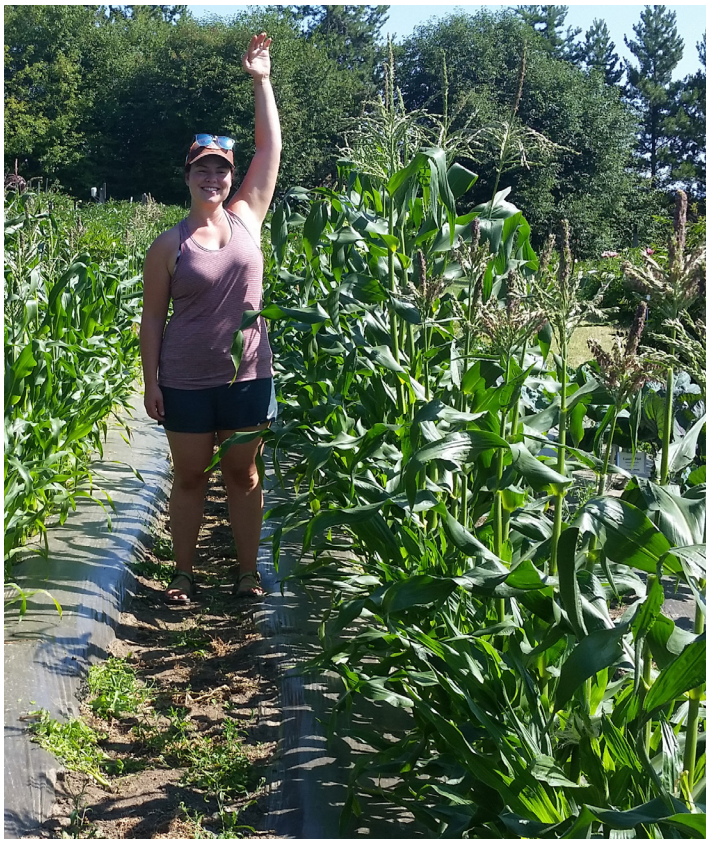
For replicated trials, the yields for each plot were totaled. Ratings were averaged for each plot, then the average of all three plots was taken. Yields for unreplicated plots were totaled and reported in terms of yield per row feet and yield per plot.

Statistical analysis of the RCBD trials was carried out through the Organic Seed Alliance's vegetable variety trials tool, which is available to use for free at https://organicseed.shinyapps.io/OrganicTrials/. A 95 percent confidence interval was used with the default alpha of 0.05. Degrees of freedom for unbalanced trials are calculated by the Satterthwaite method. If you are interested in additional statistical detail, please contact the authors.

Results of Replicated Trials

Beets

In descending order, Zeppo, Boro, Subeto, Pablo, Red Ace, Detroit Dark Red, Robin, and Merlin yields were significantly higher than Falcon, Early Blood Turnip and Lutz Green Leaf (see Table 1). Zeppo was the highest-yielding variety at an average of 2.1 pounds/row feet. The higher-yielding varieties also had correspondingly high ratings in other areas, including plant vigor, bolting sensitivity, uni-



