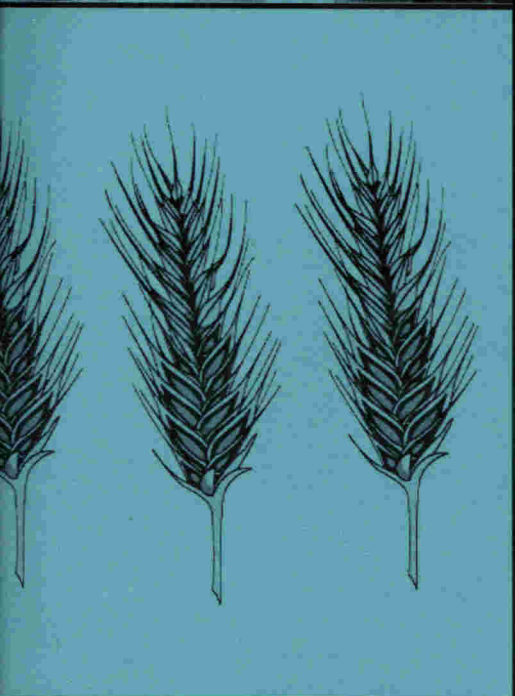
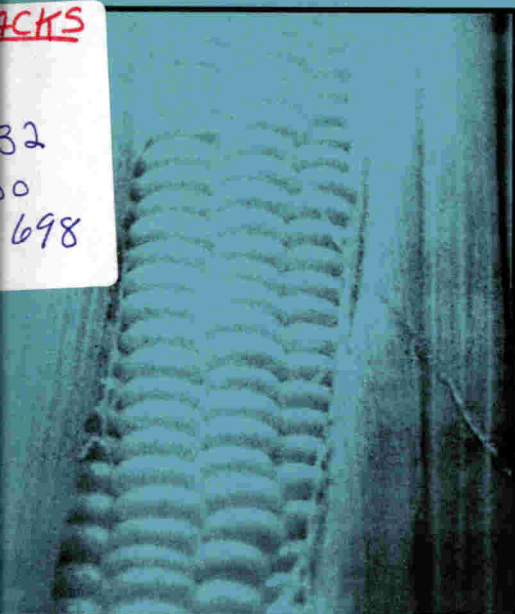


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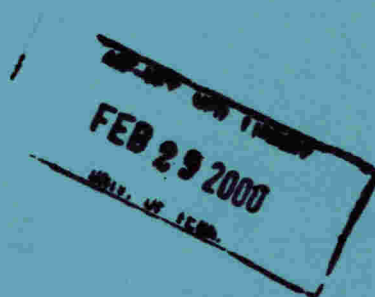


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Department of Plant and Soil Sciences
The Tennessee Agricultural Experiment Station
The University of Tennessee
Knoxville, Tennessee
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1999

PERFORMANCE OF FIELD CROP VARIETIES

DATA FOR 1999

WITH SUMMARIES OF RESULTS FROM PREVIOUS YEARS

CORN - OATS - BARLEY

WHEAT - SOYBEANS

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RECOMMENDED CROP VARIETIES

Listed Alphabetically

Corn Hybrids

See Table A.

Oats

Fall: Southern States 76-30.

Spring: Don, Larry, Ogle, and Otee.

Wheat

Clemens¹, FFR 522, FFR 555, Foster¹, Northrup King Coker 9663, Northrup King Coker 9543¹, Madison¹, American Patriot¹, Pioneer brand 2552, Pioneer brand 2568, Pioneer brand 2684, Pioneer brand 2540, Pioneer Brand 25R26, Jackson, Shiloh, and Verne.

Barley

Starling.

Alfalfa

Aggressor, Alfagraze, Cimarron VR, Fortress, Gem, and Pioneer 5454.

Red Clover

Cinnamon, Reddy, Redland III, and Redman.

Grain Sorghum

No recommendation made for 2000 due to lack of data.

Soybeans

See Table B.

Sorghum x Sudangrass crosses

DeKalb SX-17, DeKalb SX-15, FFR 202, Sordan 79.

Sudangrass

Trudan 8.

Pearlmillet

Millex 24 and Millex 32.

Summer Annual recommendations are based on production when allowed to grow 20-40 inches before cutting or grazing.

¹Present plans indicate that this variety will not be recommended after 2000.

²These varieties were not submitted for testing in 1998.

Table A. The recommended corn hybrids for 2000 are as follows:
 MAKE YIELD WITHIN A GIVEN MATURITY GROUP BECAUSE ALL
 MATURITY GROUPS ARE NOT EVALUATED AT THE SAME LOCATION.

