Report to the Oregon Processed Vegetable Commission
2006–2007

1. Title: Green Bean Breeding and Evaluation

2. Project Leaders: James R. Myers, Horticulture

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4. Project Status: Terminating 30 June, 2007

5. Project Funding:

$55,269	breeding
$10,564	processing
$65,833	total

Breeding funds were used for a major portion of the support of a vegetable breeding technician, student labor, supplies, and research farm expenses. Processing funds were used for processing samples of experimental beans, laboratory analysis, and for student labor.

6. Objectives:

   1. Breed Bush Blue Lake green bean varieties with high economic yield and improved plant architecture.

   2. Improve pod characteristics including straightness, color, smoothness, texture, flavor and quality retention, and combine with delayed seed size development.

   3. Incorporate white mold resistance and improve root rot tolerance.

   4. Map genes for resistance to white mold to facilitate marker aided selection.

7. Report of Progress:

Varietal Development: The program continued with crosses among elite lines and commercial cultivars of green bean for varietal development. Advanced lines were grown at the Hermiston Research and Extension Center and were screened for heat tolerance and general adaptation to growing conditions east of the Cascades. Much of our current focus is on incorporating white mold resistance into a BBL background. Additional selections from OSU x OSU crosses were advanced and increased for replicated trials. Advanced lines were screened in replicated root rot and white mold field nurseries. An interspecific population with white mold resistance from scarlet runner bean was screened in the field nursery. Seed increase, roguing, and sub-line maintenance of the most promising lines was continued.

Yield Trials: We retained our current nursery structure of preliminary trials and a single advanced trial consisting mostly of commercial varieties for trial along with the most promising OSU lines. The two preliminary trials were planted (May 4 and June 6), and the commercial yield trial partially funded by seed companies was planted June 21. Entries from one preliminary trial and those paid for by sponsoring seed companies in the commercial trial were processed at the OSU Pilot Plant for subsequent product evaluation.

Both preliminary trials had good growing conditions and showed reasonable yields (Tables 1-2, 6-7) although June 6 trial flowered and set pods during a hot spell. We were able to obtain data on heat tolerance in this trial (Table 5). A number of full- and small-sieve lines in the May 4 trial showed high yields (Tables 1 & 2). We are particularly interested in the 6400 series lines as these show better BBL characteristics than the 6200 and 6300 series, and some may have improved white mold resistance. Most 6200 and 6300 series crosses have white mold resistance derived from NY6020, an Andean type snap bean, or Ascher DR, a dry bean. Neither of these crosses have produced useable BBL types from single cross combinations. On the other hand, the 6400 series derives from crosses to B7354-6-2-2, a white mold resistant BBL breeding that in of itself is very unproductive, but has acceptable pod quality. The low productivity does not appear to be transmitted to its progeny as exemplified by lines 6479 and 6480 derived from the cross OSU5651/B7354-6-2-2 (Tables 1 & 6). Grading room evaluation and notes suggest that few of the 6200 and 6300 series are directly useable, but that the 6400 series material holds promise (Tables 3 & 4, 8 & 9). Much of this material is being tested for the first year, and will need additional testing to verify performance and quality.

Four year average for selected OSU Minuette crosses and check lines

	Adjusted T/A				
Line	2003	2004	2005	2006[z]	Over-all AV
OR 91G	12.5	12.6	3.8	12.1	10.3
OR 54	13.4	16.4	9.2	10.7	12.4
5630	13.8	14.7	10.8	12.9	13.1
5613	9.3	5.0	5.1	5.7	6.3
5669	16.0	12.5	8.5	10.4	11.9
6137	12.9	8.8	13.7	10.5	11.2
6174	11.0	8.1	9.5	7.3	9.0
6175	11.4	11.2	10.1	7.7	10.1
6185	9.9	8.1	6.0		
6189	10.5	12.4	8.6	9.4	10.2
LSD	2.8	3.9	2.9	3.0	3.0

[z]Average of 2 trials; all other years are from 1 trial only.

Several Minuette derived lines continue to perform well. Most promising in the full sieve class are OSU 6137 and OSU 6189, while OSU 6174 and OSU 6175 are 4-to 5sieve lines of interest. Four year average yield performance is shown in the text table. While OSU 6137 will on occasion have very high yields, its long term average is not much different from OR91G. It does have darker green pod color and pods set high on the plant. With average pod set, it stands well but lodges with heavy set. OSU 6189 is very close to a BBL type but with significantly darker pod color and better growth habit. It is also interesting in that it shows more uniform growth habit across environments compared to other lines. Both are full sieve types. OSU 6174 and OSU 6175 are both 4 to 5-sieve types with upright growth habit, and pod characteristics similar to the BBL type.

In the June 6 trial a nearly identical set of the 44 full sieve, 49 small sieve, and seven checks were grown (Tables 5-9). Where OR 91G and Savannah (four-sieve check) received a 5 on our heat tolerance scale, several experimental lines showed greater tolerance of heat stress (Table 5). Some of the variability in heat tolerance may be due to some lines not podding during times of extreme heat, so additional tests are needed. Yields in this trial were generally lower, and only one line (OSU 6436) outperformed OR 91G. In the first trial, this entry had yield similar to the check.

Commercial Green Bean Trial: The commercial trial consisted of 16 entries from four seed companies, six checks, and four OSU experimental lines (Table 10). Savannah and Concessa from Harris Moran, and Medinah from Rogers were included as small sieve checks. The trial grew under near ideal conditions, which produced very lush growth. As a result, white mold became an issue towards the end of the harvest period, and may have reduced yields on late harvested entries. Overall production and $/A value was high (Tables 10 & 11, Figures 1 & 2). SB 4285 again this year performed well in this trial and it was the entry most similar to a bush blue lake (BBL) type (Table 12). While not well adapted to the Willamette Valley, the entries from Starke Ayres were very robust, apparently responding to the nutrients available in this trial. They appear to be very efficient in nutrient use and might be a source of germplasm for increasing nitrogen use efficiency. Some of these lines are high yielding, but very indeterminate – apparently a difference in concentration of set when grown under South African conditions. This trial was evaluated for white mold incidence in the two unpicked reps (Table 13). We found a gradient across the trial perpendicular to the reps, which meant some varieties by chance landed on the heavily infected or lightly infected sides of the trial. However, the evaluation was interesting in that it was the first economic evaluation of the NY6020 source of resistance, which had been incorporated into OSU 6230. In general, this line did not seem to possess any greater white mold resistance than other trial entries. This result is confusing because in our replicated white mold trials, NY6020 derived materials show clear increases in resistance.

Root rot trial: Approximately 200 lines, including checks were grown in a root rot trial at the Vegetable Research Farm (Table 14). Material could be divided into three groups: B 7730 series lines that are BBL crosses to FR 266 (a root rot resistant kidney breeding line), GF series (a recombinant inbred line [RIL] population developed from the cross Goldcrop by FR266), and the GW series (RIL population from the cross Goldcrop x Wis 36 RR). The GW and GF populations are being used to map quantitative trait loci associated with resistance to root rot. The B7730 series lines are being used to develop breeding lines with improved resistance. The susceptible check, OSU 5446, had a rating of 7.2 while the most resistant check, RR6950, was rated as 1.1. Nine of the B7700 series and six of the GF-GW materials had a rating of 4.5 or less and were significantly better than OR 91G.

Breeding for White and Gray Mold Resistance: A white mold trial was grown at the Vegetable Research Farm (Table 15). Because of the warm dry late summer and fall, infection was late in appearance, but sufficient disease was observed that allowed separation of resistant and susceptible lines. Several common bean lines have been identified that have partial resistance to white mold. These include several OSU BBL breeding

lines, G 122, a cranberry bean, NY 6020-5, a snap bean line, and Ascher DR, a dark red kidney bean line. These have been crossed with elite BBL lines using the backcross-inbred method to recover resistance in an acceptable plant type. Twenty-six 6200 and 6300 series and 22 6400 series lines had significantly better scores than 91G. While none have been grown in long term (seven year) trials (Table 16), some (OSU 6230, 6256, and 6267) have two or more years of data, and show a similar response between years (Table 17). These three have the NY6020 source of resistance but are not acceptable quality-wise. White mold incidence and growth habit were negatively correlated in the 2006 trial, indicating that architectural type probably influenced microenvironment and thereby severity of white mold infection (text table, below). Interestingly higher yield and upright habit were positively correlated, and yield and white mold score were negatively correlated, suggesting that disease had an effect on yield, and this was influenced by growth habit.

Correlations among white mold and yield variables for a white mold field screening trial, Corvallis, 2006.

	Yield	Upright Habit
White Mold Scores	-0.47***	-0.36***
Yield		0.37***

***statistically significant at p<0.0001.

Molecular mapping to transfer resistance from Phaseolus coccineus *to* P. vulgaris: The best source of resistance to white mold resides in the related bean species, *P. coccineus* or scarlet runner bean. We have been developing backcross-inbred populations as a means of transferring resistance while regaining the snap bean type as rapidly as possible. We are furthest along with the cross 91G x PI 255956. It has been tested twice in the field (Table 18), in three straw tests in the greenhouse, and in an oxalate test (oxalate tolerance is related to white mold resistance) as shown in table 19. In the field test, six lines were as good as G122, our resistant check. These lines are genetically approximately 90% common bean and 10% scarlet runner bean, and as such, will require another cycle of recombination to move resistance into a completely adapted background. At the same time that we have been testing physiological resistance, we have been looking for molecular markers associated with resistance and to date; we have approximately a dozen candidate quantitative trait loci on four linkage groups.

We also tested a number of common bean lines that had either been parents in populations developed to screen for white mold resistance, or had been identified to have partial resistance. In general, we found an association between white mold resistance and oxalate tolerance (Table 20). Resistant parents in recombinant inbred populations were more tolerant than susceptible parents used to create those populations. There were some unusual findings, such as OR 5630 (susceptible to white mold) having similar levels of oxalate tolerance as NY6020-4 (resistant to white mold); as well as two lines that are resistant to white mold (I9365-31 and Asher) but not tolerant to oxalate (Table 20). These results would suggests that oxalate tolerance is not the only factor conditioning white mold resistance, and that other forms of resistance may be derived independently of oxalate tolerance.

Trialing in Hermiston and heat tolerance ratings: Approximately 240 lines were tested for adaptation to growing conditions in Hermiston. These were planted May 16, and then rated and harvested upon physiological maturity. We included Sahara (Harris Moran) as a heat tolerant check. This variety did have good yield under these conditions although pod quality was not the best. Nine OSU lines were identified that may have heat tolerance based on high scores and acceptable yield (Table 21). While correlation is low with the heat ratings from the second preliminary trial, we do see the same 25% in the top group for each location. We also harvested seed and can evaluate it for quality when produced under the hot, arid conditions of the Columbia Basin.

8. Summary:

We continued to emphasize breeding for white mold resistance in 2006. As such, we focused on preliminary yield and quality trials where we could evaluate larger numbers of lines. Two preliminary trials were conducted, and an advanced trial of commercial entries was evaluated. OSU 6400 series lines look very good for yield and processing quality, and some have partial white mold resistance. In addition to the white mold resistance breeding effort, about 200 lines were screened for root rot resistance. White mold evaluations consisted of greenhouse straw tests of many breeding lines, field evaluation of advanced breeding lines, and the development and evaluation of interspecific populations for additional sources of resistance. To date, we have identified some lines that are fairly close to a BBL type with partial resistance to white mold, but additional refinement is required.

Table 1. Performance of preliminary full sieve green bean lines, May 4 planting, Corvallis, 2006.[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 Sieve	Av Tons/ Acre	Av Adj Tons/Acre[x]
91G	74	full	150	4.2	5.6	9.9	33.1	38.0	9.2	52.8	12.9	13.3
OR 54	77	full	114	3.0	6.8	14.4	41.7	31.8	2.3	65.9	11.6	13.4
5630	75	full	140	4.3	5.8	11.6	50.7	24.6	2.9	72.5	12.4	15.2
5669	76	full	150	2.9	5.1	11.8	41.9	36.0	2.2	61.8	12.3	13.7
6137	76	full	145	4.0	6.3	16.7	40.5	28.6	4.0	67.5	11.7	13.8
6175	76	5	150	3.6	8.9	15.2	38.4	32.1	1.8	66.1	10.3	11.9
6189	76	full	150	0.9	2.6	6.1	25.2	40.9	24.3	34.8	10.0	8.5
6239	75	full	141	1.4	2.9	7.2	21.7	44.9	21.7	33.3	6.4	5.3
6284	77	full	150	1.5	4.6	11.5	35.1	42.0	5.3	52.7	12.0	12.4
6290	74	5	150	6.0	9.5	19.8	44.8	18.1	1.7	80.2	10.3	13.1
6300	75	full	145	3.0	6.7	13.3	35.6	37.0	4.4	58.5	12.2	13.3
6313	76	5	150	1.7	4.3	12.9	44.8	32.8	3.4	63.8	10.5	12.0
6338	75	5	150	6.4	7.6	14.6	44.6	22.9	3.8	73.2	13.5	16.6
6436	76	5	141	3.2	7.2	16.0	45.6	26.4	1.6	72.0	10.9	13.3
6437	76	5	150	6.0	7.5	14.2	40.3	29.9	2.2	67.9	12.4	14.7
6438	76	5	150	1.7	5.0	13.2	41.3	35.5	3.3	61.2	11.0	12.2
6439	75	5	150	4.3	6.4	16.3	44.0	27.0	2.1	70.9	12.3	14.8
6440	76	5	150	5.0	6.4	14.2	41.1	30.5	2.8	66.7	12.9	15.1
6443	75	5	150	4.6	5.9	13.1	41.2	33.3	2.0	64.7	13.3	15.3
6445	76	5	150	2.3	6.2	13.1	41.5	34.6	2.3	63.1	12.1	13.7
6446	74	5	145	5.0	8.0	19.0	43.0	22.0	3.0	75.0	8.5	10.7
6459	77	full	150	2.7	5.3	12.7	32.7	37.3	9.3	53.3	13.6	14.0
6463	74	full	150	4.5	6.8	14.3	34.6	31.6	8.3	60.2	11.9	13.1
6467	76	5	150	6.4	9.6	17.6	31.2	28.0	7.2	64.8	11.1	12.8
6471	77	full	147	1.4	4.1	11.6	41.5	40.8	0.7	58.5	13.2	14.4
6474	75	full	150	6.4	11.2	19.2	40.0	20.0	3.2	76.8	11.1	14.1
6475	76	5	150	5.0	8.4	21.0	39.5	24.4	1.7	73.9	11.1	13.8
6477	77	full	150	1.6	6.4	11.2	42.4	36.8	1.6	61.6	11.6	13.0
6478	76	full	150	2.2	3.6	13.7	43.2	34.5	2.9	62.6	12.5	14.2
6479	76	full	150	3.0	6.1	15.2	45.1	29.3	1.2	69.5	14.9	17.9
6480	75	5	150	2.0	5.9	15.0	52.3	23.5	1.3	75.2	13.4	16.7
6481	75	5	150	5.7	8.9	18.7	45.5	21.1	0.0	78.9	10.7	13.8
6484	77	full	150	2.7	4.1	12.2	38.1	40.8	2.0	57.1	13.5	14.4
6485	77	full	150	3.9	4.6	12.4	45.1	32.7	1.3	66.0	13.7	15.8
6488	74	full	150	5.6	7.0	11.3	22.5	23.9	29.6	46.5	6.1	5.9
6489	77	5	150	2.5	4.3	11.7	40.5	37.4	3.7	58.9	14.7	16.0
6490	75	full	150	3.7	8.1	15.4	49.3	23.5	0.0	76.5	12.3	15.6
6492	76	5	124	2.6	5.1	12.0	42.7	36.8	0.9	62.4	10.5	11.8
6493	75	5	150	3.8	9.4	18.9	43.4	22.6	1.9	75.5	9.3	11.7
6494	77	5	150	1.6	3.9	11.6	45.7	35.7	1.6	62.8	11.9	13.5
6497	76	5	150	2.2	5.5	12.1	37.4	36.3	6.6	57.1	9.0	9.6
6498	77	full	150	2.2	3.9	7.3	30.9	47.2	8.4	44.4	15.9	15.0

Table 1. Performance of preliminary full sieve green bean lines, May 4 planting, Corvallis, 2006 (cont.)[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 Sieve	Av Tons/ Acre	Av Adj Tons/Acre[x]
6499	77	full	150	1.4	4.1	12.9	38.8	40.8	2.0	57.1	13.5	14.3
6500	77	5	143	3.4	3.4	8.7	36.9	46.3	1.3	52.3	13.5	13.8
6501	77	5	150	2.2	5.2	14.2	42.5	35.1	0.7	64.2	12.2	13.9
LSD@5%											3.0	3.4

[z]Mean of 2 replications; subplots of 5' were harvested from single 20' plots in rows 30" apart.
[y]Percent calculated as % of total of 1-6 sieve beans.
[x]Tons/Acre adjusted to 50% 1-4 sieve.