Glenna Gannon, research assistant, with the corn varieties being trialed

Table 1: Replicated Trials

		Spacing									
Cultivar	Source	Within Row	Between Rows	Plot Length	Date Seeded	Transplanted	Days to Maturity	Harvest Period	Yield (lbs)/Plot	Yield (lbs)/ row foot	Avg. Unit weight
Beets											oz.
Boro (F1)	Johnny's	3″	12″	48″	5/30		50	7/30	8.0*	2.0	5.3
Detroit Dark Red	High Mowing	3″	12″	48″	5/30		55	7/24 - 8/9	7.2*	1.8	4.5
Early Blood Turnip	Urban Garden Seeds	3″	12″	48″	5/30			7/24	3.5	0.9	2.7
Falcon (F1)	Territorial	3″	12″	48″	5/30		55-60	7/24	3.9	1.0	2.6
Lutz Green Leaf	Territorial	3″	12″	48″	5/30		65	7/24	2.5	0.6	2.1
Merlin (F1)	Territorial	3″	12″	48″	5/30		55	7/24 - 8/9	5.2*	1.3	3.2
Pablo (F1)	Territorial	3″	12″	48″	5/30		50-60	7/24 - 8/9	7.3*	1.8	4.6
Red Ace (F1)	Johnny's	3″	12″	48″	5/30		50	8/2 - 8/9	7.3*	1.8	4.5
Robin (F1)	Territorial	3″	12″	48″	5/30		50	7/30 - 8/9	6.3*	1.6	4.8
Subeto (F1)	Territorial	3″	12″	48″	5/30		55-60	7/30 - 8/9	7.8*	2.0	5.1
Zeppo (F1)	Johnny's	3″	12″	48″	5/30		50	7/30 - 8/9	8.5*	2.1	5.4
Carrot											oz.
Bolero	Johnny's	1″	12″	24″	6/1		75	8/6 - 8/16	2.1	1.1	2.2
Eskimo (F1)	Territorial	1″	12″	24″	6/1		85	8/16	2.4	1.2	2.2
Hercules (F1)	Johnny's	1″	12″	24″	6/1		65	8/6 - 8/16	1.5	0.8	2.7
Nantes half long	Burpee's	1″	12″	24″	6/1		70	8/6 - 8/16	2.8	1.4	1.9
Napa (F1)	Territorial	1″	12″	24″	6/1		63	8/10 - 8/16	2.2	1.1	2.6
Napoli (F1)	Johnny's	1″	12″	24″	6/1		58	8/6 - 8/16	3.9	2.0	2.1
Nectar (F1)	Johnny's	1″	12″	24″	6/1		72	8/6 - 8/16	1.2	0.6	2.2
Nelson (F1)	West Coast Seeds	1″	12″	24″	6/1		58	8/6 - 8/16	1.6	0.8	2.1
Romance (F1)	Johnny's	1″	12″	24″	6/1		70	8/6 - 8/16	1.7	0.9	1.9
Scarlet Nantes	Burpee's	1″	12″	24″	6/1			8/6 - 8/16	2.0	1.0	3.5
Sugarsnax 54 (F1)	Johnny's	1″	12″	24″	6/1		68	8/16	0.8	0.4	2.0
Touchon	Burpee's	1″	12″	24″	6/1		65	8/6 - 8/16	1.9	1.0	1.8
Yaya (F1)	Johnny's	1″	12″	24″	6/1		56	8/6 - 8/16	2.4	1.2	2.1
Celery											lbs.
Conquistador	Johnny's	8″	48″	72″	3/21	6/5	80	8/27	22.7*	3.8	2.3
Merengo (F1)	High Mowing	8″	48″	72″	3/21	6/5	80	8/13 - 8/20	25.3*	4.2	2.5
Nero (F1)	Stokes	8″	48″	72″	3/21	6/5	98	8/16 - 8/20	25.6*	4.3	2.6
Redventure	Territorial	8″	48″	72″	3/21	6/5	100-110	8/20	9.8	1.6	2.1
Tall Utah 52-70 Improved	Burpee	8″	48″	72″	3/21	6/5	80	8/13 -8/27	25.7*	4.3	2.7
Tango OG	Johnny's	8″	48″	72″	3/21	6/5	105	8/20 - 8/27	28.8*	4.9	3.0

*$p < .05$.

Table 1: Replicated Trials (continued)

