

Dry Bean Yield Trial across 3 counties in Western WA, 2015

	Emergence (%)	Split (%)	Moldy (%)	Hundred Bean Weight (g)	Maturity (1-3 rating)	Height (in)	Moisture at harvest (%)	Yield (lb/A)
<b>San Juan County</b>								
Desert Song	25	34	11	26	2	13	20.8	318
Eclipse	45	15	9	15	2.5	13	32.6	240
Etna	50	32	16	48	2	11	35.0	253
Island	40	20	2	28	1	11	18.1	212
LRK	60	16	13	57	2.5	13	29.2	103
Orca	45	14	9	26	2	13	24.4	164
Rockwell	35	18	6	38	1.5	12	29.4	165
Rojo Chiquito	60	7	18	17	2	11	35.0	208
Sedona	30	27	6	27	2	12	26.2	203
King of the Early	50	21	18	51	2	14	35.0	125
<b>CV (%)</b>	<b>21.7</b>	<b>20.4</b>	<b>22.3</b>	<b>4.7</b>	<b>31.8</b>	<b>15.7</b>	<b>15.2</b>	<b>23.9</b>
<b>LSD (p = 0.05)</b>	<b>22</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.4</b>	<b>4</b>	<b>9.8</b>	<b>108</b>
<b>Mean</b>	<b>44</b>	<b>21</b>	<b>10</b>	<b>31</b>	<b>1.9</b>	<b>12</b>	<b>28.5</b>	<b>199</b>
<b>Minimum</b>	<b>25</b>	<b>7</b>	<b>2</b>	<b>15</b>	<b>1</b>	<b>11</b>	<b>18.1</b>	<b>52</b>
<b>Maximum</b>	<b>60</b>	<b>34</b>	<b>18</b>	<b>57</b>	<b>2.5</b>	<b>14</b>	<b>35.0</b>	<b>329</b>
<b>Skagit County</b>								
Desert Song	90	16	3	31	2	20	24.2	1644
Eclipse	93	2	2	21	3	21	24.6	3458
Etna	88	34	7	55	2	14	23.3	1961
Island	93	8	1	44	1	32	22.0	3218
LRK	90	23	3	60	1	16	21.2	2786
Orca	88	2	10	31	3	17	26.4	2142
Rockwell	95	12	2	49	1	16	21.0	2061
Rojo Chiquito	93	1	9	22	2.5	27	29.4	1965
Sedona	93	11	12	36	3	24	26.4	2555
King of the Early	90	11	6	54	1	16	24.2	3096
<b>CV (%)</b>	<b>4.8</b>	<b>30.8</b>	<b>97.6</b>	<b>4.5</b>	<b>11.5</b>	<b>19.9</b>	<b>13.9</b>	<b>28.2</b>
<b>LSD (p = 0.05)</b>	<b>10</b>	<b>9</b>	<b>12</b>	<b>4</b>	<b>0.5</b>	<b>9</b>	<b>7.6</b>	<b>1590</b>
<b>Mean</b>	<b>91</b>	<b>12</b>	<b>6</b>	<b>40</b>	<b>1.9</b>	<b>20</b>	<b>24.3</b>	<b>2489</b>
<b>Minimum</b>	<b>88</b>	<b>1</b>	<b>1</b>	<b>21</b>	<b>1</b>	<b>14</b>	<b>21.0</b>	<b>1083</b>
<b>Maximum</b>	<b>95</b>	<b>34</b>	<b>12</b>	<b>60</b>	<b>3</b>	<b>32</b>	<b>29.4</b>	<b>4358</b>
<b>Thurston County</b>								
Desert Song	90	28	13	33	1.5	20	22.6	3923
Eclipse	90	16	1	24	2	30	20.3	4466
Etna	93	63	5	69	3	16	16.6	4472
Island	90	23	16	43	1	35	22.6	4313
LRK	88	80	1	63	1.5	20	14.6	3149
Orca	85	5	31	37	3	22	35.0	3816
Rockwell	93	52	13	47	1	18	16.5	2948
Rojo Chiquito	98	4	6	24	2	27	27.5	4032
Sedona	95	49	2	40	3	34	17.6	3887
<b>CV (%)</b>	<b>5.4</b>	<b>34.9</b>	<b>80.9</b>	<b>7.1</b>	<b>15.6</b>	<b>7.3</b>	<b>18.9</b>	<b>17.2</b>
<b>LSD (p = 0.05)</b>	<b>11</b>	<b>29</b>	<b>18</b>	<b>7</b>	<b>0.7</b>	<b>4</b>	<b>9.4</b>	<b>1541</b>
<b>Mean</b>	<b>91</b>	<b>36</b>	<b>10</b>	<b>42</b>	<b>2</b>	<b>24</b>	<b>21.5</b>	<b>3890</b>
<b>Minimum</b>	<b>85</b>	<b>4</b>	<b>1</b>	<b>24</b>	<b>1</b>	<b>16</b>	<b>14.6</b>	<b>2204</b>
<b>Maximum</b>	<b>98</b>	<b>80</b>	<b>31</b>	<b>69</b>	<b>3</b>	<b>35</b>	<b>35.0</b>	<b>4890</b>