Table 2. Performance of preliminary small sieve green bean lines, May 4 planting, Corvallis, 2006.[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 sieve	Av tons/acre
5613	74	3	150	11.5	26.9	56.4	5.1	0.0	0.0	100.0	7.1
6174	75	4-5	150	8.0	10.0	21.0	44.0	17.0	0.0	83.0	8.9
6256	76	4	150	4.5	10.2	28.4	54.5	2.3	0.0	97.7	8.1
6267	74	4-5	150	10.0	11.4	20.0	44.3	12.9	1.4	85.7	6.2
6268	77	4	150	8.3	6.9	36.1	36.1	12.5	0.0	87.5	7.6
6274	77	4	138	2.2	10.0	30.0	45.6	12.2	0.0	87.8	8.4
6312-1	74	4-5	150	6.8	11.3	24.1	40.6	14.3	3.0	82.7	11.5
6312-18	74	4-5	150	4.5	11.7	22.5	45.0	13.5	2.7	83.8	9.9
6312-20	74	4-5	150	4.4	9.6	21.3	45.6	18.4	0.7	80.9	11.9
6318	74	4-5	150	6.6	11.6	23.1	46.3	10.7	1.7	87.6	10.4
6323	75	4-5	150	5.5	8.9	15.8	51.4	18.5	0.0	81.5	12.9
6329	74	4	150	6.0	11.2	26.1	47.0	9.0	0.7	90.3	11.8
6340	75	4-5	150	3.6	9.3	15.0	48.6	22.9	0.7	76.4	12.0
6342	74	4	150	7.6	12.6	28.6	45.4	5.9	0.0	94.1	10.5
6346	74	4	121	6.1	11.3	32.2	46.1	4.3	0.0	95.7	10.1
6375	74	4	150	8.7	14.1	30.4	41.3	5.4	0.0	94.6	8.3
6393	74	4	147	9.8	13.7	26.5	43.1	6.9	0.0	93.1	8.9
6434	77	4-5	150	4.2	10.9	22.7	47.9	12.6	1.7	85.7	10.9
6441	74	4-5	150	5.4	8.8	20.4	48.3	14.3	2.7	83.0	13.1
6442	74	4-5	150	7.2	12.8	22.4	44.0	12.0	1.6	86.4	11.0
6444	74	4-5	150	5.5	11.8	22.8	47.2	10.2	2.4	87.4	11.5
6447	75	3	150	7.1	20.2	56.0	15.5	1.2	0.0	98.8	7.4
6448	75	3	150	11.4	23.9	43.2	21.6	0.0	0.0	100.0	7.7
6449	74	3	150	17.3	29.3	45.3	8.0	0.0	0.0	100.0	6.7
6450	74	4-5	128	14.5	14.5	20.5	42.2	8.4	0.0	91.6	7.4
6451	74	4-5	150	5.2	9.5	20.7	44.8	17.2	2.6	80.2	10.1
6452	74	4-5	129	5.1	8.9	20.3	45.6	17.7	2.5	79.7	7.2
6453	74	4-5	142	7.4	14.8	21.0	38.3	14.8	3.7	81.5	6.9
6454	74	4-5	150	5.2	8.6	19.0	55.2	12.1	0.0	87.9	10.4
6455	76	4-5	106	7.1	9.2	13.3	38.8	28.6	3.1	68.4	9.1
6456	74	4	150	7.6	7.6	17.2	51.0	16.6	0.0	83.4	12.6
6457	76	4	140	5.9	13.7	25.5	34.3	19.6	1.0	79.4	8.3
6458	77	4-5	150	1.6	6.5	21.0	52.4	17.7	0.8	81.5	11.6
6461	76	4-5	150	1.1	3.4	20.2	64.0	11.2	0.0	1.0	8.4
6462	75	4	150	3.4	12.6	32.2	48.3	3.4	0.0	96.6	7.6
6464	75	4	150	4.6	11.0	21.1	54.1	9.2	0.0	90.8	10.1
6466	76	4-5	150	3.0	12.0	21.0	42.0	21.0	1.0	78.0	8.9
6468	77	4	150	2.6	3.4	14.7	66.4	12.9	0.0	87.1	10.4
6470	74	4	150	6.9	15.7	25.5	45.1	6.9	0.0	93.1	9.2
6472	75	4-5	150	5.8	9.4	19.6	54.3	10.9	0.0	89.1	12.3
6473	75	4	150	6.1	12.3	21.9	48.2	11.4	0.0	88.6	10.6
6476	76	4-5	150	2.3	4.6	11.5	44.3	35.9	1.5	62.6	11.8

Table 2. Performance of preliminary small sieve green bean lines, May 4 planting, Corvallis, 2006 (cont.)[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y]						%1-4 sieve	Av tons/acre
				1	2	3	4	5	6		
6482	77	4	124	5.0	10.9	20.8	51.5	10.9	1.0	88.1	9.6
6483	74	4-5	150	3.3	8.9	15.6	50.0	21.1	1.1	77.8	8.3
6486	76	4-5	150	3.1	7.8	18.8	49.2	20.3	0.8	78.9	11.9
6487	74	4-5	150	5.6	10.4	19.2	49.6	14.4	0.8	84.8	10.6
6491	75	4-5	150	1.6	7.0	19.4	50.4	20.9	0.8	78.3	11.6
6496	76	4-5	150	2.1	6.3	16.8	50.3	23.8	0.7	75.5	12.8
6503	75	4-5	150	4.1	8.1	16.9	50.7	20.3	0.0	79.7	13.2
Savannah	76	4	150	4.4	14.4	41.1	40.0	0.0	0.0	100.0	8.4
LSD@5%											2.3

[z]Mean of 2 replications; subplots of 5' were harvested from single 20' plots in rows 30" apart.
[y]Percent calculated as % of total of 1-6 sieve beans.

Table 3. Notes on preliminary full sieve green bean lines, May 4 planting, Corvallis, 2006.

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
91G	17.0	3	round	5	5	6	5	7	1	
OR 54	16.5	5	round	5	6	7	7	7	1	Getting seedy without sizing up
5630	15.5	5	round	5	5	5	7	7	1	Seed development starting in larger sv sizes
5669	16.0	6	round	6	6					Very few 6 sv beans but getting seedy
6137	15.0	6	round	4	8					Dark green shiny bean; full of off types including widely varying lengths, dark green ovals, light green non-shiny round
6175	16.5	8	round	8	7					Long, straight, dark green; just starting to get seedy in 6 sv
6189	15.0	5	round	5	7					Missed; pods are bumpy but still not very seedy in 5 sv
6239										A mix of types including dark round small pods (4 sv?), long light smooth pods (5 sv?) and a true flat (more than 1 plant) that looks like a romano
6284	15.0	7	round	5	6	7	7	6	1	Getting seedy
6290	17.0	7	round	5	5	3	7	5	1	Fairly straight, attractive pods; segregat-ing for strings
6300	15.5	5	round	5	6	6	7	5	1	Nice full sv BBL type
6313	15.0	5	round	4	5					Bumpy pods with skips
6338	15.0	3	cb	5	4	7	5	7	1	Many curly pods especially in 6 sv
6436	15.0	7	round	5	5					Getting seedy and bumpy
6437	16.0	8	round	5	7					Very long, very straight dark green bean but length is somewhat variable

Table 3. Notes on preliminary full sieve green bean lines, May 4 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6438	16.0	8	round	5	8					Very long, dark bean; straight for such a long bean
6439	17.0	5	round to cb	5	5	7	7	5	1	Nice looking pods
6440	16.0	7	round	7	6					Getting seedy; may be a mix of a long 5 sv and a shorter 4 sv
6443	17.0	7	round	5	5	7	7	7	1	Very attractive pods
6445	16.0	7	cb	5	7					Long, fairly straight pods
6446	15.0	2	cb	7	2	7	5	3	1	Light color; curved particularly in 5 and 6 sv
6459	15.5	5	oval mix	5	3	5	7	5	1	Discard - oval mix
6463	15.0	3	cb	5	3	7	5	5	1	Light colored pods with consistent curve
6467	17.0	8	round	8	6					Best beans are very long and straight, but also has shorter pods with end crooks (also lighter color)--notes apply to long straight beans
6471	15.0	6	round	8	5					4 sv pods starting to get junky
6474	15.5	6	round	5	5	3	5	5	1	
6475	18.0	7	round	3	4	7	3	1	7	Very straight for such long pods; heavy battering in grader
6477	16.0	7	round	7	5	7	7	5	1	Very nice pod appearance; good flavor
6478	15.0	5	round	7	4					Some very long beans; may be getting seedy before reaching full size potential
6479	16.0	6	cb	5	5					4 sv pods getting junky
6480	16.0	5	round	5	5	5	5	9	1	Starting to get seedy
6481	14.5	4	round	7	5	5	5	7	1	Starting to get seedy
6484	15.0	4	round	5	5	5	5	7	1	Reverse curve

Table 3. Notes on preliminary full sieve green bean lines, May 4 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6485	16.0	6	round	6	4					Color light but acceptable; 4 sv getting seedy and junky; picks nicely
6488	16.0	3	cb	5	1	7	7	5	1	Huge flabby pods; many parthenocarpic pods in 1-3 sv; only moderate seed development in 6 sv
6489	16.0	5	round	7	4	7	7	5	1	Color too light
6490	16.0	7	round	6	4					Long and fairly straight
6492	15.0	7	round	8	5					Some very long beans; getting seedy in 4, 5 and 6 sv; 3 sv junky
6493	17.0	7	round	7	5	6	7	5	1	Very nice appearance; very straight and smooth for such a long pod
6494	16.5	7	round	7	4	5	7	5	1	Nice pods but color a bit light;
6497	16.0	8	round	7	5					Long, attractive pods
6498	15.0	5	round	7	5	5	7	5	1	Getting seedy but missed by 1 or 2 days
6499	15.5	6	round	7	5					Probably prime tomorrow; little seed development
6500	15.0	6	round	5	4					Missed by a day; 5 sv seedy and 4 sv getting junky
6501	15.0	7	round	5	5					Some very long beans

[z]Scores based on a 1-9 scale with 9 straightest
[y]Cross section: cb = crease-back
[x]Scores based on a 1-9 scale with 9 smoothest
[w]Scores based on a 1-9 scale with 9 darkest
[v]Scores based on a 1-9 scale with 9 strongest
[u]BBL=bush blue lake; sv=sieve

Table 4. Notes on preliminary small sieve green bean lines, May 4 planting, Corvallis, 2006.

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
5613	13	7	heart	7	5	5	5	3	1	Prime on this date
6174	15	7	round	5	7	7	5	7	3	Very attractive dark green podded line
6256										Predominately oval and stringy; there are a few short, dark 3 sv beans that may be the intended type; discard
6267	10.5	6	round to heart	5	5	5	9	3	1	Stubby pods
6268	14	7	round	7	4					Full of flats, ovals and hooked pods; dis-card
6274	13.5	7	heart	7	3					Full of flats, ovals and hooked pods; dis-card
6312-1	15.5	5	round	6	6	7	7	5	1	Very attractive long dark green pods
6312-18	16	5	round	5	5	7	5	5	1	Seed developing in 4-6 sv pods
6312-20	15	5	heart	5	5	1	5	7	1	Poor flavor; seed developing in 4-6 sv pods
6318	15	7	round	7	5	5	7	5	1	Seed developing in 4-6 sv pods
6323	13.5	6	round	5	5	8	5	7	1	Seed developing in 4 and 5 sv pods
6329	14	3	round	6	6	6	7	5	1	Seed developing in 4-6 sv pods
6340	15.5	6	round	5	5	1	3	7	1	Seed developing in 4-6 sv pods
6342	14	6	round	5	5	5	6	5	1	Seed developing in 4 and 5 sv pods; 3 sv ok but junky
6346	14.5	5	round	7	5	5	7	5	1	Seed developing in 4 and 5 sv pods
6375	14.5	6	round to cb	7	5	5	5	5	1	Fairly smooth attractive bean
6393	14.5	6	round to cb	7	5	7	5	5	1	Seed developing in 4 and 5 sv pods
6434	15	5	oval to round	7	5					Too many ovals to grade properly; round beans 5 sv are not yet seedy but ovals are very seedy; notes are for round 5 sv beans

Table 4. Notes on preliminary small sieve green bean lines, May 4 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6441	15.5	7	round	7	5	5	7	7	1	Attractive pods; seed developing in 4-6 sv pods
6442	15.5	5	round	6	6	7	5	7	1	3 and 4 sv pods very attractive; 5 and 6 sv pods are curved
6444	16	6	round	7	6	7	7	5	1	segregating for flats; seed developing in 4-6 sv pods
6447	13	9	round	7	5	7	7	5	1	Attractive pods
6448	12.5	8	heart	7	5	6	5	5	1	Dry bean pod flavor
6449	13	7	heart	7	5	3	9	7	1	Very similar to 5613
6450	16	3	oval to heart	7	4	8	7	5	1	Fairly attractive smooth bean but light color
6451	15.5	1	cb	3	1	7	3	5	1	Contains an oval off-type; light color
6452	13	5	cb	5	5	5	5	7	1	Best of series
6453	16.5	1	round	7	3	5	7	5	1	Curly pods, tough pod skin
6454	17	5	heart	5	5	7	5	5	1	Prime on this date; attractive
6455	16	3	round to heart	6	3					Prime yesterday; seed developing in 4-6 sv pods; strong fish hook, slight strings
6456	16	3	round	4	5	5	9	3	3	Fair appearance
6457	14	6	heart	7	4					Fairly long, slightly curved, light colored pods
6458	15	4	mostly oval, some round	7	2	3	3	7	3	Too light in color and oval; discard
6461	15	7	heart	9	2					Many oval rogues and some flat stringy rogues; long, smooth pods; poor color
6462	17	7	round	7	3	5	7	3	1	Very long slender pods but color too light; tough pod texture; very concentrated set

Table 4. Notes on preliminary small sieve green bean lines, May 4 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6464	12	5	round	5	5					Short, junky pods with skips
6466	14	7	round	7	5					Prime on this date
6468	14	7	round	8	3					Segregating ovals; color too light; prime on this date
6470	16	6	round	7	7	7	5	5	1	Long, very attractive dark green bean
6472	15.5	6	round	5	5	3	5	5	1	Probably picked 1 or 2 days early
6473	15	9	round	6	4					Very attractive long straight beans; proba-bly a true 4 sv with very long pods
6476	14	3	round	6	3					Seed development in 5 and 6 sv; 4 sv OK
6482	14	5	round	9	7	7	7	5	1	Seed development in 5 and 6 sv; 4 sv OK
6483	12	7	cb	5	3	9	5	5	1	Short stubby pods; light color; rhizoctonia spots on pods
6486	15	7	round	6	5					Long straight pods
6487	15.5	7	round	7	5	7	7	7	1	Long, relatively straight, attractive pods
6491	14	7	round	8	4					Long and straight
6496	15	5	round	4	4					Bumpy pods; even 3 sv look bumpy
6503	14	7	round	6	4					Prime on this date
Savannah	14	7	round	9	6					4 sv pods starting to get seedy

[z]Scores based on a 1-9 scale with 9 straightest
[y]Cross section: cb = crease-back
[x]Scores based on a 1-9 scale with 9 smoothest
[w]Scores based on a 1-9 scale with 9 darkest
[v]Scores based on a 1-9 scale with 9 strongest
[u]sv=sieve

Table 5. Field notes from a preliminary bean trial, June 6 planting, Corvallis, Oregon, 2006

Line	Est. Sieve Size	Heat Tole-rance[z]	Notes
91G	full	5	
OR 54	full	3	
5630	full	7	
5669	full	7	
5613	3	3	
6137	full	3	
6174	4-5	5	Good upright habit
6175	5	4	
6189	full	7	Upright compact plants
6239	full	1	
6256	4	3	Oval pod; stringy
6267	4-5	1	
6268	4	5	Branching plants with spindly stems
6274	4	5	
6284	full	3	
6290	5	3	
6300	full	3	
6312-1	4-5	7	
6312-11	4-5	5	
6312-18	4-5	7	
6312-20	4-5	7	
6313	5	3	
6318	4-5	3	
6323	4-5	3	
6329	4	5	Good upright habit
6338	5	5	
6340	4-5	7	
6342	4	7	
6346	4	2	
6375	4	3	
6393	4	5	
6404	4-5	3	
6434	4-5	7	
6436	5	7	
6437	5	3	
6438	5	3	
6439	5	7	
6440	5	5	
6441	4-5	5	
6442	4-5	7	
6443	5	9	
6444	4-5	3	

Table 5. Field notes from a preliminary bean trial, June 6 planting, Corvallis, Oregon, 2006 (cont.)