						Quality: 1= Poor 5=Excellent		
Cultivar	Plant vigor	Bolting Sensitivity	Uniformity	Pest Resistance	Disease Resistance	Taste	Texture	Comments
Beets								
Boro (F1)	9	9*	8*	9	9	4	4	Round and symmetrical beets; tasty and tender beet greens
Detroit Dark Red	7	6	6*	9	9	5	4	Tendency to bolt and crack; varied in size
Early Blood Turnip	5	2	5	9	9	4	4	Tendency to bolt and crack
Falcon (F1)	5	1	7*	9	6	3	3	Tendency to bolt
Lutz Green Leaf	5	4	4	9	8	3	4	Tendency to bolt
Merlin (F1)	7	9*	8*	9	8	4	4	
Pablo (F1)	9	9*	8*	8	9	3	4	Large round beets
Red Ace (F1)	8	9*	8*	9	9	3	3	Small beets
Robin (F1)	7	9*	8*	9	9	4	4	Varied in size
Subeto (F1)	8	9*	9*	9	9	4	4	Round, symmetrical; tasty and tender beet greens
Zeppo (F1)	9	9*	9*	9	9	4	4	Large round beets
Carrot								
Bolero	9	9	7	9	9	3	3	Branched
Eskimo (F1)	9	9	8	9	9	3	3	Uniform, "ideal" carrot look
Hercules (F1)	9	9	7	9	9	3	3	Poor germination; some branched, some large, thick carrots; no data recorded for one plot
Nantes half long	8	9	8	9	9	3	4	Uniform
Napa (F1)	8	9	6	9	9	4	4	Branched; no data recorded for one plot
Napoli (F1)	9	9	9	9	9	3	4	Branched
Nectar (F1)	8	9	6	9	9	3	4	No data recorded for one plot
Nelson (F1)	8	9	8	9	9	4	5	Uniform
Romance (F1)	8	9	6	9	9	3	4	No data recorded for one plot
Scarlet Nantes	8	9	8	9	9	4	4	Tendency to split
Sugarsnax 54 (F1)	7	9	6	9	9	4	5	Long, narrow taproot, susceptible to breaking when harvested; no data recorded for one plot
Touchon	7	9	7	9	9	5	4	Branched, stubby or split
Yaya (F1)	8	9	8	9	9	3	4	Susceptible to breaking when harvested
Celery								
Conquistador	8*	9*	8	7	8	3	4	
Merengo (F1)	9*	9*	8	8	8	4	4	Uniform, thick head
Nero (F1)	9*	9*	8	8	8	4	4	Uniform, thick head
Redventure	8	8	4	7	6	2	2	Poor quality; lots of small side shoots, hollow centers, very bitter taste
Tall Utah 52-70 Improved	9*	9*	8	8	8	3	4	Large, uniform head, thick ribs
Tango OG	9*	9*	9	8	9	4	4	No data recorded for one plot

*$p < .05$.

Table 2: Unreplicated Trials

		Spacing								
Cultivar	Source	Within Row	Between Rows	Plot Length	Date Seeded	Transplanted	Days to Maturity	Harvest Period	Yield/ plot (lbs.)	Yield (lbs.)/ row foot
Beans										
Bountiful	Territorial	2”	15”	48”	5/30			8/2 - 8/23	4.4	1.1
Contender	Burpee’s	2”	15”	48”	5/30		55	8/2 - 8/20	3.4	0.9
Jade II	Territorial	2”	15”	48”	5/30		53	8/6 - 8/23	0.7	0.2
Jumbo	Johnny’s	2”	15”	48”	5/30		55	8/2 - 8/16	1.9	0.5
Provider	Johnny’s	2”	15”	48”	5/30		50	8/2 - 8/23	5.5	1.4
Rocdor	Johnny’s	2”	15”	48”	5/30		52	8/2 - 8/23	4.7	1.2
Romano Gold/ Capitano	Stoke’s	2”	15”	48”	5/30		56	8/2 - 8/20	3.0	0.8
Royal Burgundy	Johnny’s	2”	15”	48”	5/30		55	8/2 - 8/20	0.6	0.2
Royalty Purple Pod	Burpee’s	2”	15”	48”	5/30			8/6 - 8/20	0.3	0.1
Tendercrop	Victory Seeds	2”	15”	48”	5/30			8/2 - 8/23	3.3	0.8
Brussels Sprouts										
Catskill	Eden Brothers	1”	48”	200”	3/27	6/7	90	9/17	1.8	0.1
Dagan (F1)	Johnny’s	1”	48”	200”	3/27	6/7	100	9/17	2.2	0.1
Dimitri	Territorial	1”	48”	200”	3/27	6/7	137	9/17	2.6	0.2
Doric (F1)	High Mowing	1”	48”	200”	3/27	6/7	120	9/17	1.8	0.1
Franklin (F1)	Territorial	1”	48”	200”	3/27	6/7	80	9/13	3.4	0.2
Gustus (F1)	Fedco Seeds	1”	48”	200”	3/27	6/7	99	8/27 - 9/13	5.2	0.3
Hestia (F1)	Territorial	1”	48”	200”	3/27	6/7	100	8/27 - 9/13	8.2	0.5
Igor	Territorial	1”	48”	200”	3/27	6/7	200	9/17	1.2	0.1
Jade Cross (F1)	Harris Seeds	1”	48”	200”	3/27	6/7	85	8/27 - 9/13	10.2	0.6
Long Island Improved	Eden Brothers	1”	48”	200”	3/27	6/7	85-115	9/17	1.2	0.1
Nautic (F1)	Territorial	1”	48”	200”	3/27	6/7	120	9/17	4.1	0.2
Roodnerf	Territorial	1”	48”	200”	3/27	6/7	100	9/17	2.4	0.1
Rubine	Territorial	1”	48”	200”	3/27	6/7	85			
Corn										
Cafe (F1)	Territorial	8”	48”	72”	3/21	6/6	68	8/28 - 9/6	14.2	1.2
Earlivee (F1)	West Coast Seeds	8”	48”	72”	3/21	6/6	71	8/28 - 8/31	7.0	0.6
Early Sunglow	Burpees	8”	48”	72”	3/21	6/6	63	8/28 - 8/31	8.6	0.7
Espresso (F1)	Territorial	8”	48”	72”	3/21	6/6	70	8/28 - 9/6	9.9	0.8
Gaspe Flint	Sherck Seeds	8”	48”	72”	3/21	6/6	45-60			
Kickoff xr (F1) trtd	Johnny’s	8”	48”	72”	3/21	6/6	69	8/28 - 9/17	5.3	0.4
Legend (F1)	Park seed	8”	48”	72”	3/21	6/6	65	8/28 - 9/6	10.1	0.8
Ruby Queen (F1)	Burpees	8”	48”	72”	3/21	6/6	75	8/28 - 9/10	7.1	0.6
Spring Treat (F1)	Jung seed	8”	48”	72”	3/21	6/6	67	8/28 - 9/6	6.0	0.5
SS2742 (f1) trtd (sh2)	Johnny’s	8”	48”	72”	3/21	6/6	75			
Strong Start 7112 (F1)	Territorial	8”	48”	72”	3/21	6/6	71	9/10	2.3	0.2
Sugar Buns (F1)	Territorial	8”	48”	72”	3/21	6/6	70-80	8/28 - 9/6	8.0	0.7
Sugar Pearl (F1)	Johnny’s	8”	48”	72”	3/21	6/6	72	8/28 - 9/6	12.3	1.0
Sweetness (F1)	Territorial	8”	48”	72”	3/21	6/6	68	8/28 - 9/6	9.6	0.8
Yukon Chief #612	Best Cool Seeds	8”	48”	72”	3/21	6/6		8/28	1.4	0.1
Watermelon										
Blacktail Mountain	Territorial	24”	50”	90”	5/14	6/21	70-75			
Dark belle (F1)	Johnny’s	24”	50”	90”	5/14	6/21	75			
Little baby flower	Johnny’s	24”	50”	90”	5/14	6/21	70			
Sugar Baby	Seeds of change	24”	50”	90”	5/14	6/21	65			

