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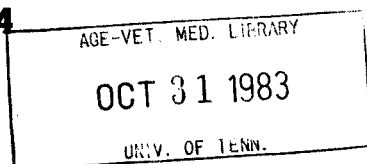


University of Tennessee Agricultural Experiment Station

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A Summary Report of Snap Bean Variety and Breeding Lines Tested in the Southern Cooperative Vegetable Trials

R. R. 83-04



March, 1983

C. A. Mullins



Dept. of Plant and Soil Science

A SUMMARY REPORT
OF
SNAP BEAN VARIETY AND BREEDING LINES
TESTED IN THE SOUTHERN COOPERATIVE VEGETABLE TRIALS

1982

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A SUMMARY REPORT OF SNAP BEAN VARIETY AND BREEDING LINES TESTED IN
THE SOUTHERN COOPERATIVE VEGETABLE TRIALS, 1982

Establishment of Trials

Individuals in the United States known to breed or select for improvement of snap beans were invited to enter selections in the trial in January, 1982. New entries were placed in the observational trial. After testing in 1982, these selections will be dropped, repeated in the 1983 observational trial, or advanced to the 1983 replicated trial. The 1982 replicated trial consisted of selections retained from the 1981 replicated trial and advanced from the 1981 observational trial. An entry is usually not tested for more than two years in either trial.

Previous cooperators were polled in February concerning participation in the 1982 trials. Requests were returned from 15 locations for 19 sets of observational and 22 sets of replicated seed lots. Successful tests were conducted and reports were returned for 12 observational tests at 9 locations and 13 replicated tests at 10 locations. Reports were returned on the standard report form. Ratings were not complete on all reports.

Comments on Replicated Trials

Nine entries were tested in the replicated trials with Eagle as the check cultivar. Lines E 0215 and BBL274-14 received the highest scores of 50 and 49 points, respectively. Lines Pirate, BBL274-17, Eagle, and Win received good scores (43 - 32). Lines Peak and BBL75-091 received only fair scores of 28 and 23 points, respectively. The BBL78-118 line received a low score of 12 points. After testing for two years in the replicated trials, BBL75-091 and Win will be dropped. Lines BBL78-118 and Peak will be dropped due to low scores. Those to repeat in the 1983 trials are Pirate, Eagle (check), BBL274-14, BBL274-17, and E 0215.

Comments on Observational Trials

Sixteen entries were tested in the observational trials with Eagle as the check cultivar. The highest scoring entries were FM 102 and BBL77-063 with 34 and 30 points, respectively. Good scores (26 - 21 points) were received by FM 103, H457B-4-1-8, H457B-4-1-6, AVX 9014, and AVX 9293. Fair scores (20 - 15 points) were received by Ver. 37, Bahalores, AVX 117, Epoch, 81 BP-211, FM 115, and 81 BP-200. Lines that received low scores (10 - 3 points) were AVX 167 and Cur. 93. Entries to advance to the 1983 replicated trials are FM 102, BBL77-063, FM 103, H457B-4-1-8, H457B-4-1-6, AVX 9014, and AVX 9293. Line Ver. 37 will be repeated in the 1983 observational trial. All other lines will be dropped.

Table 1. Replicated Trials of Bush Snap Bean Varieties, 1982 Southern Cooperative Vegetable Trials.

Variety	Growing Days	(1)									Ratings (2)					Final Score		
		Pod Shape	Pod Length (ins.)	Pod Curvature	Pod Color	Pod Roughness	Pod Set Concentration	Pod Elevation	Plant Lodging	Plants/ft. of row	Plant Height (ins.)	Yield (Bu./A.)	Repeat 1983	Drop 1983	No. 1 in Trial		No. 2 in Trial	No. 3 in Trial
1. BBL75-091	62.5	3.9	5.4	3.3	3.6	3.5	3.2	3.4	3.9	6.8	17.5	193	7	4	1	1	0	23
2. BBL78-118	62.9	3.8	5.4	2.8	4.1	3.7	2.8	2.9	3.9	4.6	15.7	138	4	7	0	1	0	12
3. Peak	61.6	4.0	5.0	3.5	3.1	3.6	3.6	3.4	3.7	8.3	15.5	227	8	3	1	1	1	28
4. Pirate	62.8	1.8	6.1	3.2	2.8	3.2	3.5	3.4	3.8	8.9	16.7	223	11	0	2	2	1	43
5. Win	62.8	4.0	5.2	2.9	3.3	3.6	3.6	2.8	3.2	7.8	15.5	234	9	2	2	1	0	32
6. Eagle	63.2	3.9	5.3	3.3	3.8	3.7	3.3	3.5	3.8	7.4	16.3	193	10	1	1	1	3	38
7. BBL274-14	62.2	3.6	5.4	3.2	3.6	3.4	3.6	3.4	3.4	7.6	15.5	232	9	2	1	5	2	49
8. BBL274-17	62.2	3.7	4.3	3.1	3.2	3.4	3.3	3.3	3.2	8.1	15.8	226	9	2	3	0	2	39
9. E 0215	62.9	4.2	5.3	3.6	4.2	3.3	3.4	3.1	3.4	7.8	15.5	228	9	2	3	2	3	50
No. of reports	12	11	11	11	11	11	10	10	11	10	10	12	11	11	12	12	12	

(1) Ratings: 1 = poor; 5 = excellent

(2) Drop (0 points), Repeat (2 points), No. 1 (5 points), No. 2 (4 points), No. 3 (3 points)

Table 2. Observational Trials of Bush Snap Bean Varieties, 1982 Southern Cooperative Vegetable Trials.