Color--Yellow Brand	Maturity---Early Hybrid	3Yr.Avg. Yield Bu/A	Grain Moisture at Harvest
Pioneer	3335	144	14.4
Pioneer	32K61	139	15.1
FFR	656	138	14.3
AgriPro	AP 9707	137	14.9
Pioneer	33Y18	137	14.2
FFR	748	137	15.1
HyPerformer	HY 9899 V	136	16.9
HyPerformer	HY 9646	136	15.3
Terra	TR 1106	132	14.6
HyPerformer	HS 9843	130	15.2
Pioneer	3245-----	Not included in 1999 trials----- ¹	
Color--White Zimmerman	Maturity--Early Z 62 W----	Not included in the 1999 trials----- ¹	
Color--Yellow	Maturity--Medium season 500 group ²		
Pioneer	3223	156	16.2
Terral	TV 2140	148	16.4
Pfister	3977	148	16.7
Zimmerman	Z 37	145	17.5
DeKalb	DK 687	145	16.6
Pioneer	3163	-----Not included in 1999 trials----- ¹	
Gutwein	2696	-----Not included in 1999 trials----- ¹	
DeKalb	DK 626	-----Not included in 1999 trials----- ¹	
AgraTech	787	-----Not included in 1999 trials----- ¹	
Color--White	Maturity--Medium-season 500 group		
Pioneer	3203 W----	Not included in 1999 trials----- ¹	
FFR	737 W-----	Not included in 1999 trials----- ¹	
Color--Yellow	Maturity--Medium-season 600 group		
Funk	DG 5510 A	163	17.1
Garst	8220	161	17.4
Terra	TR 1154	158	15.5
Terra	TR 1157	152	16.0
FFR	943-----	Not included in 1999 trials----- ¹	
Color--Yellow	Maturity-Full-season (Based on two years data)		
FFR	828	116	14.4
AgriGold	AG 6725	114	15.5
Crow's	702-----	Not included in 1999 trials----- ¹	
DeKalb	DK 743-----	Not included in 1999 trials----- ¹	
Mycogen	8460-----	Not included in 1999 trials----- ¹	
Pioneer	3165-----	Not included in 1999 trials----- ¹	
Color--White FFR	907W-----	Not included in 1999 trials----- ¹	
Zimmerman	Z 64 W-----	Not included in 1999 trials----- ¹	
Promising hybrids based on two years data 1998-99			
Color--Yellow	Maturity-Early-season		
Northrup King	N 63-G-7	130	13.3
Pioneer	3335 (Check)	127	13.6
Pioneer	33A14 Bt	125	14.0
Color--White Beck	5912 W	128	14.6
Color---Yellow	Maturity-Medium-season 1998-99		
Pioneer	31B13 Bt	154	16.4
Pioneer	3223 (Check)	145	15.6

¹Present plans indicate that this hybrid will not be recommended after 2000.

²For the medium-season hybrids, 500 and 600 refer only to the entry numbers.

³Yields adjusted to 15.5% moisture.

⁴Grain moisture is an indicator of relative maturity.

Table B. Recommended Soybean Varieties for 2000

-----Early Maturity Group IV-----				-----Medium Maturity Group V-----			
Brand	Variety	Yield Bu/A	Maturity Date	Brand	Variety	Yield Bu/A	Maturity Date
Not resistant to cyst nematode				Not resistant to cyst nematode			
Deltapine	DP 3478	50	9-17	Asgrow	A 5944	52	10-5
Dixie	478	49	9-16	VA	Hutcheson	46	9-30
HyPerformer	AP 4880	48	9-18	Terra	RVS 549	46	10-1
Pioneer	9482	47	9-16	NC	Holladay	45	9-26
DeKalb	CX 478	Not tested in 1999		HyPerformer	HY 574	44	10-3
Resistant to race 3				Pioneer	9594	Not tested in 1999	
DeKalb	CX 450	47	9-14	NC	Clifford	Not tested in 1999	
MD	Manokin	45	9-24	Resistant to race 3			
Resistant to races 3 and 14				Pioneer	9584	44	10-1
Asgrow	A 4922	48	9-20	Terral	TV 5797	Not tested in 1999	
Terral	TV 4664	47	9-15	Deltapine	DP 3588	Not tested in 1999	
Pioneer	9492	46	9-16	Resistant to races 3 and 14			
Delta King	4860(14)	45	9-16	Delsoy	5500	48	9-29
Hornbeck	HBK 4600	43	9-16	Asgrow	A 5547	47	9-30
TN	TN 4-94	42	9-21	Deltapine	DP 3519 S	46	9-26
Terral	TV 4479	Not tested in 1999		HyPerformer	AP 572 STS	45	10-3
ROUNDUP READY MATURITY GROUP IV				FFR	563	45	10-1
Resistant to races 3,14 (2 YRS DATA)				FFR	542	43	9-28
Asgrow	AG 4301	50	9-11	TN	TN 5-95	43	9-27
Asgrow	AG 4702	47	9-10	Asgrow	A 5848	Not tested in 1999	
Pioneer	9492 RR	46	9-9	Resistant to races 1,2,3,14, and 5			
Asgrow	AG 4601	45	9-9	USDA	Fowler	45	9-27
Late Maturing Group VI				ROUNDUP READY MATURITY GROUP V(3YRS DATA)			
Resistant to race 3				Not resistant to cyst nematode			
TN	TN 6-90	-	-	Hartz	H 5181 RR	39	10-8
<u>No late varieties evaluated in 1999.</u>				Hartz	H 5000 RR	38	9-30
				Resistant to races 3,14			
				Asgrow	AG 5901	41	10-6
				Sure Grow	SG 597 RR	40	10-5
				FFR	RT 546 RR	39	9-28
				Asgrow	AG 5801	39	10-4
PROMISING MATURITY GROUP V ROUNDUP READY VARIETIES BASED ON 2YRS DATA							
Brand	Variety	Yield (Bu/A)	Maturity	Resistant to Cyst (Races)			
Deltapine	DP 5806 RR	43	10-2	None			
FFR	RT 587 RR	42	10-1	3 and 14			
Deltapine	DP 5644 RR	42	9-30	14			
Hornbeck	HBK 5588 RR	41	9-29	3 and 14			
Deltapine	DP 5960 RR	41	10-4	3			
PROMISING MATURITY GROUP V NON-ROUNDUP READY VARIETIES (2 YRS DATA)							
Asgrow	A 5959	50	10-3	3 and 14			
Delta King	5995	50	10-4	3 and 14			
Hornbeck	HBK 5990	49	10-4	3			
PROMISING MATURITY GROUP IV NON-ROUNDUP READY VARIETIES (2 YRS DATA)							
Hornbeck	HBK 4890	47	9-18	none			