Table 2: Unreplicated Trials (continued)

	1=Very Poor 9=Excellent					Quality: 1= Poor 5=Excellent		
Cultivar	Uniformity	Plant vigor	Pest Resistance	Disease Resistance	Bolting Sensitivity	Taste	Texture	Comments
Beans								
Bountiful	9	8	9	7	9	3	3	Very susceptible to Botrytis
Contender	8	8	9	8		3	4	
Jade II	8	8	9	8		3	3	Poor germination
Jumbo	7	7	9	7	9	3	3	
Provider	8	8	9	7	9	4	4	Reliable producer
Rocdor	9	9	9	9	9	3	3	
Romano Gold/ Capitano	8	8	9	8	9	3	3	Flavorful, crisp texture
Royal Burgundy	9	9	9	9	9	3	4	
Royalty Purple Pod	9	9	9	9	9	3	4	
Tendercrop	9	8	9	9	9			Speckled bean
Brussels Sprouts								
Catskill	3	5	9	9	6			Some loose or small sprouts and some did not form Some lodging
Dagan (F1)	7	6	9	9	9	3	3	Uniformly small sprouts
Dimitri	7	6	9	9	9	3	3	Uniformly small sprouts
Doric (F1)	7	7	9	9	9			Small but well-formed sprouts
Franklin (F1)	7	8	9	9	9	2	2	Some plants displayed non-uniform growth.
Gustus (F1)	8	9	9	9	9	3	3	Mostly well formed, firm sprouts; some small sprouts
Hestia (F1)	8	9	9	9	9	3	3	Matured early with well formed/compact sprouts; a few somewhat soft sprouts.
Igor	2	5	9	8	7			Sprouts varied in size and 50% of plants didn't produce sprouts.
Jade Cross (F1)	9	9	9	9	9	3	3	Vigorous and productive with some lodging and some split sprouts
Long Island Improved	3	4	9	8	5	2	3	Very loose, poorly formed sprouts
Nautic (F1)	7	8	9	9	8	3	3	Small sprouts, some loose
Roodnerf	6	7	9	9	8			Small sprouts and 50% of plants lodged
Rubine								Did not mature or were loose
Corn								
Cafe (F1)	8	9	9	9	9	3	4	Top producer, very prolific but compact; 12 plants in plot
Earlivee (F1)	8	9	9	9	9	2	2	One of the earliest varieties; should have been harvested sooner--started to go to dent; 10 plants in plot
Early Sunglow	8	9	9	9	9	3	3	Uniform ears
Espresso (F1)	8	9	9	9	9	4	4	Uneven pollination
Gaspe Flint								Short field corn; molded in cool, damp conditions
Kickoff xr (F1) trtd	7	9	9	9	9	3	3	Poor pollination; some plants did not produce ears
Legend (F1)	9	8	9	9	9	3	3	
Ruby Queen (F1)	6	6	9	9	9			Late to mature
Spring Treat (F1)	7	8	9	9	9	4	4	Long harvest period
SS2742 (f1) trtd (sh2)								Did not mature
Strong Start 7112 (F1)	3	9	9	9	9			Large plants with ears but did not reach maturity
Sugar Buns (F1)	8	8	9	9	9	4	4	Uneven pollination
Sugar Pearl (F1)	9	9	9	9	9	4	4	Uneven pollination, tall stalks
Sweetness (F1)	8	9	9	9	9	5	4	Good ear production, but late to mature; tall stalks
Yukon Chief #612			7			2	1	Uniformly poor pollination and small stalks (grew no more than 2 ft. tall)
Watermelon								
Blacktail Mountain								
Dark belle (F1)								
Little baby flower								
Sugar Baby								