Line	Est. Sieve Size	Heat Tole-rance[z]	Notes
6445	5	7	
6446	5	3	
6447	3	4	
6448	3	3	
6449	3	5	Good upright habit
6450	4-5	1	
6451	4-5	7	
6452	4-5	5	Small plants
6453	4-5	7	Segregating for strings
6454	4-5	9	
6455	4-5	5	Heavy foliage
6456	4	7	
6457	4	5	
6458	4-5	5	
6459	5	5	
6461	4-5	3	Several sterile plants; segregating flats
6462	4	3	
6463	full	1	Pollywogs
6464	4	5	
6465	4-5	3	Small plants
6466	4-5	3	
6467	5	3	
6468	4	5	Good plant habit
6469	full	5	
6470	4	2	
6471	full	3	
6472	4-5	3	
6473	4	2	Very indeterminate
6474	full	5	
6475	5	5	Leggy, floppy plants
6476	4-5	3	
6477	full	5	
6478	full	5	Heavy foliage
6479	full	5	
6480	5	3	
6481	5	5	Heavy foliage
6482	4	5	Standing well with good pod load
6483	4-5	3	
6484	full	5	
6485	full	5	
6486	4-5	3	Dense foliage; floppy plant
6487	4-5	5	

Table 5. Field notes from a preliminary bean trial, June 6 planting, Corvallis, Oregon, 2006 (cont.)

Line	Est. Sieve Size	Heat Tole-rance[z]	Notes
6488	full	1	
6489	5	5	
6490	full	5	
6491	4-5	2	
6492	5	3	
6493	5	5	
6494	5	5	
6496	4-5	2	
6497	5	5	
6498	full	5	
6499	full	3	
6500	5	7	
6501	5	5	
6502	full	5	
6503	4-5	3	
Savannah	4	5	Very good upright habit
Concesa	4	2	Small plants

[z]Scores based on a 1-9 scale with 1 = poor tolerance; split set, poor yield, short and hooked pods, and 9 = excellent heat tolerance.

Table 6. Performance of preliminary full sieve green bean lines, June 6 planting, Corvallis, 2006.[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 Sieve	Av Tons/ Acre	Av Adj Tons/ Acre[x]
91G	59	full	140	4.6	5.5	11.9	36.7	34.9	6.4	58.7	10.0	10.9
OR 54	62	full	128	2.9	7.1	15.7	42.9	30.0	1.4	68.6	6.6	7.9
5630	62	full	140	1.1	5.6	13.3	56.7	22.2	1.1	76.7	8.3	10.5
5669	60	full	140	3.2	4.8	12.9	46.8	27.4	4.8	67.7	5.9	7.0
6137	60	full	140	1.5	9.2	16.9	38.5	30.8	3.1	66.2	6.2	7.2
6175	60	5	140	13.3	13.3	20.0	33.3	16.7	3.3	80.0	2.7	3.5
6189	59	full	140	8.1	11.6	18.6	37.2	20.9	3.5	75.6	8.2	10.3
6239	59	full	133	4.0	4.0	16.0	36.0	32.0	8.0	60.0	2.3	2.5
6284	63	full	140	1.2	4.9	8.5	25.6	47.6	12.2	40.2	7.3	6.6
6290	63	5	140	4.0	5.9	10.9	32.7	39.6	6.9	53.5	9.3	9.7
6300	58	full	140	3.2	12.7	20.6	39.7	20.6	3.2	76.2	5.6	7.0
6313	59	5	140	4.7	9.4	23.4	43.8	15.6	3.1	81.3	5.8	7.6
6338	59	5	140	1.6	8.1	17.7	38.7	27.4	6.5	66.1	5.7	6.6
6436	62	5	140	2.5	6.8	16.1	41.5	30.5	2.5	66.9	10.7	12.5
6437	59	5	140	4.5	13.4	25.4	44.8	10.4	1.5	88.1	6.4	8.8
6438	59	5	140	7.5	11.9	23.9	40.3	14.9	1.5	83.6	6.1	8.2
6439	59	5	140	6.1	12.2	22.0	42.7	15.9	1.2	82.9	7.6	10.1
6440	59	5	140	3.0	12.1	22.7	45.5	13.6	3.0	83.3	6.4	8.4
6443	59	5	140	2.7	9.3	20.0	48.0	18.7	1.3	80.0	7.1	9.3
6445	59	5	140	7.3	12.2	22.0	43.9	13.4	1.2	85.4	7.5	10.1
6446	63	5	140	4.1	4.1	12.2	36.7	40.8	2.0	57.1	4.4	4.7
6459	59	5	140	6.3	12.7	20.6	34.9	22.2	3.2	74.6	5.9	7.4
6463	62	full	138	1.9	3.8	7.5	30.2	43.4	13.2	43.4	4.9	4.5
6467	60	5	137	25.0	6.3	12.5	18.8	31.3	6.3	62.5	1.5	1.7
6469	63	full	134	3.6	6.0	9.5	32.1	46.4	2.4	51.2	7.6	7.6
6471	63	full	134	1.7	3.4	10.3	25.9	56.9	1.7	41.4	5.4	4.9
6474	64	full	140	2.3	4.7	9.3	26.7	40.7	16.3	43.0	8.2	7.6
6475	59	5	140	5.0	13.3	23.3	40.0	16.7	1.7	81.7	5.1	6.8
6477	62	full	140	2.4	7.1	5.9	34.1	47.1	3.5	49.4	8.0	7.9
6478	63	full	140	1.0	2.9	6.7	33.7	51.0	4.8	44.2	9.2	8.7
6479	63	full	140	2.6	6.4	6.4	33.3	47.4	3.8	48.7	7.2	7.1
6480	62	5	140	4.7	5.9	9.4	43.5	35.3	1.2	63.5	7.9	9.0
6481	62	5	140	2.7	9.3	13.3	42.7	32.0	0.0	68.0	6.7	7.9
6484	63	full	140	0.0	2.8	5.6	33.3	55.6	2.8	41.7	7.3	6.7
6485	63	full	140	1.4	5.6	5.6	26.8	56.3	4.2	39.4	7.0	6.3
6489	59	5	140	3.3	9.8	21.3	52.5	13.1	0.0	86.9	5.7	7.7
6490	62	full	140	2.5	6.2	8.6	35.8	45.7	1.2	53.1	7.3	7.5
6492	62	5	140	4.3	4.3	10.0	45.7	34.3	1.4	64.3	6.9	7.8
6493	62	5	140	4.7	6.3	10.9	34.4	42.2	1.6	56.3	6.3	6.6
6494	60	5	140	7.1	5.4	14.3	46.4	26.8	0.0	73.2	5.3	6.5
6497	62	5	140	3.7	5.6	9.3	35.2	42.6	3.7	53.7	5.4	5.6
6498	63	full	140	2.9	4.9	7.8	30.1	47.6	6.8	45.6	9.6	9.2

Table 6. Performance of preliminary full sieve green bean lines, June 6 planting, Corvallis, 2006 (cont.)[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 Sieve	Av Tons/ Acre	Av Adj Tons/ Acre[x]
6499	63	full	140	1.5	4.5	7.6	31.8	50.0	4.5	45.5	6.1	5.8
6500	60	5	140	2.9	7.2	13.0	49.3	26.1	1.4	72.5	6.6	8.1
6501	60	5	140	6.5	9.7	11.3	50.0	22.6	0.0	77.4	5.8	7.4
6502	63	full	140	2.9	3.9	7.8	31.1	46.6	7.8	45.6	9.5	9.1
LSD@5%											2.3	2.4

[z]Mean of 2 replications; subplots of 5' were harvested from single 20' plots in rows 30" apart.
[y]Percent calculated as % of total of 1-6 sieve beans.
[x]Tons/Acre adjusted to 50% 1-4 sieve.

Table 7. Performance of preliminary small sieve green bean lines, June 6 planting, Corvallis, 2006.[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 sieve	Av tons/acre
5613	60	3	140	11.9	28.6	47.6	11.9	0.0	0.0	100.0	4.2
6174	62	4-5	140	3.4	6.9	13.8	48.3	25.9	1.7	72.4	5.7
6256	60	4	135	6.3	18.8	31.3	37.5	6.3	0.0	93.8	2.9
6267	58	4-5	140	16.1	16.1	16.1	29.0	19.4	3.2	77.4	2.9
6268	62	4	140	5.6	19.4	30.6	27.8	16.7	0.0	83.3	3.3
6312-1	59	4-5	140	5.2	11.7	23.4	45.5	14.3	0.0	85.7	7.2
6312-11	59	4-5	140	1.3	8.0	24.0	46.7	18.7	1.3	80.0	7.0
6312-18	58	4-5	140	2.4	11.0	20.7	46.3	18.3	1.2	80.5	7.2
6312-20	58	4-5	140	4.5	14.9	26.9	43.3	10.4	0.0	89.6	6.3
6318	58	4-5	140	5.4	12.5	21.4	44.6	14.3	1.8	83.9	5.2
6323	59	4-5	140	5.1	23.1	23.1	37.2	11.5	0.0	88.5	6.4
6329	57	4	140	8.1	21.6	29.7	32.4	8.1	0.0	91.9	3.7
6340	59	4-5	140	4.2	8.3	22.2	48.6	16.7	0.0	83.3	6.6
6346	58	4	136	2.0	6.1	22.4	53.1	16.3	0.0	83.7	4.5
6375	59	4	140	8.9	15.6	26.7	40.0	8.9	0.0	91.1	4.2
6393	59	4	136	13.2	15.8	28.9	34.2	7.9	0.0	92.1	3.7
6404	58	4-5	140	5.0	10.0	15.0	40.0	30.0	0.0	70.0	2.2
6434	59	4-5	140	9.1	18.2	29.5	34.1	9.1	0.0	90.9	4.2
6441	58	4-5	140	11.1	15.9	25.4	36.5	11.1	0.0	88.9	6.0
6442	58	4-5	140	6.5	19.5	22.1	40.3	10.4	1.3	88.3	6.6
6444	58	4-5	140	4.3	15.2	21.7	47.8	10.9	0.0	89.1	4.7
6447	60	3	140	19.5	24.4	39.0	17.1	0.0	0.0	100.0	4.0
6448	60	3	140	18.9	37.8	32.4	10.8	0.0	0.0	100.0	3.6
6449	59	3	140	12.5	31.3	31.3	12.5	12.5	0.0	87.5	3.0
6450	63	4-5	134	7.4	14.8	18.5	33.3	24.1	1.9	74.1	5.0
6451	58	4-5	140	10.0	13.3	23.3	36.7	16.7	0.0	83.3	3.2
6452	57	4-5	124	7.0	8.8	19.3	42.1	21.1	1.8	77.2	5.0
6453	59	4-5	140	3.3	6.6	19.7	47.5	21.3	1.6	77.0	5.7
6454	59	4-5	140	5.2	8.6	27.6	50.0	8.6	0.0	91.4	5.6
6455	62	4-5	118	9.1	12.1	18.2	39.4	21.2	0.0	78.8	3.4
6456	58	4	135	4.6	12.3	24.6	49.2	9.2	0.0	90.8	5.8
6457	62	4	140	7.7	11.5	25.0	50.0	5.8	0.0	94.2	5.1
6458	63	4-5	140	1.9	3.8	22.6	60.4	11.3	0.0	88.7	5.4
6461	62	4-5	140	5.6	5.6	11.1	55.6	22.2	0.0	77.8	3.4
6462	62	4	140	4.7	7.0	20.9	62.8	4.7	0.0	95.3	4.3
6464	59	4	140	1.9	17.0	30.2	43.4	5.7	1.9	92.5	4.9
6465	63	4-5	116	4.1	10.2	16.3	40.8	24.5	4.1	71.4	4.4
6466	62	4-5	140	2.3	4.5	15.9	54.5	22.7	0.0	77.3	4.4
6468	60	4	140	6.3	16.7	25.0	43.8	8.3	0.0	91.7	4.2
6470	59	4	140	6.5	10.9	19.6	47.8	15.2	0.0	84.8	4.2
6472	60	4-5	140	6.8	10.2	22.0	47.5	13.6	0.0	86.4	5.7

Table 7. Performance of preliminary small sieve green bean lines, June 6 planting, Corvallis, 2006 (cont.)[z]

Line	Days to Harvest	Est. Sieve Size	Stand	Percent Sieve Size[y] 1	2	3	4	5	6	%1-4 sieve	Av tons/acre
6473	59	4	134	6.5	10.9	28.3	43.5	8.7	2.2	89.1	4.4
6476	62	4-5	140	1.8	7.0	12.3	45.6	31.6	1.8	66.7	5.7
6482	65	4	129	2.6	10.3	25.6	53.8	7.7	0.0	92.3	3.8
6483	57	4-5	140	2.8	11.1	22.2	30.6	25.0	8.3	66.7	3.6
6486	59	4-5	140	5.3	12.3	19.3	50.9	12.3	0.0	87.7	5.4
6487	58	4-5	140	3.4	11.9	25.4	42.4	15.3	1.7	83.1	5.7
6491	60	4-5	140	5.8	7.2	14.5	47.8	24.6	0.0	75.4	6.4
6496	59	4-5	140	4.1	10.2	26.5	49.0	10.2	0.0	89.8	4.4
6503	59	4-5	140	5.7	7.5	24.5	47.2	15.1	0.0	84.9	5.0
Savannah	59	4	140	11.1	22.2	25.9	37.0	3.7	0.0	96.3	2.5
Concesa	63	4	140	0.0	4.2	16.7	70.8	8.3	0.0	91.7	2.4
LSD@5%											2.4

[z]Mean of 2 replications; subplots of 5' were harvested from single 20' plots in rows 30" apart.
[y]Percent calculated as % of total of 1-6 sieve beans.

Table 8. Notes on preliminary full sieve green bean lines, June 6 planting, Corvallis, 2006.

