



University of Tennessee, Knoxville  
Trace: Tennessee Research and Creative  
Exchange

Research Reports

AgResearch

11-1980

# Performance of Soybean Varieties in 1980

University of Tennessee Agricultural Experiment Station

Charles R. Graves

Follow this and additional works at: [http://trace.tennessee.edu/utk\\_agresreport](http://trace.tennessee.edu/utk_agresreport)

 Part of the [Agriculture Commons](#)

## Recommended Citation

University of Tennessee Agricultural Experiment Station and Graves, Charles R., "Performance of Soybean Varieties in 1980" (1980).  
*Research Reports*.  
[http://trace.tennessee.edu/utk\\_agresreport/6](http://trace.tennessee.edu/utk_agresreport/6)

The publications in this collection represent the historical publishing record of the UT Agricultural Experiment Station and do not necessarily reflect current scientific knowledge or recommendations. Current information about UT Ag Research can be found at the [UT Ag Research website](#).

This Report is brought to you for free and open access by the AgResearch at Trace: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Research Reports by an authorized administrator of Trace: Tennessee Research and Creative Exchange. For more information, please contact [trace@utk.edu](mailto:trace@utk.edu).



# University of Tennessee Agricultural Experiment Station

AG-VET. MED. LIBRARY

**Research Report** JUL-6 1981  
UNIV. OF TENN.

RR No. 80-04

November 1980

## **Performance of Soybean Varieties in 1980**

by

**Charles R. Graves**

department of plant  
& soil science

# Performance of Soybean Varieties in 1980<sup>1/</sup>

Charles R. Graves<sup>2/</sup>

Soybean varieties in Maturity group V were evaluated at seven locations, in Maturity groups VI and VII at five locations, and in Maturity groups IV or less at four locations.

Yields were reduced at most locations in 1980 due to high temperatures and dry weather during the growing season. At Ames Plantation the yields were very low. The yields at Greeneville were high because the test was irrigated.

The leading varieties in Maturity group V were Essex, Peterson X1086-19, Asgrow A5618, Bay, Peterson X1190-19, and RA 604.

The highest yielders in Maturity groups VI and VII were Deltapine 506, FFR 668, VR 8026, RA 603, and Centennial. Varieties in these maturity groups at Ames Plantation produced higher yields than varieties in Maturity group V but they were still low when compared to previous years. The early maturing varieties performed well at Springfield on a Huntington silt loam which has a high water supplying capacity. Desoto and Delta were the two leading varieties in the early maturing group.

The varieties with the highest average yields in Dyer County (Table 10) were Pickett 71, Centennial, and Forrest.

---

<sup>1/</sup>These results will be included in the "1980 Performance Trials of Field Crop Varieties" bulletin.

<sup>2/</sup>Associate Professor of Plant and Soil Science.

Table 1. Soybeans: Yields of varieties (maturity group V) evaluated at seven locations in 1980

Variety	<u>1/</u>	<u>2/</u>	<u>3/</u>	<u>4/</u>	<u>5/</u>	<u>6/</u>	<u>7/</u>	<u>8/</u>
	Avg.	Knox-ville	Greene-ville	Spring Hill	Spring-field	Milan	Martin	Ames Plantation
Bushels per acre								
Essex	38	43	63	27	38	41	18	5
Peterson X1086-19	37	45	59	24	40	34	23	6
Asgrow A5618	37	46	56	26	38	36	20	6
Bay	36	42	56	25	34	34	25	6
Peterson X1190-19	36	40	55	21	39	34	26	8
RA 604	36	42	54	23	37	32	27	13
FFR 559	35	42	57	22	36	33	19	6
Forrest	34	42	48	22	35	35	25	9
Terra-Vig 505	34	43	60	22	36	26	19	6
N.A.P.B. 505	34	42	57	20	32	28	23	6
Deltapine 345	34	40	50	21	39	29	24	9
Bedford	33	38	52	24	30	32	22	10
RA 481	33	40	61	23	36	20	17	5
FFR 556	33	39	50	23	34	30	20	8
J-74-51	32	33	52	22	42	30	16	9
FFR 557	32	39	55	19	32	30	19	10
VR 8027	32	35	53	20	36	29	21	8
McNair 500	32	39	53	20	36	26	20	7
RA 480	32	37	55	21	34	28	17	8
Wilstar 550	31	41	50	20	32	25	17	7
Asgrow XP5474	--	41	60	24	33	--	22	--
Tabby 10	--	--	45	--	--	--	--	--
L.S.D. (.05)	--	5.3	9.3	4.0	4.9	8.2	5.8	3.4
C.V.%	--	9.3	12.0	12.7	9.8	18.7	19.5	31.6