Variety	Plant Type Rating*	Pod Type Rating*	Yield Rating*	Repeat 1983	Advance 1983	Drop 1983	Overall Performance **			Final Score
							1	2	3	
10. Ver. 37	3.3	3.0	3.8	6	3	1	1	0	1	20
11. FM 115	3.5	3.6	3.6	6	3	1	0	1	0	16
12. 81BP-200	3.0	3.1	3.5	2	5	3	0	0	1	15
13. 81BP-211	2.6	3.0	3.6	4	4	3	0	1	0	16
14. Epoch	2.9	3.2	2.8	4	4	2	1	0	0	17
15. Bahalores	3.6	3.8	3.2	4	3	2	1	0	1	18
16. BBL 77-063	3.4	3.6	3.0	1	5	4	3	1	0	30
17. AVX 167	2.7	3.0	3.0	4	1	5	0	1	0	10
18. AVX 117	3.0	3.3	3.1	5	2	3	1	1	0	18
19. AVX 9014	3.0	3.1	3.0	1	5	4	0	2	1	22
20. AVX 9293	3.0	3.2	3.5	4	3	3	1	0	2	21
21. H457B-4-1-6	2.9	2.8	3.8	2	4	4	1	1	1	22
22. H457B-4-1-8	2.8	2.8	3.9	3	3	4	1	1	2	24
23. FM 102	3.2	3.6	3.4	2	6	2	1	3	1	34
24. FM 103	3.4	3.4	3.6	6	4	0	1	1	1	26
25. Cur. 93	3.3	2.7	2.4	3	0	8	0	0	0	3
No. of Reports	11	11	11	11	11	11	12	12	12	

* Ratings, 1 - 5: 1 = Poor, 5 = Excellent

** No. 1 - Best in Trial (5 points)
 No. 2 - Second best in Trial (4 points)
 No. 3 - Third best in Trial (3 points)
 Advance (2 points)
 Repeat (1 point)

Table 3. Yields in bushels per acre of snap bean varieties in replicated trials, Southern Cooperative Vegetable Trials, 1982.

Variety or Breeding Line	B. B. Brantley (S) Experiment, GA	Paul Colditz (S) Jim Dobson Blairsville, GA	R. J. Constantine (S) Hammond, LA	R. J. Constantine (F) Hammond, LA	J. R. Fontenot (F) Baton Rouge, LA	H. Y. Hanna (F) Port Sulphur, LA	T. E. Morelock (S) Kibler, AR	T. E. Morelock (F) Kibler, AR	Jim Motes (F) Bixby, OK	C. A. Mullins (S) Crossville, TN	C. A. Mullins (F) Crossville, TN	R. Robbins (S) Charleston, S.C.	Mean
1. BBL75-091	144	210	168	216	80	44	344	330	181	115	355	134	193
2. BBL78-118	103	116	72	184	90	236	220	129	103	160	112	128	138
3. Peak	97	207	145	196	180	124	445	306	216	193	387	-	227
4. Pirate	-	218	197	250	150	176	409	188	191	206	269	195	223
5. Win	-	355	127	211	130	167	377	249	194	187	364	218	234
6. Eagle	-	230	86	290	120	165	304	177	129	199	244	180	193
7. BBL274-14	113	122	184	354	140	215	389	261	172	239	361	-	232
8. BBL274-17	99	185	149	216	150	259	411	250	197	271	401	128	226
9. E 0215	123	354	183	269	140	63	377	344	198	160	364	158	228

Table 4. Snap Bean Variety and Breeding Lines, 1982 Southern Cooperative Vegetable Trials.

No.	Variety or Breeding Lines	Source
Replicated Trials		
1.	BBL75-091	Rogers Bros. Seed Co.
2.	BBL78-118	Rogers Bros. Seed Co.
3.	Peak	Asgrow Seed Co.
4.	Pirate	Asgrow Seed Co.
5.	Win	Asgrow Seed Co.
6.	Eagle (ck)	Asgrow Seed Co.
7.	BBL274-14	Gallatin Valley Seed Co.
8.	BBL274-17	Gallatin Valley Seed Co.
9.	E 0215	Ferry Morse Seed Co.
Observational Trials		
10.	Ver. 37	Bakker Bros. of Idaho
11.	FM 115	Ferry Morse Seed Co.
12.	81BP-200	U.S.D.A. - M. J. Silbernagel
13.	81BP-211	U.S.D.A. - M. J. Silbernagel
14.	Epoch	Wilbur-Ellis Co.
15.	Bahalores	Bakker Bros. of Idaho
16.	BBL77-063	Rogers Bros. Seed Co.
17.	AVX 167	Sun Seeds
18.	AVX 117	Sun Seeds
19.	AVX 9014	Sun Seeds
20.	AVX 9293	Sun Seeds
21.	H457B-4-1-6	Gallatin Valley Seed Co.
22.	H457B-4-1-8	Gallatin Valley Seed Co.
23.	FM 102	Ferry Morse Seed Co.
24.	FM 103	Ferry Morse Seed Co.
25.	Cur. 93	Bakker Bros. of Idaho