SOYBEANS

Maturity Group IV

Asgrow AG 4301: Roundup Ready variety with purple flowers, tawny pubescence and seed with a black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Asgrow AG 4601: Roundup Ready variety with white flowers, tawny pubescence and seed with a black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Asgrow AG 4702: Roundup Ready variety with white flowers, tawny pubescence and seed with a black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Asgrow A 4922: Has white flowers, tawny pubescence, and seed with a black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Chesapeake: Has white flowers, gray pubescence, and tan podwall, seed coats are yellow with buff hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

Deltapine DP 3478: Has purple flowers, tawny pubescence and seed with black hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

DeKalb CX 450: Has purple flowers, tawny pubescence and seed with black hila. Reported to have resistance to race 3 soybean cyst nematode. Maturity Group IV.

DeKalb CX 478: Has white flowers, tawny pubescence, and seed with a black hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

Delta King 4860: Has white flowers, tawny pubescence, and seed with a black hila. Resistant to races 3 and 14 soybean cyst nematode. In Dr. Young's trials he only had resistance to race 14. Maturity Group IV.

Dixie 478: Has purple flowers, gray pubescence and seed with an imperfect black hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

Gutwein 7474: Has purple flowers, light tawny pubescence and seed with a black hila. Has no resistance to cyst nematode. Maturity Group IV.

Hornbeck HBK 4600: Has white flowers, tawny pubescence, and seed with a black hila. Has resistance to soybean cyst nematode. Maturity Group IV.

HyPerformer AP 4880: Has purple flowers, tawny pubescence, and seed with a black hila. Has no resistance to races 3 and 14 soybean cyst nematode. Maturity Group IV.

TN 4-94: Has purple flowers and gray pubescence. Resistant to races 3 and 14 of soybean cyst nematode. Has moderate resistance to frogeye, SDS and stem canker. Maturity Group IV.

Manokin: Has white flowers, tawny pubescence and seed with a black hila. Resistant to race 3 soybean cyst nematode. Maturity Group IV.

Pioneer Brand 9482: Has white flowers, tawny pubescence and seed with a black hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

Pioneer Brand 9492: Roundup Ready variety with white flowers, tawny (tan) pubescence and seed with a black hila. Resistant to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Terral TV 4479: Has white flowers, tawny pubescence and seed with a black hila. Resistant to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Terral TV 4664: Has white flowers, tawny (tan) pubescence and seed with black hila. Resistant to races 3 and 14 soybean cyst nematode. Maturity Group IV.

Maturity Group V

Asgrow A 5547: Has white flowers, gray pubescence and seed with a buff hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Asgrow A 5848: Has white flowers, gray pubescence and seed with buff hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Asgrow A 5944: Has white flowers, gray pubescence and seed with a buff hila. Has no resistance to soybean cyst nematode. Maturity Group V.

Asgrow A 5959: Has white flowers, gray pubescence and seed with a buff hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Asgrow AG 5801: Roundup Ready variety with purple flower, gray pubescence and seed with an imperfect black hila. Maturity Group V.

Asgrow AG 5901: Roundup Ready variety with white flowers, gray pubescence and buff hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Clifford: Has purple flowers, tawny pubescence and seed with black hila. Not resistant to soybean cyst nematode. Maturity Group V.

Deltapine DP 3519 S: Has purple flowers, gray pubescence and seed with an imperfect black hila. Sulfonylurea tolerant. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Deltapine DP 5644 RR: Roundup Ready variety with white flowers, tawny pubescence and seed with a black hila. Young's data shows some tolerance to race 14 soybean cyst nematode. Maturity Group V.

Deltapine DP 5806 RR: Roundup Ready variety with white flowers, gray pubescence and seed with a buff hila. Young's data does not show any resistance to soybean cyst nematode. Maturity Group V.

Deltapine DP 5960 RR: Roundup Ready variety with white flowers, gray pubescence and seed with a buff hila. Young's data shows it to be resistant to race 3 soybean nematode. Maturity Group V.

Delsoy 5500: Has white flowers, tawny pubescence and seed with a brown hila. Has resistance to races 3 and 14 of soybean cyst nematode. Maturity Group V.

FFR 542: Has purple flowers, gray pubescence and seed with an imperfect black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

FFR RT 546 RR: Roundup Ready variety with purple flowers, gray pubescence and seed with a buff hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

FFR 563: Has purple flowers, gray pubescence and seed with an imperfect black hila. Has resistance to races 3 and 14 of soybean cyst nematode. Maturity group V.

FFR RT 587 RR: Roundup Ready variety with purple flowers, gray pubescence and imperfect black hila. Has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Fowler: Has white flowers, tawny pubescence and seed with a black hila. Has resistance to races 1, 2, 3, 5, and 14 soybean cyst nematode. Maturity Group V.

Hartz H 5000 RR: Roundup Ready variety with purple flowers, tawny (brown) pubescence with a black hila. Has no cyst nematode resistance. Maturity Group V.

Hartz H 5181 RR: Roundup Ready variety with white flowers, gray pubescence and seed with a buff hila. Has no cyst nematode resistance. Maturity Group V.

Holladay: Has purple flowers, gray pubescence and seed with an imperfect black hila. Has no resistance to cyst nematode. Maturity Group V.

Hornbeck HBK 5588 RR: Roundup Ready variety with purple flowers, gray pubescence and seed with an imperfect black hila. Has resistance to races 3 and 14 cyst nematode. Maturity Group V.