- 1/ Ames Plantation yields not included in state average due to high C.V.  
2/ Sequatchie loam (2% to 5% slopes).  
3/ Cumberland silt loam (2% to 5% slopes).  
4/ Maury silt loam (2% to 5% slopes).  
5/ Sango silt loam (2% to 5% slopes).  
6/ Collins silt loam (2% to 5% slopes).  
7/ Falaya-Henry silt loam (0% to 2% slopes).  
8/ Loring silt loam (2% to 5% slopes).

Table 2. Soybeans: Maturity dates of soybean varieties (maturity group V) evaluated at four locations in 1980

Variety	Avg.	Knoxville	Spring	Martin	Milan
			Hill		
Date Mature					
Essex	9-30	9-28	10-2	10-5	9-24
RA 481	10-1	9-30	10-2	10-6	9-26
RA 480	10-2	9-30	10-2	10-10	9-26
J-74-51	10-3	9-30	10-2	10-11	9-30
VR 8027	10-4	10-2	10-7	10-6	9-30
Peterson X1086-19	10-5	10-2	10-7	10-17	9-24
Peterson X1190-19	10-5	10-2	10-7	10-12	9-30
Bay	10-5	10-7	10-10	10-8	9-24
Forrest	10-6	10-2	10-10	10-14	9-30
Asgrow A5418	10-6	10-6	10-7	10-13	9-30
FFR 559	10-6	10-5	10-2	-----	9-30
N.A.P.B. 505	10-7	10-3	10-7	10-16	10-3
Bedford	10-9	10-6	10-10	10-16	10-3
Deltapine 345	10-9	10-7	10-10	10-16	10-3
McNair 500	10-11	10-9	10-10	10-22	10-3
Terra-Vig 505	10-11	10-10	10-10	10-18	10-6
Wilstar 550	10-12	10-11	10-10	10-22	10-3
FFR 556	10-16	10-17	10-17	10-25	10-7
RA 604	10-17	10-16	10-15	10-26	10-12

Table 3. Soybeans; Yield and other characteristics of varieties evaluated at Milan in 1980<sup>1/</sup>

Variety	Yield Bu/A	Date	2/ Flower	Date	3/ Pubes-	Date	Plant ht. in.	4/ Shat-	Lodging %
		1st Flower	Color	Last Flower	cence Color	Mature		tering 0-5 Rating	
Essex	41	7-9	P	8-14	G	9-24	24	2	0
Asgrow A5618	36	7-14	P	8-18	G	9-30	44	3	0
Forrest	35	7-14	W	8-18	T	9-30	40	1	10
Asgrow SX5934	34	7-11	P	8-16	T	9-30	46	1	10
Peterson X1190-19	34	7-11	P	8-16	T	9-30	32	1	0
Bay	34	7-11	P	8-16	G	9-24	32	2	0
Peterson X1086-19	34	7-11	W	8-14	T	9-24	24	1	0
FFR 559	33	7-14	W	8-21	G	9-30	34	1	0
Bedford	32	7-20	W	8-21	T	10-3	54	1	20
RA 604	32	7-16	P&W	8-18	T	10-12	52	0	0
FFR 556	30	7-14	P	8-18	G	10-7	62	0	10
FFR 557	30	7-20	P	8-21	T	10-6	46	0	0
J-74-51	30	7-16	W	8-16	T	9-30	52	1	10
VR 8027	29	7-11	P	8-16	T	9-30	30	1	0
Deltapine 345	29	7-20	P&W	8-24	T	10-3	52	1	0
N.A.P.B. 505	28	7-15	P	8-18	T	10-3	42	0	0
RA 480	28	7-11	P	8-14	T	9-26	50	0	0
McNair 500	26	7-16	P	8-18	T	10-3	36	0	20
Terra-Vig 505	26	7-20	P&W	8-24	T	10-6	44	0	0
Wilstar 550	25	7-20	P&W	8-24	T	10-3	39	1	0
RA 481	20	7-11	P&W	8-18	G	9-26	42	4	60
L.S.D. (.05)	8.2								
C.V.%	18.7								
Avg.	30.8								

<sup>1/</sup>Planted May 9 on a Collins silt loam.