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
91G	15.0	3	round	5	5	3	5	5	1	Prime on this date
OR 54	14.5	7	round	5	5	7	7	7	1	Getting seedy without sizing up; many short pods and pollywogs
5630	15.0	7	round	5	5	5	7	7	1	Not sizing up in this trial
5669	15.0	6	round	6	6	5	7	5	1	Getting seedy; many blanks and pollywogs
6137	13.0	5	round	7	8	3	3	5	1	Some seed development; prime in a day or two
6175	14.0	7	round to cb	7	7	7	7	7	1	Very nice dark green, dull pods; best blend of Minuette with BBL type; prime in a couple days
6189	16.0	7	round	5	7	5	5	7	5	Looks good; little heat stress; tomorrow probably optimal; 5 sv just starting to get seedy; 4 sv not seedy, looks good; 3 sv good, not junky
6239	14.0	3	round to cb	3	6	3	9	9	1	Getting seedy; very low yielding, many mis-shapen and junky pods
6284	13.5	5	round	5	5	5	7	5	1	Missed by a couple days; segregating for strings; some fishhooks in 6 sv
6290	13.0	6	round to cb	5	5	5	7	5	1	Good plant habit and fairly productive but stringy
6300	13.0	5	round	5	5	5	7	5	1	Getting seedy without sizing up; many blanks and misshapen pods
6313	14-16	6	round	4	5	5	7	7	1	May be a mix of types; all 6 sv are short but some 5 sv are quite long--may also be heat stress; all sizes getting seedy
6338	14.5	7	round	7	5	3	5	5	1	Probably prime tomorrow
6436	13.0	6	round	5	5	5	7	5	1	Attractive pods; all sv sizes getting seedy
6437	14.5	6	round	7	5	7	7	7	1	Getting seedy without sizing up; contains flat off-type

Table 8. Notes on preliminary full sieve green bean lines, June 6 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6438	14.5	7	round	7	5	5	7	5	1	Getting seedy without sizing up
6439	15.0	5	round	5	5	5	7	5	1	Getting seedy without sizing up
6440	14.0	7	round	7	5	5	7	5	1	Getting seedy without sizing up; some blanking
6443	13.5	7	round	7	6	5	7	5	1	Getting seedy without sizing up
6445	14.5	7	round	7	6	6	7	5	1	Very attractive pods
6446	12.5	4	round to cb	7	4	7	7	3	1	Seedy in all sieve sizes; many curved pods.
6459	15.5	7	flat-oval	7	3	5	5	3	1	Mix of flat, oval and some round in all sieve sizes; discard
6463	13.5	4	cb	4	3	7	7	3	7	Color too light; curved pods; missed by a day or two
6467	14.0	3	round	5	5	7	7	5	1	Extremely bad split set with misshapen pods, blanks and pollywogs
6469	12.0	5	round to cb	7	5	5	7	5	1	Prime on this date; attractive pod but short
6471	12.5	6	round	7	5	7	7	5	3	Missed by a day or two
6474	14.0	6	round	5	6	5	7	5	1	Nice pods similar to 91G; missed by a day or two
6475	14.5	5	heart	5	5	5	7	5	1	Strong reverse curve; getting seedy without sizing up
6477	14.5	7	round	7	5	5	7	7	1	Attractive pods; prime yesterday
6478	15.5	5	round to cb	5	5	7	7	5	1	Missed by a day or two; attractive pods
6479	14.5	5	round	7	6	5	7	7	1	Attractive dark green, long, straight pods; prime
6480	14.5	7	round to cb	7	5	5	7	5	1	Very seedy in larger sv sizes

Table 8. Notes on preliminary full sieve green bean lines, June 6 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6481	13.5	5	round	7	4	7	7	5	1	Getting seedy without sizing up; some short pods and blanks
6484	14.0	7	cb	7	4	7	7	5	1	Attractive pods; prime yesterday
6485	14.5	5	round	5	4	7	7	5	1	Seedy in all sv sizes; many junky pods
6489	13.0	4	round	5	5	5	7	5	1	Getting seedy without sizing up; many short junky pods
6490	13.5	5	round	5	5	7	7	5	1	Prime; attractive pods
6492	12.5	7	round	5	5	3	5	5	1	Short pods; getting very seedy; 3 sv short and junky
6493	14.5	6	round	7	5	7	5	5	1	Prime
6494	11.0	7	round	7	5	7	7	5	1	Getting seedy without sizing up
6497	14.0	6	round	5	5	7	7	5	1	Some short pods and blanks
6498	14.0	5	round	7	6	5	7	5	1	Attractive pods, productive
6499	13.5	5	round	5	5	7	7	5	1	Missed; many short and junky pods; seedy in all sv sizes
6500	14.5	6	round	5	5	3	7	5	1	Segregating for strings
6501	13.5	6	round	7	5	7	7	5	1	Getting seedy without sizing up; short junky pods especially in smaller sv sizes
6502	13.0	7	round	7	4	7	7	5	1	Prime; attractive pods

[z]Scores based on a 1-9 scale with 9 straightest
[y]Cross section: cb = crease-back
[x]Scores based on a 1-9 scale with 9 smoothest
[w]Scores based on a 1-9 scale with 9 darkest
[v]Scores based on a 1-9 scale with 9 strongest
[u]BBL=bush blue lake; sv=sieve

Table 9. Notes on preliminary small sieve green bean lines, June 6 planting, Corvallis, 2006.

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
5613	10.5	7	round	7	5	7	7	3	1	Prime on this date
6174	14.0	5	round	7	7	7	7	3	7	Prime on this date
6256	14.5	8	round	9	3	7	5	5	1	Smooth straight pods but high fiber; color too light; segregating strings
6267	10.5	7	round	5	4	3	5	7	1	Short pods in 4-5 sv; prime on this date; strings
6268	12.5	8	round	7	4	1	5	5	1	Prime on this date
6312-1	14.0	6	round	7	5	7	7	5	1	Seed developing in 4 & 5 sv pods
6312-11	14.0	6	round	7	7	7	3	5	7	Contains a smaller sv, shorter, lighter co-lored mix; prime in a day or two
6312-18	13.5	7	round	7	6	7	7	5	1	Attractive pods; prime in a day or two
6312-20	14.0	7	heart to round	7	6	7	7	5	1	Seems to be getting seedy without sizing up; seeds developing in 4 and 5 sv
6318	14.5	6	round	5	5	7	9	5	1	Seedy in 5 sv; 4 sv OK
6323	13.0	6	round	5	5	7	7	5	1	Seems to be getting seedy without sizing up; seeds developing in 4 and 5 sv; 3 sv short and junky
6329	13.0	8	round	7	6	5	7	5	1	Prime on this date
6340	12.5	7	round	7	5	5	7	5	1	Short, junky pods
6346	14.0	3	cb	3	5	7	7	5	1	Short, junky pods, especially in 3 sv
6375	12.5	5	round	7	5	7	7	5	1	Prime on this date
6393	12.0	6	round	7	5	3	7	7	1	Contains a longer pod mix and a shiny mix; probably prime tomorrow; 3 sv getting short and junky
6404	13.0	7	round	7	3	5	9	5	1	Shiny short pods; prime today
6434	13.5	5	round	5	4	5	7	5	1	Early; probably prime in a couple of days
6441	15.0	5	round	7	5	7	7	5	1	Early; probably prime in a couple of days
6442	14.0	7	round	7	5	5	7	5	1	Early; probably prime in a couple of days

Table 9. Notes on preliminary small sieve green bean lines, June 6 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6444	13.0	7	round	5	5	7	7	7	1	Early; probably prime in a couple of days
6447	11.0	9	heart	9	5	7	7	7	1	Very attractive 3 sv bean; prime today
6448	11.0	7	round	7	5	3	7	7	1	Prime on this date
6449	13.0	7	round	7	5	3	7	7	1	Prime today; produces more 4 and 5 sv than most 3 sv beans
6450	13.0	5	round	7	5	7	7	3	7	Pods have slight but consistent positive curve; prime today
6451	13.5	5	round	5	3	5	7	7	1	Seems to be predominately early light colored short pod type with mix of later darker colored type
6452	14.0	7	cb	6	5	7	7	5	1	Attractive pods; prime today
6453	15.0	6	round	7	3	1	3	5	1	Color too light; segregating strings
6454	15.0	6	round	7	6	5	7	7	1	Getting seedy without sizing up
6455	13-16	6	round	6	4	7	7	3	1	Mix of long (16cm) and short (13 cm) pods; long beans seem more desirable and prime maturity; short beans are over mature
6456	14.0	6	round	7	6	3	7	5	1	Attractive pod; probably prime tomorrow
6457	11.0	3	round	5	3	7	7	5	1	Probably prime tomorrow
6458	13.0	7	oval to round	7	4	7	7	3	1	Segregating oval and round, which affected the grading; round pods probably prime
6461	14.5	3	round	7	3	7	7	5	1	Pod color too light; pods too curved
6462	15.0	7	round	7	3	5	7	3	1	Getting seedy without sizing up; many 3 and 4 sv short and junky
6464	12.0	6	round	5	6	7	7	7	1	Getting seedy without sizing up
6465	13.0	3	round to cb	5	5	7	7	7	1	Somewhat short & curved; prime today
6466	11.0	5	round	5	5	7	7	5	5	Prime on this date

Table 9. Notes on preliminary small sieve green bean lines, June 6 planting, Corvallis, 2006 (cont).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfu-mi-ness	
6468	13.5	9	round	9	4	7	7	5	1	Very attractive pods but too color light; probably prime in a couple of days
6470	14.0	6	round	5	6	5	7	5	1	Prime on this date
6472	13.5	3	round	5	5	5	7	7	1	Getting seedy without sizing up
6473	13.0	6	round	7	6	7	5	7	1	Small seeds but large seed cavities
6476	12.5	7	round	7	4	7	7	5	1	Probably prime yesterday
6482	12.0	5	round	7	6	5	7	3	1	Prime tomorrow
6483	9.5	7	round	7	4	7	7	5	1	Short junky pods with some blanking es-pecially in 3 and 4 sv
6486	13.5	8	round	7	6	3	3	7	1	Uniform, smooth, straight pods; probably prime tomorrow
6487	14.0	5	round	5	5	7	7	5	1	Prime on this date
6491	12.0	7	round	7	5	5	7	5	1	Short junky pods
6496	13.0	5	round	7	5	7	7	5	1	Many short junky pods
6503	13.0	7	round	7	5	5	7	5	1	Probably prime tomorrow
Savannah	12.5	8	round	9	7	5	7	1	1	Shiny dark green, smooth pods; getting seedy without sizing up
Concesa	12.5	3	round	7	9	5	7	3	3	Very dark green shiny pods; many fish-hooks; very dark green seeds

[y]Cross section: cb = crease-back
[x]Scores based on a 1-9 scale with 9 smoothest
[w]Scores based on a 1-9 scale with 9 darkest
[v]Scores based on a 1-9 scale with 9 strongest
[u]sv=sieve

Table 10. Performance of commercial green bean varieties, June 21 planting, Corvallis, 2006.

Variety	Source	AV Stand	Intended Use	Days	Percent Sieve Size[z]							Tons/Acre Sieve Size						Graded Total[y]	$/Acre[x]
					1	2	3	4	5	6	1-4	1	2	3	4	5	6		
91G	OSU	150	full sieve	59	4.6	6.7	12.6	31.5	38.7	5.9	55.5	0.48	0.70	1.31	3.26	4.00	0.61	10.35	897*
				61	5.9	3.7	6.3	26.8	43.1	14.1	42.8	0.70	0.44	0.74	3.13	5.05	1.65	11.70	902
OR 54	OSU	150	full sieve	61	3.4	8.4	21.1	39.8	24.9	2.3	72.8	0.39	0.96	2.39	4.52	2.83	0.26	11.35	1131
				63	2.2	4.3	11.6	37.0	36.2	8.7	55.1	0.26	0.52	1.39	4.44	4.35	1.04	12.01	1036*
				65	1.5	3.1	6.8	24.1	47.4	17.0	35.6	0.22	0.44	0.96	3.39	6.66	2.39	14.05	1007
5630	OSU	150	full sieve	59	4.5	6.9	14.6	42.1	31.2	0.8	68.0	0.48	0.74	1.57	4.52	3.35	0.09	10.74	1032
				61	4.3	4.3	10.4	38.9	39.3	2.9	57.9	0.52	0.52	1.26	4.74	4.79	0.35	12.18	1077*
				63	3.0	3.0	5.7	27.5	49.7	11.1	39.3	0.39	0.39	0.74	3.57	6.44	1.44	12.96	965
5669	OSU	150	full sieve	59	3.8	9.2	21.7	40.0	24.6	0.8	74.6	0.39	0.96	2.26	4.18	2.57	0.09	10.44	1054
				61	1.9	5.8	14.3	40.9	33.2	3.9	62.9	0.22	0.65	1.61	4.61	3.74	0.44	11.27	1039*
				63	1.7	2.3	6.9	28.4	47.2	13.5	39.3	0.22	0.30	0.91	3.74	6.22	1.78	13.18	981
6137	OSU	150	full sieve	61	4.7	11.0	19.2	39.2	22.4	3.5	74.1	0.52	1.22	2.13	4.35	2.48	0.39	11.09	1116
				63	2.7	6.3	11.8	34.9	38.0	6.3	55.7	0.30	0.70	1.31	3.87	4.22	0.70	11.09	962*
				65	1.0	3.0	5.6	19.5	45.2	25.7	29.0	0.13	0.39	0.74	2.57	5.96	3.39	13.18	880
6185	OSU	150	full sieve	59	6.5	10.3	20.5	30.3	25.9	6.5	67.6	0.52	0.83	1.65	2.44	2.09	0.52	8.05	770
				61	2.3	6.0	10.6	29.2	35.2	16.7	48.1	0.22	0.57	1.00	2.74	3.31	1.57	9.40	762*
				63	1.5	3.1	5.4	13.8	35.6	40.6	23.8	0.17	0.35	0.61	1.57	4.05	4.61	11.35	713
6189	OSU	150	full sieve	59	7.6	11.4	17.3	36.3	24.1	3.4	72.6	0.78	1.17	1.78	3.74	2.48	0.35	10.31	1025
				61	2.4	5.2	12.8	32.0	38.0	9.6	52.4	0.26	0.57	1.39	3.48	4.13	1.04	10.88	917*
				63	2.3	3.2	9.4	22.4	39.9	22.7	37.3	0.30	0.44	1.26	3.00	5.35	3.05	13.40	978
6230	OSU	148	full sieve	58	6.4	9.2	14.7	31.2	31.2	7.3	61.5	0.30	0.44	0.70	1.48	1.48	0.35	4.74	432*
				61	2.1	3.5	6.3	22.4	40.6	25.2	34.3	0.13	0.22	0.39	1.39	2.52	1.57	6.22	440
SB 4285	Syngenta	150	full sieve	61	6.0	8.7	18.5	40.8	24.2	1.9	74.0	0.70	1.00	2.13	4.70	2.78	0.22	11.53	1158
				63	4.7	6.1	11.4	34.3	38.4	5.1	56.6	0.61	0.78	1.48	4.44	4.96	0.65	12.92	1129*
				65	3.1	4.0	8.0	23.8	51.7	9.3	39.0	0.44	0.57	1.13	3.35	7.26	1.31	14.05	1043
BB 519	Pannar	146	5	65	5.3	10.0	23.4	40.7	18.2	2.4	79.4	0.48	0.91	2.13	3.70	1.65	0.22	9.09	951
				68	4.7	8.9	22.6	45.1	17.0	1.7	81.3	0.48	0.91	2.31	4.61	1.74	0.17	10.22	1083*
				70	3.6	9.0	16.6	40.8	26.0	4.0	70.0	0.44	1.09	2.00	4.92	3.13	0.48	12.05	1175

Table 10. Performance of commercial green bean varieties, June 21 planting, Corvallis, 2006 (cont.).