Hornbeck HBK 5990: Has purple flowers, tawny pubescence and seed with a black hila. Has resistance to race 3 soybean cyst nematode. Maturity Group V.

Hutcheson: Has white flowers, gray pubescence, and seed with a buff hila. Has high resistance to stem canker and moderate resistance to frogeye disease. Maturity Group V. Has no resistance to soybean cyst nematode.

HyPerformer AP 572 STS: Has white flowers, gray pubescence and seed with a buff hila. Has resistance to race 3 soybean cyst nematode. Maturity Group V.

HyPerformer HY 574: Has purple flowers, tawny pubescence and seed with a black hila. Has no resistance to soybean cyst nematode. Maturity Group V.

Pioneer Brand 9584: Has white flowers, tawny pubescence and seed with a black hila. Resistant to race 3 soybean cyst nematode. Maturity Group V.

Pioneer Brand 9594: Has white flowers, gray pubescence and seed with a buff hila. Has no resistance to soybean cyst nematode. Maturity Group V.

Sure Grow SG 597 RR: Roundup Ready variety with white flowers, tawny pubescence and seed with a black hila. Young's data shows that this variety has resistance to races 3 and 14 soybean cyst nematode. Maturity Group V.

Terra RVS 549: Has purple flowers, gray pubescence and seed with a brown hila. Reported to have resistance to race 3 soybean cyst nematode. Young's rating does not support this claim. Maturity Group V.

Terral TV 5797: Has white flowers, gray pubescence and seed with a buff hila. Resistant to race 3 soybean cyst nematode. Maturity Group V.

TN 5-95: Has purple flowers and tawny pubescence. Has resistance to races 3 and 14 soybean cyst nematode. Has resistance to frogeye and stem canker. Maturity Group V.

Maturity Group VI

TN 6-90: Has white flowers, tawny pubescence, and seed with black hila. Has resistance to frogeye and soybean mosaic virus. Maturity Group VI.

OATS

Fall-Seeded

FFR Southern States 76-30: About two days earlier than Cumberland in maturity and a few inches taller in plant height. It has out-yielded Cumberland and Coker 716 in the State variety tests with standing ability similar to Coker 716.

BARLEY

Starling: A medium maturity variety with plant height similar to Nomini. Has medium test weight. Reported to have resistance to barley yellow dwarf, leaf rust, scald, and moderate resistance to powdery mildew. Has yielded well in the variety trials.

WHEAT

Clemens: A medium to late soft red winter wheat variety which is reported to have very good leaf rust resistance and good powdery mildew resistance.

FFR 522: An early maturity soft red winter wheat variety with good test weight (bushel wt).

FFR 555: A medium maturity soft red winter wheat variety with fair test weight. Has shown resistance to mildew and glume blotch.

Foster: A medium maturity soft red winter wheat with fair test weight. Reported to have good resistance to septoria leaf blotch and very good resistance to powdery mildew and leaf rust.

Jackson: A medium-maturing soft red winter wheat with average test weight. It is reported to have moderate resistance to powdery mildew and septoria leaf blotch. Jackson has been susceptible to leaf rust in the variety trials. Hessian fly resistance is not known at this time.

Madison: A medium-early maturing, apically-awnletted white-chaffed cultivar of medium height and straw strength. Moderate resistance to powdery mildew, resistant to spindle streak virus, and moderately tolerant to septoria.

Northrup King 9543: An early-medium maturing soft red winter wheat variety with fair test weight. Reported to be resistant to Hessian fly biotype E.

Northrup King 9663: A medium to late maturing soft red winter wheat variety with fair to good test weight.

Patriot: An early maturing soft red winter wheat variety with resistance to leaf rust and powdery mildew.

Pioneer brand 25R26: An awned medium-maturing soft red winter wheat with fair test weight. Not resistant to Hessian fly.

Pioneer brand 2540: An awned medium-maturing soft red winter wheat with average test weight. Not resistant to Hessian fly.

Pioneer brand 2552: An awned medium-maturing soft red winter wheat with fair to good test weight. Not resistant to Hessian fly.

Pioneer brand 2568: An awned medium-maturing soft red winter wheat with fair test weight. Not resistant to Hessian fly.

Pioneer brand 2684: An awned medium-maturing soft red winter wheat with above average test weight. Pioneer brand 2684 and Pioneer brand 2580 are similar in plant height and lodging resistance. Pioneer brand 2684 has shown tolerance to some races of Hessian fly.

Shiloh: An early-maturing variety which is reported to have excellent resistance to leaf rust and good resistance to powdery mildew.

Verne: A soft red winter cultivar with medium early maturity. It has shown some tolerance to leaf rust, but has been susceptible to mildew and glume blotch.

PERFORMANCE OF CORN HYBRIDS FROM 1997 THROUGH 1999.

The early-season hybrid trials were conducted at four locations, medium-season hybrids were evaluated at seven locations and full-season at four.

At Jackson, full-season hybrids were evaluated with and without irrigation. Early hybrids at Ames Plantation were also evaluated for response to irrigation. All tests at Knoxville were irrigated once during silking and tasseling.

All corn hybrid trials were over-planted and thinned to a population from 19,000 to 28,000 plants per acre. Population varied with location, but was the same for all hybrids at a given location. Variation in population among locations was due to different row spacings. Spacing within the row was the same at all locations. Most tests were conducted using thirty to thirty-six inch row spacing. The tests were fertilized with 150 pounds or more of nitrogen per acre. A portion of the nitrogen was applied prior to seeding and the remainder was applied as a side-dressing. This practice was followed whenever possible. Phosphorous and potassium were applied at least in the amount recommended by soil test results. The plot size for mechanically-harvested plots was two rows 25 or 30 feet in length. Plots were replicated four times at each location. In 1999, the corn hybrid studies at Crossville, Ames Plantation, Jackson, Milan, Martin, and Knoxville were harvested with a combine-sheller. At Ames Plantation in 1999 and previous years, the early-season non-irrigated trials were hand-harvested. All corn trials at Milan were grown no-till.