<sup>2/</sup>W=White and P=Purple

<sup>3/</sup>G=Gray and T=Tawny

<sup>4/</sup>Rating based on a scale of 0 through 5 with 0 = no lodging 5 = severe lodging.

Table 4. Soybeans: Yields and other characteristics of varieties (maturity group V) evaluated at Crossville in 1980<sup>1/</sup>

Variety	Yield Bu/A	Date	Date	2/ Flower	Date	Plant Height in.	Lodging %
		1st Flower	Last Flower	Color	Mature		
Forrest	32	7-23	8-8	W	10-6	33	5
Bay	31	7-24	8-12	P	10-6	36	2.5
RA 480	31	7-23	8-14	P	10-2	32	0
FFR 559	30	7-24	8-14	W	10-2	32	20
Asgrow XP5474	29	7-24	8-8	W	10-6	32	0
Essex	27	7-23	8-8	P	10-6	27	0
J-74-51	26	7-24	8-7	W	10-2	37	30
FFR 557	25	7-28	8-14	W	10-6	32	0
Bedford	24	7-28	7-14	W	10-6	36	10
RA 481	22	7-23	8-11	W&P	10-6	33	0
L.S.D. (.05)	5.4	----	----	---	----	---	---
C.V.%	16.3	----	----	---	----	---	---

<sup>1/</sup>Hartsells loam (2% to 5% slopes).

<sup>2/</sup>W = White and P = Purple.

Table 5. Soybeans: Yield of varieties (maturity group VI and VII) evaluated at five locations in 1980

Variety	Avg.	<u>1/</u>	<u>2/</u>	<u>3/</u>	<u>4/</u>	<u>5/</u>
		Knox-ville	Spring Hill	Martin	Milan	Ames Plantation
Bushels per acre						
Deltapine 506	27	38	21	31	26	18
FFR 668	27	42	21	30	24	16
VR 8026	26	41	23	25	23	20
RA 603	26	41	23	29	26	13
Centennial	26	41	17	27	27	17
Terra-Vig 606	25	42	21	27	22	12
VR 8025	22	36	22	28	13	14
Pickett 71	<del>19.25</del> 32	32	23	28	27	14
Brysoy-9	--	35	23	30	--	--
Asgrow XP 5934 <sup>6/</sup>	--	34	25	23	--	--
L.S.D. (.05)	--	6.1	3.7	2.9	3.3	4.7
C.V.%	--	11.4	11.7	7.1	9.6	20.5

<sup>1/</sup> Sequatchie loam (2% to 5% slopes).

<sup>2/</sup> Maury silt loam (2% to 5% slopes).

<sup>3/</sup> Falaya silt loam (0% to 2% slopes).

<sup>4/</sup> Collins silt loam (2% to 5% slopes).

<sup>5/</sup> Loring silt loam (2% to 5% slopes).

<sup>6/</sup> Should have been included in Maturity Group V test.

Table 6. Soybean: Maturity date of soybean varieties (maturity group VI and VII) at three locations in 1980

Variety	Avg.	Spring		
		Knoxville	Hill	Martin
Asgrow XP5934 <sup>1/</sup>	10-10	9-29	10-9	10-24
Pickett 71	10-24	10-24	10-19	10-30
Terra-vig 606	10-25	10-24	10-24	10-27
VR 8025	10-25	10-23	10-24	10-28
Centennial	10-26	10-22	10-28	10-27
Deltapine 506	10-26	10-24	10-23	10-30
VR 8026	10-26	10-22	10-27	10-28
Brysoy-9	10-26	10-25	10-24	10-30
RA 603	10-27	10-25	10-27	10-30
FFR 668	10-29	10-28	10-29	10-30

<sup>1/</sup> Should have been included in group V maturity.