Variety	Source	AV Stand	Intended Use	Days	Percent Sieve Size[z]							Tons/Acre Sieve Size						Graded Total[y]	$/Acre[x]
					1	2	3	4	5	6	1-4	1	2	3	4	5	6		
BSC 864	Brotherton	150	4-5	61	7.7	18.6	24.4	38.5	10.9	0.0	89.1	0.52	1.26	1.65	2.61	0.74	0.00	6.79	649
				63	4.8	11.4	18.0	38.9	26.3	0.6	73.1	0.35	0.83	1.31	2.83	1.91	0.04	7.26	569
				65	5.2	7.8	13.0	35.4	34.9	3.6	61.5	0.44	0.65	1.09	2.96	2.91	0.30	8.35	570*
Concesa	Harris Moran	150	4	62	7.8	27.5	49.2	15.5	0.0	0.0	100.0	0.65	2.31	4.13	1.31	0.00	0.00	8.40	1019
				64	4.4	14.3	40.4	40.4	0.5	0.0	99.5	0.39	1.26	3.57	3.57	0.04	0.00	8.83	931*
				66	3.6	8.9	33.3	53.3	0.9	0.0	99.1	0.35	0.87	3.26	5.22	0.09	0.00	9.79	949
Savannah	Harris Moran	150	4	61	5.9	23.4	41.5	27.3	2.0	0.0	98.0	0.52	2.09	3.70	2.44	0.17	0.00	8.92	999
				63	2.8	12.6	39.7	42.1	2.8	0.0	97.2	0.26	1.17	3.70	3.92	0.26	0.00	9.31	949*
				65	1.9	6.7	30.2	52.6	8.6	0.0	91.4	0.22	0.78	3.52	6.13	1.00	0.00	11.66	1041
BB 2200	Pureline	150	4	64	10.6	20.6	36.9	28.4	3.5	0.0	96.5	0.65	1.26	2.26	1.74	0.22	0.00	6.13	673
				66	10.2	20.5	38.6	27.1	3.6	0.0	96.4	0.74	1.48	2.78	1.96	0.26	0.00	7.22	797*
				68	8.9	18.8	38.6	30.2	3.5	0.0	96.5	0.78	1.65	3.39	2.65	0.30	0.00	8.79	954
BB 420	Starke Ayres	145	4	64	12.7	17.6	28.4	37.3	3.9	0.0	96.1	0.57	0.78	1.26	1.65	0.17	0.00	4.44	460
				66	11.6	16.5	24.8	39.7	7.4	0.0	92.6	0.61	0.87	1.31	2.09	0.39	0.00	5.26	519*
				70	4.9	8.6	15.6	49.8	18.9	2.1	79.0	0.52	0.91	1.65	5.26	2.00	0.22	10.57	823
BB 513	Starke Ayres	150	4	64	11.0	18.5	38.2	30.1	2.3	0.0	97.7	0.83	1.39	2.87	2.26	0.17	0.00	7.53	827
				66	7.0	16.4	30.3	42.8	3.5	0.0	96.5	0.61	1.44	2.65	3.74	0.30	0.00	8.74	881*
				68	8.4	17.3	31.4	40.3	2.6	0.0	97.4	0.70	1.44	2.61	3.35	0.22	0.00	8.31	858
BB 514	Starke Ayres	150	4	63	10.3	17.7	35.4	34.3	2.3	0.0	97.7	0.78	1.35	2.70	2.61	0.17	0.00	7.61	817
				65	8.0	16.6	28.6	42.2	4.5	0.0	95.5	0.70	1.44	2.48	3.65	0.39	0.00	8.66	866*
				68	8.4	15.6	27.6	42.5	5.8	0.0	94.2	1.00	1.87	3.31	5.09	0.70	0.00	11.96	1178
BB 520	Starke Ayres	150	4	63	9.0	15.0	30.8	38.3	6.8	0.0	93.2	0.52	0.87	1.78	2.22	0.39	0.00	5.79	579
				65	5.5	12.3	25.3	49.3	7.5	0.0	92.5	0.35	0.78	1.61	3.13	0.48	0.00	6.35	587*
				68	6.1	11.7	26.9	42.6	11.2	1.5	87.3	0.52	1.00	2.31	3.65	0.96	0.13	8.57	781
GB 87	Pureline	150	3-4	57	19.4	45.2	32.3	3.2	0.0	0.0	100.0	0.78	1.83	1.31	0.13	0.00	0.00	4.05	522
				59	7.9	25.7	46.4	20.0	0.0	0.0	100.0	0.48	1.57	2.83	1.22	0.00	0.00	6.09	722*
				62	5.3	14.9	39.9	38.3	1.6	0.0	98.4	0.44	1.22	3.26	3.13	0.13	0.00	8.18	863

Table 10. Performance of commercial green bean varieties, June 21 planting, Corvallis, 2006 (cont.).

Variety	Source	AV Stand	Intended Use	Days	Percent Sieve Size[z]							Tons/Acre Sieve Size						Graded Total[y]	$/Acre[x]
					1	2	3	4	5	6	1-4	1	2	3	4	5	6		
Trofeo	Pureline	150	3	63	15.2	41.8	38.0	5.1	0.0	0.0	100.0	1.04	2.87	2.61	0.35	0.00	0.00	6.87	879
				65	13.1	32.4	46.6	8.0	0.0	0.0	100.0	1.00	2.48	3.57	0.61	0.00	0.00	7.66	965*
				68	11.3	33.3	45.5	10.0	0.0	0.0	100.0	1.13	3.35	4.57	1.00	0.00	0.00	10.05	1254
Ducato	Brotherton	150	3	61	7.7	24.7	48.9	18.7	0.0	0.0	100.0	0.61	1.96	3.87	1.48	0.00	0.00	7.92	945
				63	4.3	15.5	48.1	31.6	0.5	0.0	99.5	0.35	1.26	3.92	2.57	0.04	0.00	8.13	902*
				65	2.3	10.8	45.1	40.8	0.9	0.0	99.1	0.22	1.00	4.18	3.78	0.09	0.00	9.27	970
Medinah	Syngenta	150	2-3	61	11.8	62.5	25.7	0.0	0.0	0.0	100.0	0.78	4.13	1.70	0.00	0.00	0.00	6.61	703*
				63	5.3	34.9	57.4	2.4	0.0	0.0	100.0	0.39	2.57	4.22	0.17	0.00	0.00	7.35	423
				65	4.1	25.4	64.8	5.7	0.0	0.0	100.0	0.35	2.13	5.44	0.48	0.00	0.00	8.40	355
Stayton	Syngenta	150	2-3	56	31.6	67.4	1.1	0.0	0.0	0.0	100.0	1.31	2.78	0.04	0.00	0.00	0.00	4.13	585
				58	18.5	69.4	12.1	0.0	0.0	0.0	100.0	1.00	3.74	0.65	0.00	0.00	0.00	5.39	678*
				61	11.4	57.1	31.5	0.0	0.0	0.0	100.0	0.91	4.57	2.52	0.00	0.00	0.00	8.00	784
Baccara	Pureline	150	2	59	50.4	49.6	0.0	0.0	0.0	0.0	100.0	2.57	2.52	0.00	0.00	0.00	0.00	5.09	728
				62	32.6	66.9	0.6	0.0	0.0	0.0	100.0	2.44	5.00	0.04	0.00	0.00	0.00	7.48	1064*
				64	21.5	75.9	2.6	0.0	0.0	0.0	100.0	1.78	6.31	0.22	0.00	0.00	0.00	8.31	1157

[z]Percent calculated as % of total of 1-6 sieve beans.

[y]Total tons/acre of the graded beans, including sieve sizes 1-6. Values will be lower than those reported in Table 11 because some beans are lost in the grading process. Analysis of variance (Table 11) was calculated using the harvest marked with *.

[x]$/acre for full sieve and 5 sieve beans based on $120/ton for 1-4 sieve and $45/ton for 5-6 sieve; for 3, 4, and 4-5 sieve beans based on $131/ton for 1-3 sieve, $69/ton for 4 sieve and $25/ton for 5-6 sieve; and for 2-3 and 2 sieve beans based on $143/ton for 1-2 sieve and $0/ton for 3-6 sieve.

Table 11. Statistical comparison of yields and dollar return of commercial green bean lines, Corvallis, 2006[z].

Line	Intended Use	T/A Unadjusted	T/A Adjusted[y]	$/A
91G	full sieve	11.1	11.8	964
OR 54	full sieve	12.5	13.1	1077
5630	full sieve	13.2	14.2	1165
5669	full sieve	12.0	13.6	1107
6137	full sieve	11.7	12.4	1015
6185	full sieve	9.9	9.7	804
6189	full sieve	11.3	11.5	953
6230	full sieve	5.4	6.0	487
SB 4285	full sieve	13.6	14.6	1190
BB 519	5 sieve	12.8	15.4	1252
BSC 864	4-5 sieve	9.0	9.0	820
Concesa	4 sieve	9.3	9.3	1108
Savannah	4 sieve	10.0	10.0	1180
BB 2200	4 sieve	7.5	7.5	878
BB 420	4 sieve	5.9	5.9	672
BB 513	4 sieve	9.0	9.0	1052
BB 514	4 sieve	9.3	9.3	1086
BB 520	4 sieve	6.7	6.7	771
GB 87	3 sieve	6.5	6.5	783
Trofeo	3 sieve	8.0	8.0	960
Ducato	3 sieve	8.5	8.5	1015
Medinah	2-3 sieve	7.0	7.0	835
Stayton	2-3 sieve	5.6	5.6	673
Baccara	2 sieve	7.8	7.8	934
LSD @ 5%		1.7	1.7	174

[z]Based on one selected harvest for each variety (marked with * on Table 10), which was the harvest closest to optimal based on that variety's intended use (50% 1-4 sieve for full sieve). Yields are field yields of 1-6 sieve beans.
[y]Full sieve and 5 sieve beans were adjusted to 50% 1-4 sieve; all others were unadjusted.

Table 12. Notes on June 21 commercial bean trial, Corvallis, Oregon, 2006.

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Color[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfumi-ness	
91G	16.0	5	round	5	5	7	7	5	1	
OR54	16.0	7	round	6	6	5	7	5	1	
5630	15.5	5	round	5	6	7	7	5	1	Very productive in this trial
5669	15.0	5	round	5	6	7	7	7	1	
6137	17.0	5	round	5	8	3	7	5	1	Very attractive dark green, long pods; good interior color; seeds very widely spaced in pod
6185	16.0	6	round	7	7	3	5	7	1	Long slender dark green pods with systematic, strong reverse curve; pods become shiny in 5 and 6 sv
6189	15.5	6	round	5	6	5	7	5	3	BBL pods; dull blue-green color; probably best of Minuette crosses
6230	15.0	3	round	3	4	5	7	5	1	Low yield; some blanking and variable pod color but no strings or high fiber; color too light
SB 4285	15.0	6	round	8	4	5	5	7	1	Good BBL type but color maybe too light; easy to hand pick
BB 519	15.5	8	round to cb	9	5	7	5	5	1	Long straight slender smooth pods; mix of yellow green pods and darker green pods; indeterminate or split set
BSC 864	14.5	5	round to cb	7	5	3	5	3	7	Long smooth pods, most have a reverse curve; some blonding of shaded pods

Table 12. Notes on June 21 commercial bean trial, Corvallis, Oregon, 2006 (cont.).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Co-lor[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfumi-ness	
Concesa	14.5	7	round	8	7	1	9	7	1	Shiny dark green smooth pods; very dark green seed.
Savannah	14.5	8	round	6	7	5	5	5	1	Long straight dark green pods
BB 2200	16.0	7	round	9	5	3	7	5	3	Long smooth shiny green pod; many pollywogs in 5 sv
BB 420	14.5	7	round	9	5	3	5	9	1	Very indeterminate or split set; some blond pods from heavy shading in plots; ap-pears to be segregating for easy pick trait; may be a mix of late long podded full sv and a shorter podded 4 sv line
BB 513	15.5	7	round	7	5	5	7	7	1	Very indeterminate plant; shiny pods
BB 514	15.0	8	round	9	4	7	5	7	7	Long straight, smooth, apple green pods; tendency to blond under heavy foliage; split set
BB 520	14.5	6	round	9	4	7	5	7	7	Long slender apple green pods; some severe blonding where pods were shaded; some pods with a severe bronzing (virus?)
GB 87	14.5	8	round to cb	9	4	3	3	7	1	Very long, straight, smooth, shiny pod ; color too light
Trofeo	15.0	8	round	9	4	1	3	9	3	Long, slender, smooth, ap-ple green pods

Table 12. Notes on June 21 commercial bean trial, Corvallis, Oregon, 2006 (cont.).

Line	Pod Length (cm)	Pod Straight-ness[z]	Pod Cross Section[y]	Pod Smooth-ness[x]	Pod Co-lor[w]	Flavor[v]				Notes[u]
						Sweet-ness	Astrin-gency	Beani-ness	Perfumi-ness	
Ducato	13.0	7	round	9	5	5	9	5	1	Very smooth apple green pods; strong reverse curve
Medinah	12.5	8	round	7	5	7	7	3	1	
Baccara	12.5	6	round	9	4	5	7	5	1	Very indeterminate plant; slow hand picking

[z]Scores based on a 1-9 scale with 9 straightest
[y]Cross section: cb = crease-back
[x]Scores based on a 1-9 scale with 9 smoothest
[w]Scores based on a 1-9 scale with 9 darkest
[v]Scores based on a 1-9 scale with 9 strongest
[u]This trial had uniform lush heavy growth with light white mold infection beginning; sv = sieve; BBL = bush blue lake

Table 13. White mold incidence in green bean lines, June 21 planting, Corvallis, 2006[z].

Line	Sieve Size	Position in Field[x]		Total No. Plants		No. Infected		% Infected		Average % Infected	Notes
		Rep 1	Rep 6	Rep 1	Rep 6	Rep 1	Rep 6	Rep 1	Rep 6		
91G	full sieve	middle	south	32	38	31	6	97	16	56	Very leggy floppy plant
OR 54	full sieve	middle	south	31	37	27	12	87	32	60	Very leggy floppy plant
5630	full sieve	south	south	31	47	31	15	100	32	66	
5669	full sieve	north	north	47	39	12	6	26	15	20	% infected may be misleading (low) because both plots were on the north side of field
6137	full sieve	north	north	35	49	25	8	71	16	44	
6185	full sieve	south	south	42	40	25	31	60	78	69	Somewhat leggy and floppy habit with white mold developing
6189	full sieve	south	middle	43	45	30	25	70	56	63	Retains compact habit in field even under high productivity situations
6230	full sieve	south	north	45	37	32	4	71	11	41	Large leaved, floppy habit
SB 4285	full sieve	south	north	33	44	25	1	76	2	39	Retains compact habit in field even under high productivity situations
BB 519	5 sieve	north	south	36	40	7	9	19	23	21	
BSC 864	4-5 sieve	middle	middle	31	45	13	0	42	0	21	
Concesa	4 sieve	middle	middle	44	36	37	1	84	3	43	
Savannah	4 sieve	north	south	31	45	22	13	71	29	50	
BB 2200	4 sieve	middle	north	50	41	27	0	54	0	27	
BB 420	4 sieve	north	north	33	51	12	10	36	20	28	Very indeterminate with heavy foliage
BB 513	4 sieve	middle	middle	22	45	3	3	14	7	10	Very indeterminate with heavy foliage
BB 514	4 sieve	middle	north	41	43	16	0	39	0	20	Very indeterminate with heavy foliage
BB 520	4 sieve	north	south	52	39	13	4	25	10	18	

Table 13. White mold incidence in green bean lines, June 21 planting, Corvallis, 2006[z].

Line	Sieve Size	Position in Field[x]		Total No. Plants		No. Infected		% Infected		Average % Infected	Notes
		Rep 1	Rep 6	Rep 1	Rep 6	Rep 1	Rep 6	Rep 1	Rep 6		
GB 87	3 sieve	south	middle	41	48	20	2	49	4	26	
Trofeo	3 sieve	north	south	52	48	41	45	79	94	86	
Ducato	3 sieve	south	north	38	37	21	1	55	3	29	
Medinah	2-3 sieve	south	middle	43	50	6	6	14	12	13	
Stayton	2-3 sieve	north	middle	49	45	28	0	57	0	29	
Baccara	2 sieve	middle	middle	40	40	32	4	80	10	45	Very indeterminate

[z]Counts were taken after harvest of the entire trial was completed and based on a 5' plot each from the first and sixth reps.
[x]Plots on south side of field were more heavily infected due to extra water from a young broccoli planting. The east end of the field (rep 1) was also generally more heavily infected than the west end (rep 6).