In 1997 and 1998 two medium-season corn hybrid trials were grown

each year with one being referred to as the 500 and the other referred to as the 600 group. The 500 and 600 refer to the hybrid entry number. The trials of this maturity group were conducted adjacent to each other. In 1999, the 500 and 600 group were combined into one medium-season test.

No data are reported for Spring Hill in 1998 due to stand reduction from insect damage to the corn seedlings. No full-season data for 1998 are reported for Knoxville due to grain being lost during harvest because of a plate coming off the new combine. In 1999, no data are reported for Greeneville due to the corn trials being sprayed with a soybean herbicide. At Crossville, the medium-season corn trial in 1999 was damaged by a wind storm, which caused severe lodging, therefore, no data are reported.

EARLY-SEASON

The early-season data for 1999 is reported in Tables 1 through 6. Un-irrigated yields were low at Ames Plantation and Crossville in 1999. Milan was planted early on a Collins silt loam soil with good water holding capacity, which enabled the trial to escape the drought. Knoxville yields were high due to one irrigation at silking and tasseling.

Cargill 7821, Asgrow RX 799 Bt, FFR 739W, and Pioneer 33J56 were among the highest producing hybrids. FFR 726 performed poorly at most locations in 1999. This hybrid had performed well in 1997 and 1998. The ear height ranged from 37 to 52 inches. Corn hybrids were ready for harvest earlier than usual because of the hot dry weather. The grain moisture at harvest of the early-season hybrids ranged from 13.4 to 16.3% (Table 2).

Two years of data for early-season hybrids are shown in Tables 3 and 4. Northrup King N 63-G-7, Beck 5912W, Pioneer Brand 3335, and FFR 656 were among the highest producing hybrids evaluated for two years (Table 3). There was little difference among the two year average yield for Knoxville, Crossville and Milan. Un-irrigated yields at Ames Plantation were low for 1998 and 1999. HyPerformer HV 9899V had the highest moisture at harvest (16.1) and Northrup King N 63-G-7 the lowest (13.3) for a two year average. Eleven early-season hybrids have been evaluated for three years and this data is shown in Tables 5 and 6. Pioneer brand 3335 produced higher yields (144 bu/a) than the mean yield of 134.9 bu/a (Table 5). The highest hybrid in grain moisture at harvest was HyPerformer HY 9899V (16.9%), and the lowest in grain moisture was Pioneer brand 33Y18 (Table 6).

MEDIUM-SEASON HYBRIDS (500 AND 600)

In 1999, only one medium-season trial was conducted at five locations. The trial contained both 500 and 600 entries.

Results of the medium-season hybrids for 1999 are reported in Tables 7 and 8. Pioneer brand 31B13 Bt and Funk DG 5510 A were the two leading hybrids in yield (Table 7). The yields were high at Knoxville and Milan, and low at Spring Hill, Springfield and Martin (Table 7). The medium-season hybrids for group 500 and 600 in 1998 are included in the two year average with the medium-season hybrids evaluated in one test in 1999 (Table 9). The hybrids with an asterisk were grown in the 600 group in 1998, and all others were grown in the 500 group. The tests in 1998 were grown adjacent to each other. This should be taken into account when comparing hybrids.

The three year yield data for medium-season hybrids are shown in Table 10. The medium-season hybrids were grown in separate, but adjacent tests in 1997 and 1998. The 600 group are noted by an asterisk. The other hybrids were grown in the 500 group test. In 1999, both groups were grown in one test.

FULL-SEASON HYBRIDS

The full-season hybrids data are presented in Tables 11 through 14. In 1999, the leading hybrids were Callahan 7975 Bt, FFR 849 IT and FFR 943 (Table 11). The grain moisture at harvest ranged from 17.5 to 13.7% (Table 12). The two year full-season data are presented in Tables 13 and 14.

HYBRIDS RECEIVED LATE

Seed of hybrids that were received too late to be included in the regular hybrid trial results are shown in Tables 15 and 16.

Table 1. Corn: Yield of early-season hybrids evaluated at four locations in 1999.