## Dry Bean Observational Trial in Skagit County, 2015

	Emergence (%)	Maturity (1-3 rating)	Height (in)	Moisture at harvest (%)	Moldy (%)	Split (%)	Hundred Bean Weight (g)	Yield (lb/A)
<b>Black</b>								
B12712	83	1.0	19	20.9	0.9	1.8	18.5	1287
B12721	93	2.0	18	24.9	3.5	2.3	23.5	2237
B12724	83	1.0	16	20.6	0.4	4.0	17.4	1176
BK11-8	68	2.0	21	23.3	1.6	2.0	20.3	1052
Black coco	88	1.0	13	22.1	2.5	41.1	50.4	1448
Eclipse	73	2.0	22	23.2	1.4	1.4	20.6	1109
Espresso	95	1.0	15	21.9	0.0	5.2	21.7	1622
Zenith	85	1.0	22	16.8	0.1	26.9	19.2	1971
<b>Black and White</b>								
Calypso	90	1.5	13	23.7	2.2	14.1	51.4	1451
Orca	80	2.0	21	16.3	1.2	41.4	26.7	1256
<b>Brown</b>								
Marfax	95	1.0	15	23.4	0.7	10.3	37.7	1496
<b>Cranberry</b>								
C11266	90	1.0	14	22.2	3.2	14.9	47.1	1165
Etna	88	1.5	12	23.5	4.2	18.4	52.8	1093
King of the Early	90	1.0	14	21.7	1.3	11.0	53.3	1936
Krimson	93	1.5	18	23.7	5.0	22.0	55.8	1938
Vermont Cranberry	83	3.0	15	21.8	4.9	35.8	39.8	1057
<b>Dark Red Kidney</b>								
ND061106	90	3.0	18	31.0	13.4	3.3	48.2	1429
ND061210	95	2.0	18	25.5	2.8	4.5	46.1	2016
Red Hawk	83	2.0	19	24.7	2.2	2.5	47.3	1282
<b>Flor de Junio</b>								
Desert Song	85	1.0	24	21.6	1.1	8.1	29.6	2488
<b>Flor de Mayo</b>								
FDM9623	85	1.0	21	23.4	0.7	1.7	38.9	1704
Gypsy Rose	88	3.0	21	35.0	26.0	8.7	29.6	1331
<b>Gold and white</b>								
Jacob's Gold	80	1.0	14	19.3	0.4	87.5	50.0	1109
<b>Light Red Kidney</b>								
CELRK	93	1.0	14	22.3	2.6	9.2	57.3	2217
LRK	65	2.0	15	25.4	5.6	5.9	54.1	1125
<b>Navy</b>								
Alpena	85	1.5	18	17.5	0.8	6.3	16.3	1728
Avalanche	85	1.5	23	23.4	3.3	1.8	21.4	1481
N13131	85	2.5	20	17.8	1.3	7.7	28.3	1512
N14230	93	2.5	22	18.0	1.2	5.9	15.0	1970
<b>Pink</b>								
PK11-4-4	90	1.0	19	22.0	0.8	2.2	30.9	3073
PK9-1	90	1.0	27	20.7	1.4	8.9	33.6	2531
Rosetta	90	3.0	24	17.3	0.7	40.7	27.6	1738
Sedona	85	2.0	22	26.7	9.5	5.9	34.7	1779
UCD9634	83	1.0	26	17.5	0.8	33.9	30.9	1966
UI-537	90	1.5	16	24.0	1.9	7.6	37.1	1191
Victor	93	2.0	17	24.8	2.7	2.2	33.8	1372
<b>Pinto</b>								
Agate	90	2.0	27	25.3	1.6	1.5	39.9	2667
Island	88	1.0	24	25.0	1.2	6.4	41.7	1180
Othello	88	1.5	18	24.9	2.2	4.6	37.5	1784
PT12-31	88	1.0	19	22.4	1.0	4.1	35.0	1876
PT8-15	88	1.0	20	19.9	1.1	17.7	41.6	1976
Quincy	83	2.0	23	17.9	0.7	25.3	40.3	858
Stampede	75	3.0	22	29.0	7.5	5.4	35.2	779
<b>Red and White</b>								
Jacob's Cattle	75	1.0	16	17.9	0.7	79.3	51.0	756
Rockwell	90	1.0	13	22.1	2.2	5.2	45.3	1291
<b>Small Red</b>								
Merlot	80	3.0	25	30.3	18.2	4.6	34.2	1527
R12844	88	3.0	18	18.1	0.5	56.7	29.3	976
Rio Rojo	60	2.0	22	26.9	8.5	3.7	32.4	825
Rojo Chiquito	83	1.0	22	21.2	4.3	0.9	19.9	1648
SR10-2-4(1)	90	3.0	24	28.7	11.7	2.1	37.4	1983
UI-239	85	2.0	20	25.0	2.3	1.5	32.3	2196
<b>Yellow</b>								
Canario 707	73	2.0	22	21.6	6.7	9.8	29.7	1465
DBY28-1	70	2.5	14	21.7	3.1	21.1	40.2	813
DBY60-1	85	3.0	21	27.2	8.2	8.9	42.4	1488
<b>Yellow-eye</b>								
Kenearly	88	1.0	15	22.5	2.1	6.4	45.5	2153
<b>CV (%)</b>	<b>10.4</b>	<b>20.6</b>	<b>15.8</b>	<b>8.7</b>	<b>77.8</b>	<b>40.0</b>	<b>11.5</b>	<b>38.1</b>
<b>LSD (p = 0.05)</b>	<b>18</b>	<b>0.7</b>	<b>6</b>	<b>4.0</b>	<b>5.5</b>	<b>11.2</b>	<b>8.3</b>	<b>1202</b>
<b>Mean</b>	<b>85</b>	<b>1.7</b>	<b>19</b>	<b>22.8</b>	<b>3.5</b>	<b>14.0</b>	<b>35.9</b>	<b>1574</b>
<b>Minimum</b>	<b>60</b>	<b>3.0</b>	<b>12</b>	<b>16.3</b>	<b>0.0</b>	<b>0.0</b>	<b>14.4</b>	<b>286</b>
<b>Maximum</b>	<b>95</b>	<b>1.0</b>	<b>27</b>	<b>35.0</b>	<b>32.9</b>	<b>88.0</b>	<b>58.4</b>	<b>3748</b>