Table 7. Soybeans: Yields and other characteristics of varieties (maturity groups VI and VII) evaluated at Milan in 1980<sup>1/</sup>

Variety	Yield Bu/A	Date	Flower Color	<sup>2/</sup>	<sup>3/</sup>	Date Mature	Plant Height in.	Lodging %
		1st Flower		Date Last Flower	Pubes- cence Color			
Pickett 71	27	7-19	P	8-24	G	10-2	29	10
Centennial	27	7-22	W	8-26	T	10-6	36	20
RA 603	26	7-20	P&W	8-26	T	10-6	45	10
Deltapine 506	26	7-19	P	8-24	T	10-2	44	10
FFR-668	24	7-20	P	8-24	G	10-6	38	5
VR 8026	23	7-20	P&W	8-24	T	10-2	48	15
Terra-Vig 606	22	7-19	P&W	8-24	G	10-6	38	10
VR 8025	13	7-20	P&W	8-24	T	10-2	46	10
L.S.D. (.05)	3.3	----	---	----	-	----	--	--
C.V.%	9.6	----	---	----	-	----	--	--

<sup>1/</sup> Seeded May 7 on a Collins silt loam (2% to 5% slopes).  
<sup>2/</sup> W = white and P = purple.  
<sup>3/</sup> G = gray and T = tawny.

Table 8. Soybeans: Yields of early-maturing soybean varieties evaluated at four locations in 1980

Variety	Avg.	<sup>1/</sup>	<sup>2/</sup>	<sup>3/</sup>	<sup>4/</sup>
		Cross- ville	Springfield	Martin	Milan
Desoto	36	31	55	24	32
Delta	34	27	48	26	34
Williams	33	27	49	26	29
Mitchell	32	29	50	22	28
Wilstar 430	32	29	48	23	26
Mitchell 450	31	30	49	24	22
FFR 446	31	29	44	19	30
FFR 335	30	24	48	22	28
L.S.D. (.05)	--	3.3	N.S.	N.S.	4.9
C.V.%	--	8.0	13.4	20.5	11.8
Avg.	--	28.3	48.9	23.3	28.6

<sup>1/</sup> Hartsells loam (2% to 5% slopes).  
<sup>2/</sup> Huntington silt loam, local alleevium (2% to 5% slopes).  
<sup>3/</sup> Falaya silt loam (0% to 2% slopes).  
<sup>4/</sup> Falaya silt laom (2% to 5% slopes).



Table 9. Soybeans: Yield and other characteristics of early-maturing varieties evaluated at Milan in 1980<sup>1/</sup>

Variety	Yield Bu/A	Date	Date	<sup>2/</sup>	<sup>3/</sup>	Date	Plant	<sup>4/</sup>
		1st Flower	last Flower	Flower Color	Pubes- cence Color	Mature	Ht. in.	Shat- tering (1-5)
Delta	34	6-20	7-28	P	G	8-24	43	3
Desoto	32	6-18	7-24	P	G	8-24	39	2
FFR 446	30	6-20	7-28	P	G	8-30	46	2
Williams	29	6-18	7-24	W	T	8-24	38	3
Mitchell	28	6-20	7-24	P	T	8-30	41	1
FFR 335	28	6-18	7-24	W	T	8-24	34	4
Wilstar 430	26	6-20	7-24	P	T	9-5	46	1
Mitchell 450	22	6-20	7-26	P	T	9-8	48	1
L.S.D. (.05)	4.9	----	----	-	-	----	--	-
C.V.%	11.8	----	----	-	-	----	--	-
Avg.	28.6	----	----	-	-	----	--	-

<sup>1/</sup> Falaya silt loam (2% to 5% slopes).

<sup>2/</sup> P = purple and W = white.

<sup>3/</sup> G = gray and T = tawny.

<sup>4/</sup> Rating of 1 to 5 with 1 slight and 5 severe.

Table 10. Soybeans: Yield of varieties evaluated on four soil types in Dyer County in 1980<sup>1/</sup>

Variety	Avg.	Sharky	Bosket	Alligator	Robinson-
		Clay	silt loam	clay	ville loam
Bushels per acre					
Pickett 71	36	46	17	36	43
Centennial	34	43	16	38	39
Forrest	33	46	8	30	48
York	30	44	9	32	34
Bay	30	46	9	31	33
Bedford	30	42	11	33	33
Asgrow 5474	30	37	8	31	46
Dare	30	45	10	31	34
Essex	26	37	7	25	34
J-74-51	25	33	6	22	34
L.S.D. (.05)	--	7.6	5.1	5.2	N.S.
C.V.%	--	12.5	34.6	11.5	29.3

<sup>1/</sup> Tests conducted on private farm in cooperation with the Extension Service and the Milan Field Station.