Color Brand	Hybrid	Avg. Yield	Knox- ville	Cross- ville	Milan	Ames Plantation	
						Un-Irr.	Irrigated
-----Bushels per acre-----							
Y Cargill	7821	155	183	107	213	117	156
Y Asgrow	RX 799 (Bt)	146	174	106	186	120	143
W FFR	739 W	145	169	111	200	99	147
Y Pioneer	33J56	144	191	110	187	95	136
Y Northrup King	N63-G-7	142	166	112	188	111	131
W Beck	5912 W	142	163	124	197	111	114
Y Pioneer	31B13(Bt)	141	181	107	185	87	148
Y Pioneer	3335	138	183	96	181	94	138
Y Pioneer	33A14(Bt)	137	165	107	174	112	126
Y Pioneer	32K61	137	165	123	161	110	123
Y Mycogen	2799(Bt)	136	166	122	181	87	124
Y Crow's	496	136	158	109	175	104	132
Y DeKalb	DK 611	135	168	105	166	103	135
Y HyPerformer	HY 9899 V	135	143	123	170	97	142
Y FFR	656	135	170	107	192	86	121
Y Cargill	7997	135	146	122	183	104	119
Y FFR	748	134	147	104	185	112	124
Y AgriPro	AP 9707	134	159	103	179	100	130
Y Terra	TR 1106	134	164	105	174	94	133
Y AgriGold	AG 6460	133	167	101	185	100	113
Y HyPerformer	HY 9646	133	163	103	162	98	140
Y AgriGold	AG 6588 IMI	133	166	96	179	103	121
Y Cargill	7731 IMI	133	145	102	180	105	131
Y Pioneer	33J24	132	173	99	171	100	119
Y Terral	TV 2100	132	158	102	179	89	130
Y Pioneer	33Y18	130	167	65	175	104	137
Y Pioneer	31A12	129	132	107	175	100	129
Y Asgrow	RX 740	128	151	104	179	83	124
Y Asgrow	AP 9829	126	146	118	157	90	121
Y Pioneer	33G26	126	124	98	181	83	142
Y Zimmerman Z	42	125	144	108	174	98	103
Y Callahan	7860	125	140	112	173	93	109
Y Pioneer	34B23	124	121	93	176	99	129
Y Asgrow	RX 739	124	153	100	167	102	97
Y AgriPro	HS 9843	124	137	103	153	102	122
Y FFR	669	123	138	107	160	114	97
Y Terral	TV 2090	123	143	104	162	85	121
Y Terra	TR 1097	121	162	115	182	113	32
Y Asgrow	RX 773	120	135	105	169	84	108
Y Dyna Gro	5505 RR	120	114	127	167	80	111

Table 1. Continued.

Color Brand	Hybrid	Avg. Yield	Knox- ville	Cross- ville	Milan	Ames Plantation	
						Un-Irr.	Irrigated
-----Bushels per acre-----							
Y DeKalb	DK 595 IMI	119	139	112	156	118	72
Y AgriGold	AG 6432	118	121	108	167	90	106
W Pioneer	34W67	116	113	107	145	98	117
W Asgrow	776W	116	145	89	158	97	89
Y Mycogen	2725	114	129	109	171	98	62
Y Terral	TVX 20980	113	119	105	161	75	106
Y Terra	TR 1129 RR	111	119	96	137	84	117
Y FFR	726	99	116	110	79	79	109
L.S.D. (.05)		12.4	24.3	28.1	25.4	22.4	29.6
C.V. %		15.5	11.5	18.9	10.8	10.4	17.7
Avg.		129.4	150.8	106.4	172.1	98.1	119.4
R-Square		0.78	0.66	0.47	0.60	0.40	0.61

Table 2. Corn: Yield and other characteristics of early-season hybrids evaluated at four locations in 1999.

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture at Harvest
		Bu/A	Avg. No.	Rating ¹	In.	%
Y Cargill	7821	155	0.9	4.4	41	14.5
Y Asgrow	RX 799 (Bt)	146	0.1	4.5	44	14.8
W FFR	739 W	145	1.6	4.5	51	15.0
Y Pioneer	33J56	144	1.9	4.6	43	13.9
Y Northrup King	N 63-G-7	142	0.4	4.8	44	13.5
W Beck	5912 W	142	1.8	4.6	52	15.0
Y Pioneer	31B13 (Bt)	141	2.9	4.6	49	15.6
Y Pioneer	3335	138	4.4	5.2	43	13.7
Y Pioneer	33A14 (Bt)	137	0.8	4.8	44	14.1
Y Pioneer	32K61	137	1.0	4.9	42	15.1
Y Mycogen	2799 (Bt)	136	1.5	4.8	41	14.4
Y Crow's	496	136	1.1	4.8	41	13.5
Y DeKalb	DK 611	135	0.8	4.8	44	13.7
Y HyPerformer	HY 9899 V	135	3.3	4.4	46	16.3
Y FFR	656	135	1.6	4.5	45	14.0
Y Cargill	7997	135	1.5	4.8	43	14.1
Y FFR	748	134	0.8	4.7	41	14.4
Y AgriPro	AP 9707	134	0.6	4.9	42	14.2
Y Terra	TR 1106	134	1.8	4.8	40	14.0
Y AgriGold	AG 6460	133	1.4	4.8	41	14.0
Y HyPerformer	HY 9646	133	2.6	4.4	49	15.0
Y AgriGold	AG 6588 IMI	133	1.3	4.5	41	14.3
Y Cargill	7731 IMI	133	0.9	4.4	41	14.4
Y Pioneer	33J24	132	1.1	4.9	41	14.0
Y Terral	TV 2100	132	1.4	4.8	43	14.1
Y Pioneer	33Y18	130	0.6	4.8	45	14.1
Y Pioneer	31A12	129	1.3	4.9	42	15.2
Y Asgrow	RX 740	128	0.6	4.7	41	13.7
Y AgriPro	AP 9829	126	2.1	4.8	46	15.0
Y Pioneer	33G26	126	0.9	5.3	44	13.9
Y Zimmerman	Z 42	125	1.1	4.6	46	14.1
Y Callahan	7860	125	1.3	4.9	40	14.0
Y Pioneer	34B23	124	1.7	4.9	39	13.6
Y Asgrow	RX 739	124	1.1	4.6	40	13.8
Y AgriPro	HS 9843	124	0.9	4.4	45	14.7
Y FFR	669	123	2.2	4.6	41	14.0
Y Terral	TV 2090	123	0.5	4.7	41	14.0
Y Terra	TR 1097	121	1.9	4.9	39	14.0
Y Asgrow	RX 773	120	1.4	4.9	42	14.0
Y Dyna Gro	5505 RR	120	1.4	4.7	38	13.7

Table 2. Continued.