## Trial Methods

**Planting:** In the observational trial, 55 varieties including breeding lines from North Dakota State University, University of California Davis, USDA Prosser, Michigan State University, Oregon State University, several local heirlooms, and commercially available varieties were planted on May 14, 2015. The trial was arranged in a randomized complete block design with two replicated plots of each variety. Plots were 8 ft in length and 5 ft in width (three rows wide). Seed was hand planted at a rate of one seed every two inches (130,680 seeds/acre). Target seeding depth was two inches. Seed was inoculated with Garden Combination Inoculant, (Johnny's Selected Seeds, Winslow, ME) immediately prior to planting.

The yield trial contained a set of 10 entries planted at all locations in two replicates. Planting dates ranged from May 14 to June 9. All trials were hand-planted to accommodate variation in row width and field size.

**Weed Control:** In early June, post-emergence, the trial was cultivated between rows. Hand-weeding was performed for the rest of the summer. Farmer-collaborators managed soil fertility, weed control, and irrigation at on-farm trials.

**Harvest:** Mature plots from the observation trial and Skagit yield trial were harvested using a Wintersteiger NurseryMaster (Wintersteiger Ag, Ried im Innkreis, Austria) on September 9 and 16. On-farm trials were harvested by hand and then threshed using the plot combine (Thurston County harvested on September 10 and 29 and San Juan county harvested October 1).

\*Maturity rated on a scale of 1-3, where one is early and three is late.

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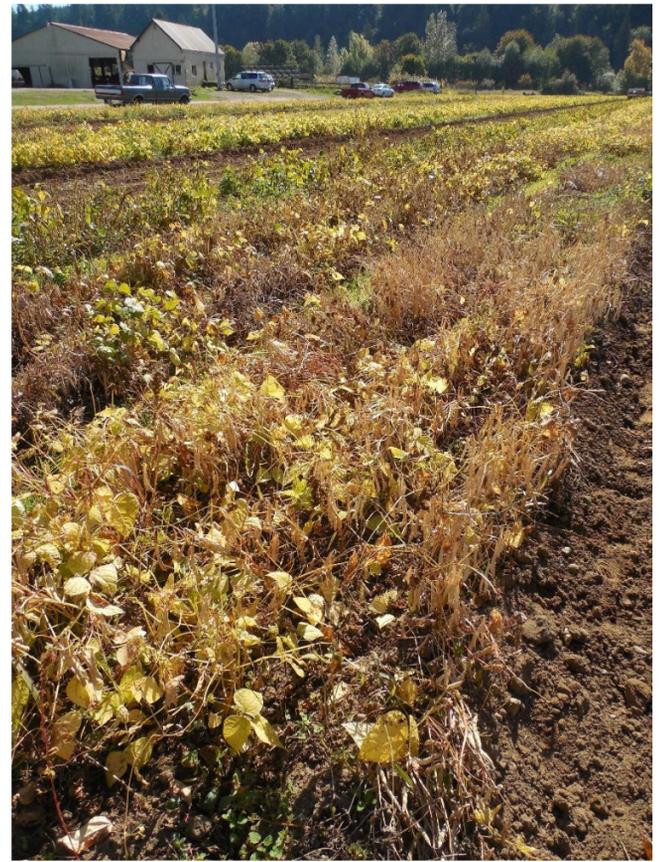
For additional variety testing results visit: <http://plantbreeding.wsu.edu>

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Skagit County Trial



Thurston County Trial



San Juan County Trial