formity, and pest and disease resistance. The lower-yielding varieties were less vigorous and had a much higher tendency to bolt. Taste tests were performed after a workshop by volunteers. Detroit Dark Red had the highest taste rating while Falcon and Red Ace had the lowest taste and texture ratings.

Carrots

Carrot yields were not significantly different. Napoli yielded the highest average weight (2 pounds/row foot) while Sugarsnax yielded the lowest weight (0.4 pounds/row foot). Many varieties were forked and misshapen, perhaps because of the clayey soil. Sugarsnax, Touchon and Yaya were brittle and susceptible to breaking, but otherwise received acceptable ratings. Eskimo, Nantes Half Long and Nelson were highly rated for uniformity and had a pleasing carrot shape. Touchon, Sugarsnax and Nelson scored highest for taste. Yields and evaluations for Hercules, Napa, Nectar, Romance and Sugarsnax should be interpreted with caution as data for one plot was missing (likely due to an unreliable internet connection when collecting the data).

Celery

Most celery varieties did uniformly well. Tango OG averaged the highest yield at 4.9 pounds per row foot; however, data for one plot was missing. Redventure yields were significantly lower than Merengo, Nero and Tall Utah 52-70, which each averaged about 4 pounds per row foot and had uniform, large heads. Slugs infested Conquistador but no sustained damage was observed. In addition to low yield, Redventure had hollow shoots and tasted bitter.

Results of Unreplicated Trials

Unreplicated trials will be used to determine which crops and varieties warrant further testing in replicated trials. Results should be used with caution as many factors could influence results when only one plot is grown. Beans are a standard crop for the Interior; however, many varieties did not perform well in the summer of 2018. We consider Brussels Sprouts, corn and watermelon to be marginal crops for Interior Alaska because of the days to maturity required and/or their heat requirements.

Beans

Unfortunately, some of the beans sustained damage from vandalism or unauthorized harvesting. In addition, the beans matured during a particularly rainy August, and *Botrytis* led to a loss of marketable beans. Provider, the standard for cold-hardy beans, was unsurprisingly the highest yielding variety (1.4 pounds/row foot), while Rocdor (1.2 pounds/row foot) and Bountiful (1.1 pounds/row foot) were close behind. Rocdor continued to produce even as other varieties were slowing and affected by damp, cool conditions. Royal Burgundy and Royalty Purple Pod had the lowest yields at 0.2 pounds/row foot and 0.1 pounds/row foot, respectively. This low yield might be partially explained by the vandalism.