Table 14. Fusarium root rot infection, Corvallis, 2006[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
B7732-1	5	6	5.5	I	med to high	strings
B7732-3	7	5	6.0	I	medium	strings
B7732-15	6	5	5.5	I	med to high	strings
B7732-16	5	7	6.0	I	medium	strings
B7732-19	7	5	6.0	I	medium	strings
B7732-24	6	6	6.0	I	med to high	
B7732-26	8	6	7.0	I	med to high	strings
B7732-27	6	7	6.5	I	medium	
B7732-35	6	6	6.0	I	med to high	short, curved pods; late
B7732-41	6	7	6.5	I	med to high	strings
B7732-42	5	7	6.0	I	low to med	strings
B7733-6	6	4	5.0	I	low to med	
B7733-8	6	8	7.0	I	med to high	short, very curved pods; low yield
B7733-11	5	7	6.0	I	med to high	
B7733-21	5	7	6.0	I	low to med	strings
B7733-25	4	7	5.5	I	medium	strings
B7733-26	6	7	6.5	I	medium	strings
B7733-29	4	6	5.0	I	medium	late, low yield, strings
B7733-30	7	8	7.5	I	med to high	early, good yield, nice pods, no strings
B7733-32	7	6	6.5	I	medium	strings
B7733-34	7	7	7.0	I	medium	strings

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
B7733-35	5	4	4.5	I	med to high	
B7733-36	4	3	3.5	I	medium	
B7734-6	5	5	5.0	I	high	strings
B7734-7	5	4	4.5	I	high	strings
B7734-23	4	6	5.0	I	high	
B7734-24	6	7	6.5	I	med to high	strings
B7734-27	6	5	5.5	I	high	short curved pods; strings
B7734-29	6	6	6.0	I	high	strings
B7734-31	5	6	5.5	I	medium	
B7734-36	4	6	5.0	I	med to high	very short curved pods
B7734-37	5	6	5.5	I	high	
B7734-39	6	4	5.0	I	medium	strings
B7734-45	6	5	5.5	I	medium	very short pods; strings
B7734-46	4	4	4.0	I	medium	very short pods; strings
B7734-47	7	5	6.0	I	med to high	
B7735-2	5	6	5.5	I	medium	
B7735-9	6	3	4.5	I	med to high	
B7735-11	6	4	5.0	I	medium	
B7735-12	6	5	5.5	I	medium	
B7735-13	7	7	7.0	I	high	strings
B7735-17	5	7	6.0	I	high	strings
B7735-18	5	6	5.5	I	medium	
B7735-19	4	5	4.5	I	medium	
B7735-20	6	7	6.5	I	med to high	
B7735-23	6	5	5.5	I	medium	

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
B7735-24	6	4	5.0	I	medium	strings
B7735-30	6	6	6.0	I	med to high	
B7735-32	6	5	5.5	I	medium	
B7735-36	6	8	7.0	I	medium	strings
B7735-39	6	6	6.0	I	med to high	
B7735-41	6	6	6.0	I	med to high	
B7735-43	5	7	6.0	I	med to high	
B7735-47	4	5	4.5	I	med to high	strings
B7735-48	7	6	6.5	I	med to high	short pods, some curved
B7735-51	8	8	8.0	I	medium	strings
B7735-53	6	6	6.0	I	medium	strings
B7735-57	6	6	6.0	I	medium	
B7735-59	5	8	6.5	I	medium	
B7735-61	4	4	4.0	I	medium	
B7735-62	7	8	7.5	I	med to high	
B7735-65	7	5	6.0	I	med to high	
B7735-66	5	6	5.5	I	med to high	leaft plants; low yield; curved pods
B7735-67	6	6	6.0	I	medium	
B7735-68	5	6	5.5	I	med to high	
B7735-69	4	7	5.5	I	high	strings
B7735-70	6	6	6.0	I	medium	
B7735-72	6	5	5.5	I	med	very short curved pods; strings

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
B7735-73	3	7	5.0	I	med to high	
B7735-74	6	6	6.0	I	med to high	
B7735-75	5	8	6.5	I	low to med	
B7738-2	6	4	5.0	I	med to high	strings
B7738-3	7	4	5.5	I	high	
B7738-4	7	5	6.0	I	medium	
B7738-5	6	7	6.5	I	high	strings
B7738-9	6	6	6.0	I	high	strings
B7738-10	7	6	6.5	I	high	
B7738-12	6	7	6.5	I	high	
B7738-20	7	4	5.5	I	high	
B7738-22	6	5	5.5	I	high	strings
B7738-29	6	6	6.0	I	high	
B7738-30	6	5	5.5	I	med to high	
B7738-32	7	6	6.5	I	high	
B7738-35	5	7	6.0	I	low to high	
B7738-38	5	5	5.0	I	high	
B7738-39	7	6	6.5	I	high	strings
B7738-40	5	6	5.5	I	low to high	
B7738-42	7	6	6.5	I	med to high	
B7738-45	6	5	5.5	I	med to high	strings
B7738-48	5	4	4.5	I	med to high	
B7738-49	6	6	6.0	I	medium	

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
B7738-53	6	6	6.0	I	high	
B7739-8	7	5	6.0	I	med to high	
B7739-9	6	7	6.5	I	med to high	
B7739-12	5	6	5.5	I	high	
B7739-14	6	6	6.0	I	medium	very short curved pods; strings
B7739-16	7	6	6.5	I	medium	strings
B7739-17	6	6	6.0	I	med to high	
B7739-19	6	5	5.5	I	low to high	strings
B7739-20	6	5	5.5	I	low to med	
B7739-29	7	5	6.0	I	medium	very short curved pods
B7739-30	7	6	6.5	I	med to high	very curved pods
B7739-32	7	6	6.5	I	high	
B7739-40	7	6	6.5	I	high	
B7739-45	6	6	6.0	I	high	strings
DM4NY6	6	6	6.0	III	high	
DM6NY1	5	6	5.5	I	low to med	
B7030-24	2	1	1.5	I	med to high	
B7126-33-1-2	6	6	6.0	I	high	
B7239-5-4	7	5	6.0	I	medium	
NY 5517	8	7	7.5	I	medium	
RR 4270	2	5	3.5	I	high	
WIS 46 RR	5	6	5.5	I	med to high	
WIS 83 RR	2	2	2.0	I	medium	

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
SB 4325	7	6	6.5	I	low to med	
SB 4326	6	7	6.5	I	medium	
GF1	7	7	7.0	I	med to high	
GF4	7	6	6.5	I	medium	
GF5	6	5	5.5	I	med to high	
GF6	7	6	6.5	I	medium	strings
GF7	6	6	6.0	I	medium	
GF8	7	5	6.0	I	med to high	
GF9	5	5	5.0	I	med to high	
GF10	4	6	5.0	I	low to med	
GF11	5	5	5.0	I	low to med	strings
GF12	6	5	5.5	I	medium	
GF14	6	5	5.5	I	high	
GF16	6	6	6.0	I	high	strings
GF17	6	5	5.5	I	high	strings
GF18	6	6	6.0	I	med to high	
GF19	6	6	6.0	I	medium	
GF20	6	7	6.5	I	med to high	
GF21	6	6	6.0	I	medium	strings
GF22	5	5	5.0	I	med to high	
GF24	6	8	7.0	I	med to high	strings

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
GF25	5	5	5.0	I	med to high	
GF26	8	6	7.0	I	high	strings
GF27	6	6	6.0	I	med to high	
GF29	6	7	6.5	I	med to high	
GF30	6	6	6.0	I	med to high	
GF31	7	6	6.5	I	med to high	
GF33	6	6	6.0	I	med to high	strings
GF34	7	7	7.0	I	med to high	strings
GF35	7	6	6.5	I	medium	
GF38	6	6	6.0	I	medium	
GF39	7	6	6.5	I	medium	
GF40	8	6	7.0	I	medium	strings
GF41	6	6	6.0	I	med to high	
GF42	7	6	6.5	I	med to high	
GF43	7	7	7.0	I	medium	
GF44	7	6	6.5	I	medium	
GF46	5	6	5.5	I	low to med	
GF48	6	6	6.0	I	high	strings
GF50	7	6	6.5	I	high	
GW1	5	6	5.5	I	med to high	strings
GW2	4	5	4.5	I	med to high	strings

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
GW3	5	5	5.0	I	high	
GW7	5	5	5.0	I	med to high	
GW9	5	6	5.5	I	high	strings
GW11	6	6	6.0	I	med to high	strings
GW16	5	4	4.5	I	high	
GW17	6	6	6.0	I	high	strings
GW20	6	6	6.0	I	med to high	
GW22	7	7	7.0	I	high	strings
GW23	6	6	6.0	I	high	
GW25	5	6	5.5	I	med to high	strings
GW26	3	4	3.5	I	high	
GW27	6	5	5.5	I	high	strings
GW29	5	6	5.5	I	medium	strings
GW30	7	6	6.5	I	high	strings
GW31	7	5	6.0	I	med to high	strings
GW32	6	6	6.0	I	med to high	
GW37	5	6	5.5	I	high	
GW38	4	5	4.5	I	high	
GW42	6	6	6.0	I	high	
GW44	5	3	4.0	I	high	strings
GW45	7	7	7.0	I	medium	strings
GW46	4	6	5.0	I	low to high	strings
GW47	6	6	6.0	I	high	strings
GW48	7	6	6.5	I	medium	strings

Table 14. Fusarium root rot infection, Corvallis, 2006 (cont.)[z]

Line	Score[y] Rep 1	Rep 2	Average	Habit[x]	Pod Fiber	Notes
GW49	6	6	6.0	I	med to high	strings
GW50	4	7	5.5	I	high	strings
GW53	6	6	6.0	I	high	
GW55	6	4	5.0	I	high	
GW57	7	7	7.0	I	high	strings
GW58	6	6	6.0	I	medium	
GW61	6	8	7.0	I	med to high	strings
GW64	5	4	4.5	I	med to high	
GW67	7	6	6.5	I	low to med	strings
GW68	5	6	5.5	I	medium	
GW70	5	5	5.0	III	med to high	
GW71	5	6	5.5	I	medium	
GW75	6	6	6.0	I	low to med	
GW77	7	8	7.5	I	medium	
GW81	5	4	4.5	I	med to high	
5446[w]	7.0	7.4	7.2	I	low	
RR 6950[w]	1.2	1.0	1.1	III	high	
LSD @ 5%			1.8			

[z]Planted June 27.
[y]Scores based on a 1-9 scale, with 1 = very light surface infection and 9 = roots mostly dead and plants stunted.
[x]I = bush habit; III = vine
[w]Checks; each rep score is an average of 5 plots.

Table 15. Results from a white mold screening trial, Corvallis, 2006[z]

Entry	White Mold Scores[y] Rep 1	Rep 2	Rep 3	Rep 4	Average White Mold Incidence[y]	White Mold Check Comparisons[x] G 122	MO 162	91G	Growth Habit[w]	Estimated Yield[v]
PI207130-2-4	1	3	1		1.72			**	1.6	3.0
PI290990-4-1	1	2	2	2	1.75			**	3.3	2.5
G122	2	2	2	2	2.00			**	3.5	3.8
L192	2	3	2	2	2.25			**	2.3	3.0
MO162	2	3	3	2	2.50			**	2.5	3.3
NY2-5984-1	3	3	1	3	2.50			**	2.0	2.8
NY1-6020-5	2	2	4	3	2.75			**	1.5	3.0
NY5972	2	3	4	2	2.75			**	2.5	2.8
6229	2	3	4	2	2.75			**	1.8	2.5
6231	2	3	3	3	2.75			**	1.5	3.0
H9658-9	3	3	3	3	3.00			**	2.5	3.3
NY1-6020-4	3	3	3	3	3.00			**	1.3	2.0
NYBS6637	4	3	2		3.05			**	1.6	2.6
FR266	3	3	3	4	3.25	^		**	2.0	2.5
6230	3	4	3	3	3.25	^		**	2.3	2.3
6256	3	4	3	3	3.25	^		**	2.8	2.8
6263	4	3	3	3	3.25	^		**	2.8	3.5
6235	2	4	4	4	3.50	^		**	1.8	2.0
6267	3	4	4	3	3.50	^		**	1.5	2.3
6274	5	4	3	2	3.50	^		**	3.3	3.3
6468	4	4	4	4	3.72	^	^	**	3.0	3.0
NYBS6643	3	5	3	4	3.75	^	^	**	1.8	2.0
6239	5	4	3	3	3.75	^	^	**	2.0	2.3
6453	2	4	4	5	3.75	^	^	**	2.8	3.3
Medina		2			3.99	^		**	3.0	3.0
6232	4	3	4	5	4.00	^	^	**	2.3	2.8
6268	4	4	4	4	4.00	^	^	**	2.3	2.5

Table 15. Results from a white mold screening trial, Corvallis, 2006 (cont.)[z]

Entry	White Mold Scores[y] Rep 1	Rep 2	Rep 3	Rep 4	Average White Mold Incidence[y]	White Mold Check Comparisons[x] G 122	MO 162	91G	Growth Habit[w]	Estimated Yield[v]
6457	4	3	4	5	4.00	^	^	**	2.5	2.8
6448	5	3			4.06	^	^	**	2.4	2.4
6260	3	5	4	5	4.25	^	^	**	3.3	3.0
6262	4	4	4	5	4.25	^	^	**	3.0	2.8
6461	4	5	4	4	4.25	^	^	**	2.5	2.8
Savannah	4	4	5	4	4.25	^	^	**	2.3	2.3
6283	5	5	5	3	4.50	^	^	**	2.3	2.5
6447	4	5	4	6	4.75	^	^	**	2.5	2.5
Ex Rico	5	6	5	4	5.00	^	^	**	1.8	2.8
6287	4	5	5	6	5.00	^	^	**	2.0	2.8
6288	5	5	5	5	5.00	^	^	**	1.3	2.8
6462	4	5	6	5	5.00	^	^	**	2.3	2.3
6475	4	6	5	5	5.00	^	^	**	2.0	2.5
6483	5	5	5	5	5.00	^	^	**	1.8	2.0
6259	6	5	6	4	5.25	^	^	**	2.5	2.8
6290	5	5	5	6	5.25	^	^	**	2.0	2.5
6300	5	5	5	6	5.25	^	^	**	2.0	2.3
6458	5	5	5	6	5.25	^	^	**	2.5	2.3
6258	6	5	5	6	5.50	^	^	**	3.0	3.3
6280	5	4	6	7	5.50	^	^	**	2.5	2.3
6312-7	6	6	6	4	5.50	^	^	**	2.5	2.0
6393	5	5	5	7	5.50	^	^	**	2.5	2.8
6464	6	5	6	5	5.50	^	^	**	2.0	2.5
6474	5	6	5	6	5.50	^	^	**	1.8	2.3
6455	5	6			5.56	^	^	**	1.9	2.9
5613	7	5	6	5	5.75	^	^	**	1.8	2.8
6313	7	5	6	5	5.75	^	^	**	2.0	2.3
6348	6	5	6	6	5.75	^	^	**	2.0	2.3
6450	6	6	5	6	5.75	^	^	**	2.0	2.5

Table 15. Results from a white mold screening trial, Corvallis, 2006 (cont.)[z]

Entry	White Mold Scores[y] Rep 1	Rep 2	Rep 3	Rep 4	Average White Mold Incidence[y]	White Mold Check Comparisons[x] G 122	MO 162	91G	Growth Habit[w]	Estimated Yield[v]
6257	6	6	6	6	6.00	^	^	**	1.8	2.8
6312-3	7	6	6	5	6.00	^	^	**	2.0	2.5
6312-8	6	6	7	5	6.00	^	^	**	2.0	2.0
6329	6	6	6	6	6.00	^	^	**	2.0	2.0
6338	7	7	4	6	6.00	^	^	**	2.0	2.3
6438	6	6	5	7	6.00	^	^	**	2.3	2.5
6439	5	6	6	7	6.00	^	^	**	2.3	2.5
6441	6	6	6	6	6.00	^	^	**	2.5	2.3
6443	6	6	7	5	6.00	^	^	**	2.0	2.3
6444	6	6	6	6	6.00	^	^	**	2.0	2.0
6459	6	5	6	7	6.00	^	^	**	2.0	2.0
6470	6	6	5	7	6.00	^	^	**	2.0	2.5
6500	6	5	7	6	6.00	^	^	**	2.5	2.5
6175			6		6.04	^	^		1.1	2.1
6436	7	5	6		6.05	^	^		2.3	2.3
6174	6				6.12	^	^		1.8	1.9
5630	6	6	6	7	6.25	^	^		2.0	2.3
6284	6	6	6	7	6.25	^	^		1.8	2.0
6312-1	7	6	6	6	6.25	^	^		2.3	2.5
6375	7	7	5	6	6.25	^	^		1.8	2.0
6434	6	7	5	7	6.25	^	^		2.0	2.3
6437	6	5	7	7	6.25	^	^		2.3	2.0
6440	7	5	7	6	6.25	^	^		2.0	2.0
6454	6	6	6	7	6.25	^	^		2.0	2.5
6467	6	6	7	6	6.25	^	^		1.8	2.3
6478	6	7	6	6	6.25	^	^		2.0	2.3
6479	6	7	6	6	6.25	^	^		2.3	2.0
6487	6	6	6	7	6.25	^	^		1.8	2.3
6490	6	7	7	5	6.25	^	^		2.3	2.3