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture at Harvest
		Bu/A	Avg. No.	Rating ¹	In.	%
Y DeKalb	DK 595 IMI	119	1.2	4.6	37	14.0
Y AgriGold	AG 6432	118	1.5	4.8	40	13.4
W Pioneer	34W67	116	1.4	4.9	39	13.8
W Asgrow	776 W	116	0.9	4.5	37	14.7
Y Mycogen	2725	114	2.3	4.8	40	13.6
Y Terral	TVX 20980	113	1.6	5.1	41	13.5
Y Terra	TR 1129 RR	111	1.3	4.7	39	13.5
Y FFR	726	99	1.9	4.8	42	14.5

¹Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 3. Corn: Yield of early-season hybrids evaluated at four locations for two years (1998-99).

Color	Brand	Hybrid	Avg. Yield	Knox- ville	Cross- ville	Milan	Ames Plantation	
							Irr.	Un-Irr.
-----Bushels per acre-----								
Y Northrup King	N	63-G-7	130	154	147	157	115	76
W Beck		5912 W	128	152	159	150	110	68
Y Pioneer		3335	127	156	148	142	123	65
Y FFR		656	127	150	145	159	115	65
Y HyPerformer	HY	9646	126	150	147	146	124	65
Y AgriPro	AP	9707	126	147	140	152	122	70
Y Pioneer		33A14 (Bt)	125	158	136	146	113	73
Y FFR		748	125	144	149	152	112	68
Y Pioneer		32K61	121	151	144	125	117	70
Y HyPerformer	HY	9899 V	120	136	147	129	121	69
Y Zimmerman	Z	42	119	141	149	146	94	66
Y Pioneer		31A12	119	134	144	139	116	64
Y Pioneer		33Y18	119	155	121	137	114	69
Y Pioneer		33G26	117	132	141	127	125	59
Y Asgrow	RX	740	116	139	133	144	107	58
Y Terra	TR	1106	115	133	122	148	114	57
Y Terral	TV	2100	114	132	133	131	116	58
Y FFR		726	103	117	147	96	98	57
L.S.D. (.05)			8.9	14.8	23.4	23.5	16.4	12.8
C.V. %			16.7	10.4	16.6	16.9	14.4	19.7
Avg.			121.0	143.4	141.7	140.2	114.3	65.3
R-Square			0.84	0.68	0.79	0.78	0.59	0.90

Table 4. Corn: Yield and other characteristics of early-season hybrids evaluated at four locations for two years (1998-99).

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Height	Grain Moisture At Harvest
		Bu/A	Avg. No.	Rating ¹	In.	%
Y Northrup King	N 63- G-7	130	0.5	5.7	41	13.3
W Beck	5912 W	128	1.3	5.7	48	14.6
Y Pioneer	3335	127	3.2	5.8	39	13.6
Y FFR	656	127	1.3	5.6	43	13.8
Y HyPerformer	HY 9646	126	1.8	5.7	47	14.5
Y AgriPro	AP 9707	126	0.5	5.9	39	14.1
Y Pioneer	33A14 (Bt)	125	0.5	5.9	41	14.0
Y FFR	748	125	1.4	5.8	40	14.3
Y Pioneer	32K61	121	1.0	6.0	39	14.6
Y HyPerformer	HY 9899 V	120	2.4	5.7	43	16.1
Y Zimmerman	Z 42	119	0.8	5.5	43	14.0
Y Pioneer	31A12	119	1.1	5.9	39	14.9
Y Pioneer	33Y18	119	0.7	5.8	41	13.8
Y Pioneer	33G26	117	0.7	6.1	41	13.8
Y Asgrow	RX 740	116	0.4	5.7	39	13.6
Y Terra	TR 1106	115	1.2	5.8	38	13.8
Y Terral	TV 2100	114	1.3	5.8	39	13.9
Y FFR	726	103	1.5	6.0	40	14.1

¹Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 5. Corn: Yield of early-season hybrids evaluated at four locations for three years (1997-99).

Color Brand	Hybrid	Avg. Yield	Knox- ville	Cross- ville	Milan	Ames Plantation Un-Irr.	Irrigated
-----Bushels per acre-----							
Y Pioneer	3335	144	160	148	164	104	146
Y Pioneer	32K61	139	161	144	160	96	137
Y FFR	656	138	146	145	172	99	130
Y AgriPro	AP 9707	137	147	140	167	97	136
Y Pioneer	33Y18	137	164	121	158	100	136
Y FFR	748	137	148	149	164	96	131
Y HyPerformer	HY 9899 V	136	149	147	145	107	137
Y HyPerformer	HY 9646	136	148	147	164	86	139
Y Terra	TR 1106	132	137	122	166	94	135
Y Terral	TV 2100	125	135	133	151	80	128
Y FFR	726	124	130	147	130	100	119
L.S.D. (.05)		7.5	12.1	24.6	16.8	12.6	14.3
C.V. %		15.0	10.2	17.6	13.1	16.1	17.6
Avg.		134.9	147.5	140.1	158.2	96.3	134.0
R-Square		0.84	0.73	0.79	0.85	0.94	0.80

Table 6. Corn: Yield and other characteristics of early-season hybrids evaluated at four locations for three years (1997-99).

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Ear Height	Grain Moisture at Harvest
		Bu/A	Avg. No.	In.	%
Y Pioneer	3335	144	3.2	43	14.4
Y Pioneer	32K61	139	1.1	46	15.1
Y FFR	656	138	1.3	45	14.3
Y AgriPro	AP 9707	137	1.1	41	14.9
Y Pioneer	33Y18	137	2.0	45	14.2
Y FFR	748	137	2.4	42	15.1
Y HyPerformer	HY 9899 V	136	2.7	46	16.9
Y HyPerformer	HY 9646	136	2.6	49	15.3
Y Terra	TR 1106	132	1.7	40	14.6
Y Terral	TV 2100	125	2.1	41	14.6
Y FFR	726	124	1.7	42	14.8

Table 7. Corn: Yield of medium-season (Group 500 and 600) hybrids evaluated at five locations in 1999.