Brussels Sprouts

Of the Brussels sprouts, Jade Cross and Hestia were the highest-yielding varieties at 0.6 pounds/row foot and 0.5 pounds/row foot, respectively. In spite of Jade Cross's higher yield, some plants were lodging (bent over and then growing up again) and some sprouts were loose. Gustus, Nautic and Franklin were good performers. Rubine, Catskill and Long Island Improved did not perform well. Rubine's sprouts were too small to harvest by the end of the season. Catskill and Long Island Improved both had some harvestable sprouts but they were extremely erratic and not uniform in their growth.

Corn

Despite the cool, wet weather, many of the corn varieties performed well, with Cafe (1.2 pounds/row foot) and Sugar Pearl (1.0 pounds/row foot) producing the highest yields. However, it should be noted that Espresso, Spring Treat, Sugar Buns, Sugar Pearl, Sweetness and Yukon Chief all had fewer than 12 plants because of germination rates that were less than 100 percent. Only seven Yukon Chief plants were transplanted.

Early Sunglow and Earlivee were compact plants with good pollination. They were harvested the earliest, between August 28 and August 31. Low taste test scores might have been due to the ears being harvested after their prime so that they would be available at the taste test. Corn becomes starchier and tougher as it matures past its prime or "goes to dent." Other varieties were harvested from August 28 into September. Sweetness, Sugar Pearl, Sugar Buns, Spring Treat and Espresso scored well on the taste test. Spotty pollination — possibly associated with the wet weather for much of August — was an issue with some varieties.

Gaspe Flint (a flint corn) was grown more for historical interest because it was a parent of Yukon Chief #612, which was developed at the Agriculture and Forestry Experiment Station. SS2472 did not mature and Kickoff XR and Yukon Chief #612 had very minimal yields. At the Matanuska Experiment Farm, Stephen Brown reported that, in descending order, Sweetness, Espresso and Café performed best while Yukon Chief did not produce any harvestable yield.

The watermelon produced flowers and small fruits but never matured. An earlier start in the greenhouse and earlier planting could have made a difference.

Acknowledgements
Katherine DiCristina, Georgeson Botanical Garden Manager

Retail Sources of Plants/Seeds
Burpee & Co., www.burpee.com/
Johnny's Selected Seeds, www.johnnyseeds.com/
Territorial Seed Co., www.territorialseed.com
Stoke's, www.stokeseeds.com/
Victory Seeds, www.victoryseeds.com/
High Mowing Organic Seeds, www.highmowingseeds.com/
Sherck Seeds, www.sherckseeds.com/
Urban Garden Seeds, https://urbangardenseeds.com/
Eden Brothers, www.edenbrothers.com/
Fedco Seeds, www.fedcoseeds.com/
Harris Seeds, www.harrisseeds.com/
West Coast Seeds, www.westcoastseeds.com/
Park Seed, https://parkseed.com/
Denali Seed Co., https://bestcoolseeds.co/
Seeds of Change, www.seedsofchange.com/

Note: Companies, product or equipment trade names and seed sources are listed to clearly communicate what was used in the trials. It does not serve as an endorsement.

To learn more about variety trials in Alaska:
To see results from past trials, go to www.uaf.edu/snre/research/publications/variety-trials/.

To learn more about the importance of testing and choosing the right vegetable variety for where you live, go to http://bit.ly/2y3uabV and choose the video "How to Choose Varieties to Grow."

To learn more about these trials, go to https://snrenews.blogspot.com/2017/07/limited-variety-trials-begin-at.html.

Connect with UAF Cooperative Extension Service:
Connect with your local Cooperative Extension Service Agent for information on workshops, volunteering and gardening questions in your community!

Go to www.uaf.edu/ces to find out more about UAF Cooperative Extension Service.

Beans are a standard crop for the Interior; however, many varieties do not perform well here.

Find research-based information on the internet
To access over 300 UAF Extension publications, go to http://cespubs.uaf.edu/.

To access agriculture research conducted by the UAF School of Natural Resources and Extension go to www.uaf.edu/snre or https://scholarworks.alaska.edu/handle/11122/1013 and search by researcher or by topic. Search for author Grant Matheke for past variety trials (as far back as 1978).

Go to www.georgesonbotanicalgarden.org for research on perennials, annuals, flowers, vegetables and herbs in Fairbanks, Alaska (look under the research and education).

Search hundredss of Extension websites nationwide here at https://search.extension.org/.

Find research and educational opportunities for sustainable agriculture here at www.sare.org/.

Sign up for a weekly, digital newsletter on sustainable agriculture or find an internship, educational opportunity or ask an expert at https://attra.ncat.org./

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