Table 15. Results from a white mold screening trial, Corvallis, 2006 (cont.)[z]

Entry	White Mold Scores[y] Rep 1	Rep 2	Rep 3	Rep 4	Average White Mold Incidence[y]	White Mold Check Comparisons[x] G 122	MO 162	91G	Growth Habit[w]	Estimated Yield[v]
6493	7	7	6	5	6.25	^	^		1.8	2.3
6286	6	6	7	7	6.50	^	^		1.5	2.0
6312-4	6	7	6	7	6.50	^	^		1.8	2.0
6312-6	6	7	7	6	6.50	^	^		1.5	2.3
6342	7	7	6	6	6.50	^	^		2.0	2.0
6445	7	6	7	6	6.50	^	^		2.0	2.3
6460	7	7	5	7	6.50	^	^		2.0	2.0
6466	5	7	6	8	6.50	^	^		2.0	2.3
6473	6	6	6	8	6.50	^	^		2.0	2.3
6484	6	7	6	7	6.50	^	^		2.3	2.3
6491	6	7	7	6	6.50	^	^		2.0	2.3
6492	6	6	7	7	6.50	^	^		2.0	2.5
6497	7	7	5	7	6.50	^	^		1.8	2.0
6498	7	7	6	6	6.50	^	^		2.0	2.3
6503	6	6	7	7	6.50	^	^		2.0	2.0
6456	6	7			6.56	^	^		1.9	2.4
6471	7	6			6.56	^	^		1.9	1.9
6476	7	6			6.56	^	^		1.9	1.9
6485	6	7			6.56	^	^		1.9	2.4
6241	6	6	8	7	6.75	^	^		1.8	1.8
6340	6	7	6	8	6.75	^	^		1.5	2.3
6346	7	7	6	7	6.75	^	^		2.0	2.0
6347	7	6	7	7	6.75	^	^		2.0	2.0
6477	7	8	7	5	6.75	^	^		1.8	2.3
6480	7	7	6	7	6.75	^	^		2.0	2.0
6486	6	7	7	7	6.75	^	^		2.3	2.3
91G[u]	7.8	6.7	5.7	7.5	6.83	^	^		1.8	2.1
6137				7	6.85	^	^		1.1	2.1

Table 15. Results from a white mold screening trial, Corvallis, 2006 (cont.)[z]

Entry	White Mold Scores[y] Rep 1	Rep 2	Rep 3	Rep 4	Average White Mold Incidence[y]	White Mold Check Comparisons[x] G 122	MO 162	91G	Growth Habit[w]	Estimated Yield[v]
OR54	6	7	7	8	7.00	^	^		1.8	2.3
6318	7	7	7	7	7.00	^	^		2.0	2.0
6323	7	7	7	7	7.00	^	^		2.0	2.0
6481	7	7	7	7	7.00	^	^		2.0	2.0
6495	7	7	7	7	7.00	^	^		2.0	2.0
6499	7	7	7	7	7.00	^	^		1.8	2.0
6501	6	7	7	8	7.00	^	^		2.0	2.0
6435	7				7.12	^	^		1.8	1.9
6489	7	7	8		7.38	^	^		2.0	2.0
5669	8	7	7	8	7.50	^	^		1.8	2.0
6472	6	7	8	9	7.50	^	^		1.8	2.8
Spinel	8	7	8	8	7.75	^	^	^	1.5	2.3

[z]Planted June 29.

[y]Average scores based on LS means; 1-10 scale with 1 = low incidence, no symptoms obvserved and 10 = high incidence, all plants in plot dead.
[x]** indicates significantly better than this check ($p<0.05$); ^ indicates significantly worse than this check ($p<0.05$).
[w]Scores based on a 1-4 scale with 1 = prostrate and 4 = upright.
[v]Scores based on a 0-4 scale with 0 = no yield and 4 = high yield.
[u]Average of 5, 7, 6, and 6 plots per rep respectively.

Table 16. Comparison of white mold field averages, seven years combined, Corvallis, 2006.

Entry	White Mold Field Score Averages[z] 2000	2001	2002	2003	2004	2005	2006	Overall AV
L192	1.5	1.1	2.5	1.3	4.0	2.5	2.3	2.2
NY2-5984-1	2.0	1.5	3.3	2.3	3.0	1.5	2.5	2.3
NYBS6637	1.3	1.8	3.8	1.7	2.3	2.5	3.1	2.3
PI290990-4-1	2.5	2.3	3.0	2.0	2.0	3.0	1.8	2.4
PI207130-2-4	1.5	2.4	4.0	3.0	2.8	1.8	1.7	2.4
MO 162	1.0	1.1	3.3	3.3	2.8	3.3	2.5	2.5
NY5972	1.3	1.6	3.3	2.7	3.8	2.5	2.8	2.5
NY1-6020-5	2.8	1.5	4.5	1.7	2.3	2.5	2.8	2.6
G122	2.0	1.5	4.0	2.0	5.8	2.5	2.0	2.8
NYBS6643	1.8	1.6	4.3	1.0	6.5	1.5	3.8	2.9
H9658-9	2.0	2.1	4.5	4.3	3.0	2.5	3.0	3.1
NY1-6020-4	3.0	2.6	4.8	2.3	3.5	2.5	3.0	3.1
FR 266	3.8	2.3	6.0	1.7	6.8	3.5	3.3	3.9
Ex Rico	5.0	4.1	7.0	4.3	7.3	5.3	5.0	5.4
5630	5.3	7.3	8.8	6.0	9.3	5.8	6.3	6.9
5613	6.8	6.5	9.0	6.0	10.0	6.3	5.8	7.2
OR 54	7.5	6.8	9.0	6.0	10.0	7.8	7.0	7.7
91G	7.8	8.3	8.3	7.2	9.8	6.8	6.8	7.8
Grand AV	3.3	3.1	5.2	3.3	5.3	3.5	5.5	4.2
LSD @ .05						1.0	1.3	0.9

[z]White mold scores: 1-10, 1 = low incidence, no symptoms observed, 10 = high incidence, all plants in plot infected.

Table 17. Comparison of white mold field averages, two years combined, Corvallis, 2006.

Entry	2005	2006	Overall AV
PI207130-2-4	1.8	1.7	1.7
NY2-5984-1	1.5	2.5	2.0
6229	1.5	2.8	2.1
G122	2.5	2.0	2.3
L192	2.5	2.3	2.4
PI290990-4-1	3.0	1.8	2.4
NY1-6020-5	2.5	2.8	2.6
NY5972	2.5	2.8	2.6
NYBS6643	1.5	3.8	2.6
6230	2.3	3.3	2.8
H9658-9	2.5	3.0	2.8
NY1-6020-4	2.5	3.0	2.8
NYBS6637	2.5	3.1	2.8
6256	2.5	3.3	2.9
6267	2.3	3.5	2.9
MO 162	3.3	2.5	2.9
Medina	2.0	4.0	3.0
FR 266	3.5	3.3	3.4
Savannah	2.5	4.3	3.4
6239	3.3	3.8	3.5
6263	3.8	3.3	3.5
6235	4.3	3.5	3.9
6262	4.8	4.3	4.5
6258	3.8	5.5	4.6
6259	4.5	5.3	4.9
6283	5.5	4.5	5.0
6393	4.8	5.5	5.1
Ex Rico	5.3	5.0	5.1
6288	5.8	5.0	5.4
6257	5.0	6.0	5.5
6290	6.0	5.3	5.6
6286	5.3	6.5	5.9
6300	6.5	5.3	5.9
5613	6.3	5.8	6.0
5630	5.8	6.3	6.0
6284	6.0	6.3	6.1
6313	6.5	5.8	6.1
6346	5.5	6.8	6.1
6348	6.5	5.8	6.1
6375	6.0	6.3	6.1
6241	6.0	6.8	6.4
6338	6.8	6.0	6.4
91G	6.8	6.8	6.8

Table 17. Comparison of white mold field averages, two years combined, Corvallis, 2006 (cont.)

Entry	2005	2006	Overall AV
6318	6.8	7.0	6.9
6323	6.8	7.0	6.9
6340	7.3	6.8	7.0
6342	7.5	6.5	7.0
6347	7.3	6.8	7.0
Ore 54	7.8	7.0	7.4
Spinel	8.0	7.8	7.9
Grand AV	4.5	5.5	5.0
LSD @ .05	1.0	1.3	1.3

[z]White mold scores: 1-10, 1 = low incidence, no symptoms observed, 10 = high incidence, all plants in plot infected.

Table 18. LS means for a 91G x PI255956 BC_2F_5 population from a field white mold disease screening trial, Corvallis, 2006.[z]

Line	LS Mean[y]	Comparison to Checks[x]			
		G122	MO162	OR 91G	OR 5630
G122	2.25	X		**	**
MO162	2.68		X	**	**
OR 91G	6.88	**	**	X	
OR 5630	7.00	**	**		X
WMGx25 18-1	2.06			**	**
WMGx25 13-14	3.04			**	**
WMGx25 13-8	3.04			**	**
WMGx25 20-2	3.06			**	**
WMGx25 20-3	3.06			**	**
WMGx25 6-2	3.06			**	**
WMGx25 2-6	3.31	**		**	**
WMGx25 44-3	3.54	**		**	**
WMGx25 6-3	3.54	**		**	**
WMGx25 6-9	3.54	**		**	**
WMGx25 48-5	3.64	**		**	**
WMGx25 13-11	3.98	**	**	**	**
WMGx25 45-1	3.98	**	**	**	**
WMGx25 15-1	4.04	**	**	**	**
WMGx25 21-1	4.04	**	**	**	**
WMGx25 4-1	4.04	**	**	**	**
WMGx25 29-9	4.06	**	**	**	**
WMGx25 46-6	4.06	**	**	**	**
WMGx25 11-4	4.31	**	**	**	**
WMGx25 5-15	4.31	**	**	**	**
WMGx25 6-1	4.50	**	**	**	**
WMGx25 10-4	4.54	**	**	**	**
WMGx25 38-5	4.54	**	**	**	**
WMGx25 38-6	4.54	**	**	**	**
WMGx25 41-2	4.54	**	**	**	**
WMGx25 44-4	4.54	**	**	**	**
WMGx25 47-3	4.54	**	**	**	**
WMGx25 12-3	4.64	**	**	**	**
WMGx25 31-1	4.64	**	**	**	**
WMGx25 41-7	4.64	**	**	**	**
WMGx25 49-2	4.64	**	**	**	**
WMGx25 48-4	5.00	**	**	**	**
WMGx25 3-12	5.04	**	**	**	**
WMGx25 3-15	5.04	**	**	**	**
WMGx25 7-8	5.04	**	**	**	**
WMGx25 14-9	5.06	**	**	**	**
WMGx25 17-4	5.06	**	**	**	**
WMGx25 39-3	5.06	**	**	**	**

Table 18. LS means for a 91G x PI255956 BC_2F_5 population from a field white mold disease screening trial, Corvallis, 200 (cont.).[z]

Line	LS Mean[y]	Comparison to Checks[x]			
		G122	MO162	91G	OSU5630
WMGx25 44-5	5.06	**	**	**	**
WMGx25 4-6	5.31	**	**	**	**
WMGx25 46-5	5.31	**	**	**	**
WMGx25 43-3	5.50	**	**	**	**
WMGx25 7-2	5.50	**	**	**	**
WMGx25 19-3	5.54	**	**	**	**
WMGx25 31-6	5.54	**	**	**	**
WMGx25 43-1	5.54	**	**	**	**
WMGx25 26-1	5.64	**	**	**	**
WMGx25 40-1	5.64	**	**	**	**
WMGx25 45-3	5.64	**	**	**	**
WMGx25 47-4	5.64	**	**	**	**
WMGx25 6-7	5.64	**	**	**	**
WMGx25 9-10	5.75	**	**	**	**
WMGx25 19-5	5.98	**	**		
WMGx25 33-1	5.98	**	**		
WMGx25 34-1	5.98	**	**		
WMGx25 45-2	5.98	**	**		
WMGx25 1-11	6.00	**	**		
WMGx25 25-6	6.00	**	**		
WMGx25 40-3	6.00	**	**		
WMGx25 49-5	6.00	**	**		
WMGx25 21-5	6.04	**	**		
WMGx25 25-3	6.04	**	**		
WMGx25 36-1	6.04	**	**		
WMGx25 50-5	6.04	**	**		
WMGx25 11-1	6.06	**	**		
WMGx25 12-5	6.06	**	**		
WMGx25 1-7	6.06	**	**		
WMGx25 3-2	6.06	**	**		
WMGx25 39-4	6.06	**	**		
WMGx25 48-3	6.06	**	**		
WMGx25 8-2	6.06	**	**		
WMGx25 9-13	6.06	**	**		
WMGx25 1-1	6.25	**	**		
WMGx25 27-13	6.25	**	**		
WMGx25 3-18	6.25	**	**		
WMGx25 25-1	6.31	**	**		
WMGx25 27-3	6.31	**	**		
WMGx25 31-3	6.31	**	**		
WMGx25 41-11	6.31	**	**		
WMGx25 4-4	6.31	**	**		

Table 18. LS means for a 91G x PI255956 BC_2F_5 population from a field white mold disease screening trial, Corvallis, 200 (cont.).[z]

Line	LS Mean[y]	Comparison to Checks[x]			
		G122	MO162	91G	OSU5630
WMGx25 9-16	6.38	**	**		
WMGx25 12-2	6.54	**	**		
WMGx25 2-5	6.54	**	**		
WMGx25 42-1	6.54	**	**		
WMGx25 42-3	6.54	**	**		
WMGx25 8-1	6.54	**	**		
WMGx25 8-3	6.54	**	**		
WMGx25 19-10	6.64	**	**		
WMGx25 35-7	6.64	**	**		
WMGx25 24-7	6.98	**	**		
WMGx25 27-1	6.98	**	**		
WMGx25 36-4	6.98	**	**		
WMGx25 43-4	6.98	**	**		
WMGx25 50-3	6.98	**	**		
WMGx25 7-15	7.01	**	**		
WMGx25 20-8	7.04	**	**		
WMGx25 26-3	7.04	**	**		
WMGx25 3-3	7.04	**	**		
WMGx25 24-4	7.06	**	**		
WMGx25 28-1	7.06	**	**		
WMGx25 38-3	7.06	**	**		
WMGx25 24-1	7.25	**	**		
WMGx25 40-6	7.31	**	**		
WMGx25 17-6	7.54	**	**		
WMGx25 28-4	8.04	**	**		
WMGx25 42-5	8.04	**	**		
WMGx25 10-15	8.06	**	**		

[z]Planted June 28. 91G x PI 255956 is a *Phaseolus vulgaris x Phaseolus coccineus* interspecific cross. [y]Scores based on a scale of 1-10 where 1 is highly resistant. [x]** indicates statistically significantly different from this check at $p < 0.05$

Table 19. LS means from an oxalate screening test of a 91G x PI 255956 population, Corvallis, 2006[z]

Line	LS Mean[y]	Comparison to Checks[x]				
		PI 255956	G122	MO162	NY6020-5	OR 91G
PI 255956	0.07	X		**	**	**
WMGx25 913	1.25				**	**
WMGx25 851	1.50				**	**
WMGx25 903	1.50				**	**
WMGx25 919	1.50				**	**
G122	1.63		X		**	**
WMGx25 879	2.00	**			**	**
WMGx25 849	2.25	**				**
WMGx25 908	2.25	**				**
WMGx25 912	2.25	**				**
WMGx25 917	2.25	**				**
MO162	2.66	**		X		**
WMGx25 800	2.75	**				**
WMGx25 918	2.75	**				**
WMGx25 784	3.00	**				
WMGx25 856	3.00	**				
WMGx25 860	3.00	**				
WMGx25 861	3.00	**				
WMGx25 878	3.00	**				
WMGx25 790	3.25	**	**			
WMGx25 805	3.25	**	**			
WMGx25 859	3.25	**	**			
WMGx25 802	3.50	**	**			
WMGx25 826	3.50	**	**			
WMGx25 883	3.50	**	**			
NY6020-5	3.75	**	**		X	
WMGx25 771	3.75	**	**			
WMGx25 772	3.75	**	**			
WMGx25 799	3.75	**	**			
WMGx25 808	3.75	**	**			
WMGx25 812	3.75	**	**			
WMGx25 847	3.75	**	**			
WMGx25 884	3.75	**	**			
WMGx25 759	4.00	**	**			
WMGx25 779	4.00	**	**			
WMGx25 810	4.00	**	**			
WMGx25 821	4.00	**	**			
WMGx25 823	4.00	**	**			
WMGx25 839	4.00	**	**			
WMGx25 782	4.08	**	**			
WMGx25 780	4.25	**	**	**		
WMGx25 818	4.25	**	**	**		

Table 19. LS means from an oxalate screening test of a 91G x PI 255956 population, Corvallis, 2006 (cont)[z]

Line	Mean[y]	Comparison to Checks[x]				
		PI 255956	G122	MO162	NY6020-5	OR 91G
WMGx25 834	4.25	**	**	**		
WMGx25 850	4.25	**	**	**		
WMGx25 817	4.35	**	**			
WMGx25 885	4.44	**	**	**		
OR 91G	4.50	**	**	**		X
WMGx25 763	4.50	**	**	**		
WMGx25 789	4.50	**	**	**		
WMGx25 797	4.50	**	**	**		
WMGx25 804	4.50	**	**	**		
WMGx25 832	4.50	**	**	**		
WMGx25 854	4.50	**	**	**		
WMGx25 889	4.50	**	**	**		
WMGx25 902	4.50	**	**			
WMGx25 905	4.50	**	**	**		
WMGx25 807	4.75	**	**	**		
WMGx25 809	4.75	**	**	**		
WMGx25 814	4.75	**	**	**		
WMGx25 822	4.75	**	**	**		
WMGx25 831	4.75	**	**	**		
WMGx25 896	4.75	**	**	**		
WMGx25 901	4.75	**	**	**		
WMGx25 915	4.75	**	**	**		
WMGx25 920	4.75	**	**	**		
WMGx25 762	5.00	**	**	**		
WMGx25 764	5.00	**	**	**		
WMGx25 766	5.00	**	**	**		
WMGx25 769	5.00	**	**	**		
WMGx25 770	5.00	**	**	**		
WMGx25 774	5.00	**	**	**		
WMGx25 778	5.00	**	**	**		
WMGx25 819	5.00	**	**	**		
WMGx25 830	5.00	**	**	**		
WMGx25 841	5.00	**	**	**		
WMGx25 848	5.00	**	**	**		
WMGx25 857	5.00	**	**	**		
WMGx25 880	5.00	**	**	**		
WMGx25 881	5.00	**	**	**		
WMGx25 886	5.00	**	**	**		
WMGx25 906	5.00	**	**	**		
WMGx25 757	5.25	**	**	**		
WMGx25 803	5.25	**	**	**		
WMGx25 806	5.25	**	**	**		

Table 19. LS means from an oxalate screening test of a 91G x PI 255956 population, Corvallis, 2006 (cont)[z]

Line	Mean[y]	Comparison to Checks[x]				
		PI 255956	G122	MO162	NY6020-5	OR 91G
WMGx25 816	5.25	**	**	**		
WMGx25 835	5.25	**	**	**		
WMGx25 837	5.25	**	**	**		
WMGx25 840	5.25	**	**	**		
WMGx25 846	5.25	**	**	**		
WMGx25 855	5.25	**	**	**		
WMGx25 900	5.25	**	**	**		
WMGx25 761	5.50	**	**	**	**	
WMGx25 815	5.50	**	**	**	**	
WMGx25 838	5.50	**	**	**	**	
WMGx25 852	5.50	**	**	**	**	
WMGx25 760	5.75	**	**	**	**	
WMGx25 777	5.75	**	**	**	**	
WMGx25 827	5.75	**	**	**	**	
WMGx25 828	5.75	**	**	**	**	
WMGx25 844	5.75	**	**	**	**	
WMGx25 897	5.75	**	**	**	**	
WMGx25 904	5.75	**	**	**	**	
WMGx25 781	6.00	**	**	**	**	
WMGx25 813	6.00	**	**	**	**	
WMGx25 836	6.00	**	**	**	**	
WMGx25 768	6.25	**	**	**	**	**
WMGx25 792	6.25	**	**	**	**	**
WMGx25 798	6.25	**	**	**	**	**
WMGx25 811	6.50	**	**	**	**	**
WMGx25 833	6.75	**	**	**	**	**
WMGx25 894	6.75	**	**	**	**	**
WMGx25 824	7.00	**	**	**	**	**
WMGx25 825	7.00	**	**	**	**	**
WMGx25 853	7.00	**	**	**	**	**
WMGx25 845	7.25	**	**	**	**	**

[z]91G x PI 255956 is a *Phaseolus vulgaris x Phaseolus coccineus* interspecific cross.
[y]Scores based on a scale of 0-9 where 0 is no symptoms and 9 is total plant collapse.
[x]** indicates statistically significantly different from this check at $p < 0.05$

Table 20. LS means from an oxalate screening test of white mold resistant and susceptible Phaseolus vulgaris lines, Corvallis, 2006

Line	LS Mean[z]	Comparison to Checks[y]				
		Cornell 605	G122	NY6020-4	OR 91G	Asher
Cornell 605	2.33	X		**	**	**
L192	2.67				**	**
Maverick	3.00				**	**
VA-19	3.00				**	**
G122	3.33		X		**	**
Cornell 501	3.67					**
Cornell 603	3.67					**
Cornell 604	3.67					**
MO159	3.67					**
PC50	3.67					**
NY6020-4	4.00	**		X		
Aztec	4.00	**				**
MO162	4.00	**				
NY6020-5	4.00	**				
OR 5630	4.00	**				
Winchester	4.00	**				
A55	4.08	**				
Benton	4.33	**				
Matterhorn	4.33	**				
MO061	4.33	**				
Othello	4.33	**				
Ex Rico	4.67	**				
I9365-25	4.67	**				
XAN-159	4.67	**				
Minuette	4.84	**				
OR 91G	5.00	**	**		X	
Montrose	5.00	**	**			
ND88-106-04	5.00	**	**			
Raven	5.00	**	**			
BO5003	5.33	**	**			
I9365-31	5.33	**	**			
Asher	5.67	**	**	**		X

[z]Plants were rated on a scale of 0-9 where 0 = no symptoms and 9 = total plant collapse

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006[z]

Entry	Heat Tolerance[y]	Yield[x]	Notes
OR 91G	3	8	Poor stand
OR 54	5	8	Poor stand
Savannah	3	5	
Sahara (ck)	4	7	Late
Concesa	2	4	Very late
OR 190	5	8	Poor stand; high yield
OR 2065	5	6	Late
OR 1604M	3	5	
OR 1604B	3	5	
OR 17	5	6	
OR 43	3	6	
OR 58	3	4	2 plants
OR 58R	4	5	
OR 83	5	7	Pollywogs
4911	3	6	Pollywogs
5022-1	4	6	
5024-1-9	5	5	
5061	5	7	Poor stand
5062	3	5	
5073	3	5	
5078	3	5	
5090	3	4	Poor stand
5097B	3	4	Poor stand
5163	5	7	Poor stand
5256	2	5	Poor stand
5446-1	2	5	2 plants
5613	5	6	
5620	4	5	
5630	3	5	
5635	5	7	
5651	4	6	Pollywogs
5669	3	6	
5835	3	4	
5977	6	7	3 plants
5981	1	3	Very late; large empty pods; leafy
5989	3	5	
5996	4	6	Poor stand
5998	1	3	Leafy
6002-6-2	3	3	
6002-15	3	5	Poor stand
6002-30	5	6	2 plants
6100-1	4	7	
6104	4	5	
6125	3	6	1 plant

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006 (cont)[z]

Entry	Heat Toleran-ce[y]	Yield[x]	Notes
6127	2	5	
6131	3	5	
6137	5	5	
6142	3	5	
6150	3	5	
6154	3	4	
6174	3	6	Poor stand
6175	4	7	Poor stand
6185	4	5	
6186	3	6	
6189	3	5	Poor stand
6193	2	2	Poor stand
6207	2	3	Poor stand
6212	3	5	
6213	5	7	Poor stand
6215	3	3	1 plant
6229	6	5	Late
6230	4	3	Late
6231	4	5	1 plant
6232	3	4	Pollywogs
6235	3	4	Pollywogs
6239	2	4	
6241	4	4	
6256	3	4	4 plants
6257	4	7	High fiber
6258	3	6	High fiber; poor stand
6259	4	6	Poor stand
6260	4	5	Poor stand
6262	3	6	Short pods
6263	5	6	
6267	3	4	Poor stand; fish hooks
6268	3	5	Poor stand
6274	3	5	Poor stand
6279	4	4	Poor stand
6280	4	6	Poor stand; high fiber; fish hooks
6283	4	5	Poor stand
6284	4	5	Poor stand
6286	4	6	Poor stand
6287	4	6	Poor stand
6288	3	7	Floppy plants
6290	3	5	
6300	3	5	
6312-6	3	5	
6313	3	6	2 plants

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006 (cont)[z]

Entry	Heat Toleran-ce[y]	Yield[x]	Notes
6318	2	5	
6323	2	4	
6329	2	4	Very poor stand
6338	3	4	Poor stand
6340	3	6	
6342	3	5	Poor stand
6343	4	5	
6347	3	4	
6348	4	4	Poor stand
6375	4	7	
6393	3	7	Poor stand
6405	2	3	Very poor stand
6406	3	6	Poor stand; late; fish hooks
6407	3	6	Late
6408	4	7	
6409	2	4	
6410	5	5	
6411	4	7	Very poor stand
6412	3	6	Very poor stand
6413	5	3	Very poor stand
6414	3	6	
6415	6	5	Very early; short pods
6416	4	4	
6417	5	5	
6418	5	6	
6419	6	7	
6420	7	7	
6421	6	6	
6422	5	7	Very poor stand
6423	5	6	
6424	5	6	Leafy
6425	3	6	1 plant
6426	3	6	1 plant
6427	5	6	Poor stand
6428	5	6	
6429	4	5	
6430	4	5	
6432	3	4	1 plant
6433	3	5	
6434	4	6	
6436	4	5	
6437	3	4	
6438	3	5	
6439	3	5	

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006 (cont)[z]

Entry	Heat Toleran-ce[y]	Yield[x]	Notes
6440	3	5	
6441	3	4	
6442	2	4	
6443	3	4	
6444	2	5	
6445	2	4	
6446	1	1	1 plant
6447	3	4	Very poor stand
6448	3	4	Poor stand
6450	3	4	Very poor stand
6453	3	4	
6454	2	5	
6455	5	7	
6457	2	4	
6458	3	4	
6459	3	5	
6460	2	6	
6461	3	5	
6462	3	6	
6464	3	4	
6465	2	2	Dwarf plants
6466	3	4	
6467	4	6	
6468	5	6	
6470	4	6	Segregating for persistant green
6472	2	6	
6473	4	6	
6474	6	5	
6475	3	6	
6476	2	6	
6477	2	6	
6478	4	5	
6479	3	5	
6480	3	5	
6481	2	6	
6483	1	4	
6484	3	4	
6485	3	4	
6486	3	5	
6487	3	4	
6488	3	3	
6489	3	4	
6490	2	5	
6491	3	7	

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006 (cont)[z]

Entry	Heat Toleran-ce[y]	Yield[x]	Notes
6492	3	6	
6493	3	5	
6494	2	3	Segregating for persistant green
6495	3	4	
6497	3	5	
6498	3	5	
6499	3	6	
6501	3	5	
6503	4	3	Very poor stand
6504	7	6	1 plant
6505	7	6	
6506	7	8	
6507	6	6	
6508	4	5	
6509	6	6	
6510	6	7	Late
6511	8	8	
6512	4	4	
6513	4	6	
6516	4	6	
6518	4	5	3 plants
6519	3	4	
6522	5	7	
6523	6	6	
6528	4	5	1 plant
6530	5	6	
6533	4	5	
6534	5	6	Very poor stand; fish hooks
6537	5	7	
6542	8	8	2 plants
6543	5	6	2 plants; segregating for persistant green and sieve size
6544	6	7	
6550	6	7	2 plants
6551	6	6	
6552	6	6	
6553	5	5	
6554	5	7	
6555	6	5	
6556	6	6	
6557	6	6	Poor stand
6559	6	7	Poor stand
6560	6	6	
6562	7	6	

Table 21. Heat tolerance ratings from a bean trial at Hermiston, Oregon, 2006 (cont)[z]

Entry	Heat Toleran-ce[y]	Yield[x]	Notes
6563	1	1	
6564	3	5	
6565	8	7	
6567	6	6	
6568	7	7	
6569	6	6	
6570	5	6	
6571	5	6	
6572	6	5	
6573	8	6	
6574	7	6	
6575	8	6	
6578	7	6	
6579	6	6	Poor stand; dwarf plants
6580	7	7	1 plant
6581	8	7	Poor stand
6582	6	6	Late
6583	5	7	
6584	6	6	2 plants
6585	1	2	
6586	5	4	
6587	6	7	
6588	5	6	
6589	5	7	1 plant
6590	7	7	Long pods
6591	7	7	Poor stand
6592	6	6	
6593	5	6	
6594	6	6	2 plants
6595	7	7	

[z]Planted May 16.
[y]Scores based on a 1-9 scale with 9 = excellent heat tolerance; scores greater than 6 indicate good heat tolerance.
[x]Scores based on a 1-9 scale with 9 = high yield.

Figure 1. Commercial Bean $/A 2006 - Full Sieve Varieties

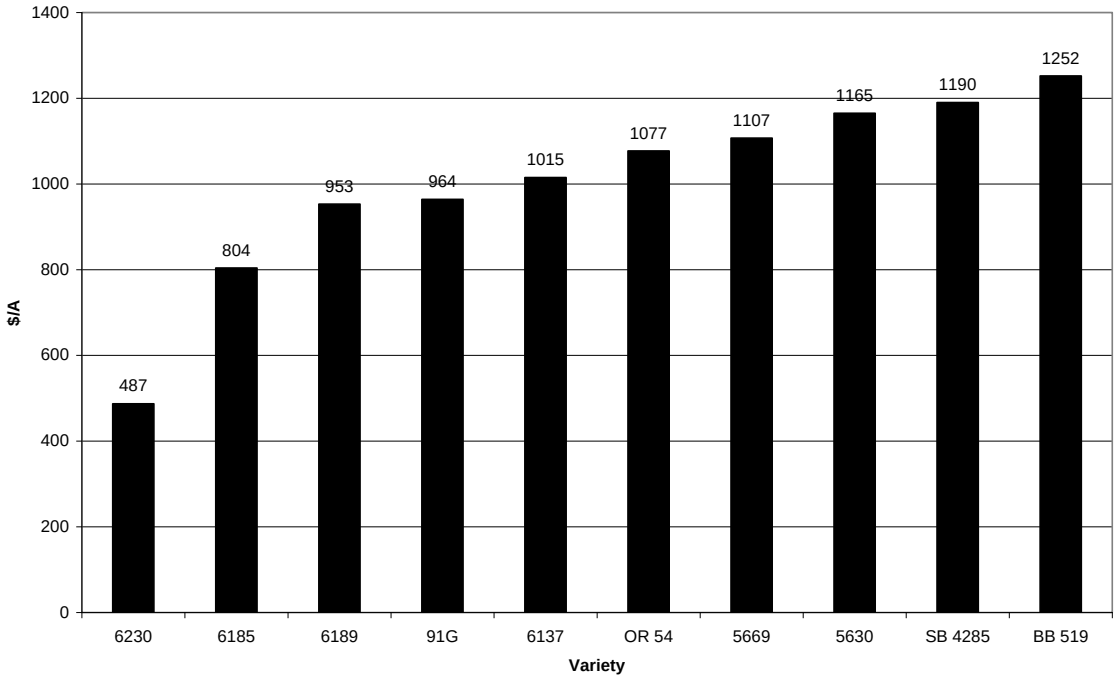

Figure 2. Commercial Bean $/A 2006 - Small Sieve Varieties