Color Brand	Hybrid	Avg. Yield	Knox- ville	Spring- field	Spring Hill	Milan	Martin
-----Bushels per acre-----							
Y Pioneer	31B13 (Bt)	152	183	122	102	208	144
Y Funk	DG 5510 A	150	182	124	132	196	115
Y Terral	TV 2140	140	164	107	96	207	127
Y DeKalb	DK 650	140	190	114	92	186	119
Y AgriGold	AG 6609 (Bt)	137	176	104	88	203	116
Y Crow's	687 (Bt)	136	178	97	99	190	118
Y Garst	8220	136	172	110	102	199	98
Y Pfister	3977	136	183	102	92	187	113
Y Terra	TR 1154	135	157	102	115	189	113
Y FFR	769 (Bt)	135	180	95	97	192	111
Y DeKalb	DK 687	135	181	99	96	181	116
Y Pioneer	3223	134	157	91	100	205	117
Y Terral	TVX 21483 (Bt)	134	177	106	87	188	113
Y Mycogen	2862	134	171	106	108	175	110
Y Gutwein	2633 (Bt)	134	180	94	108	188	100
Y Terral	TVX 21680 (Bt)	134	160	96	114	191	108
Y Pfister	3321	134	176	114	103	183	92
Y Callahan	7655	133	159	110	103	186	109
Y AgriGold	XA 3809	131	165	106	117	179	90
Y Terral	TVX 21481	131	168	105	95	193	91
Y AgriGold	AG 6569 (Bt)	130	170	90	93	194	104
Y AgriGold	9689 (Bt)	130	173	97	101	183	96
Y AgriGold	A 6490	129	158	102	114	177	95
Y FFR	797 IT	128	169	107	100	169	96
Y Funk	G 5575	128	171	99	107	175	88
Y Gutwein	2633 (Bt)	128	149	100	87	197	106
Y Terral	TVX 21280 (Bt)	128	154	112	97	171	104
Y Pioneer	32Y52	127	150	103	92	185	105
Y Gutwein	2696	127	169	97	94	172	102
Y Mycogen	2888 IMI	126	163	108	92	185	85
Y Garst	8222 IT	126	157	98	90	191	95
Y Terral	TVX 21580	125	150	101	96	183	96
Y Terra	TR 1167	125	150	95	84	170	124
Y AgriGold	XA 3715	124	170	101	81	167	101
Y AgriGold	A 6590	123	165	98	79	188	86
Y Garst	8464	123	164	90	98	155	108
Y Northrup King	N 79-L 3	123	168	79	76	178	113
Y Zimmerman	Z 37	121	165	100	92	152	98
Y Garst	8335	120	168	96	94	156	88
Y Terra	TR 1157	120	162	99	80	167	93

Table 7. Continued.

Color Brand	Hybrid	Avg. Yield	Knox- ville	Spring- field	Spring Hill	Milan	Martin
-----Bushels per acre-----							
W TN Exp.	TN 99-4	119	144	91	107	159	94
W TN Exp.	TN 99-3	119	152	84	111	160	87
Y Northrup King	N 73-03	118	142	81	100	164	104
Y Garst	8343	118	136	76	107	160	112
Y Terra	TR 1185	117	146	106	100	143	89
Y DeKalb	DK 668	114	159	88	88	154	83
Y Callahan	C 9644 IMI	114	128	95	93	156	99
Y AgriGold	XA 2814 RR	114	135	78	96	175	85
Y AgriGold	6605	113	144	82	110	158	72
Y Pioneer	32Z18 IMI	112	142	91	78	158	91
Y Terra	TR 1147 RR	111	123	81	103	163	83
L.S.D. (.05)		12.1	19.6	22.9	N.S.	27.8	24.8
C.V. %		15.3	8.7	16.5	20.7	11.2	17.3
Avg.		128.0	162.0	99.2	98.3	178.2	102.4
R-Square		0.83	0.62	0.56	0.42	0.46	0.52

Table 8. Corn: Yield and other characteristics of medium-season (Group 500 & 600)hybrids evaluated at five locations in 1999.

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture At Harvest
		Bu/A	Avg.	No. Rating ¹	In	%
Y Pioneer	31B13 (Bt)	152	0.8	3.7	52	15.5
Y Funk	DG 5510 A	150	0.3	4.7	46	16.2
Y Terral	TV 2140	140	1.4	4.3	51	14.8
Y DeKalb	DK 650	140	0.7	5.3	46	14.7
Y AgriGold	AG 6609 (Bt)	137	0.6	4.0	43	14.9
Y Crow's	687 (Bt)	136	1.2	4.7	43	15.3
Y Garst	8220	136	1.1	5.0	47	16.1
Y Pfister	3977	136	1.3	4.3	42	15.4
Y Terra	TR 1154	135	0.3	5.0	53	14.4
Y FFR	769 (Bt)	135	1.0	4.3	47	15.4
Y DeKalb	DK 687	135	1.8	4.3	47	15.1
Y Pioneer	3223	134	1.0	4.7	49	15.3
Y Terral	TVX 21483 (Bt)	134	1.6	4.0	52	15.3
Y Mycogen	2862	134	0.9	5.0	47	15.2
Y Gutwein	2633 (Bt)	134	0.9	4.3	44	15.3
Y Terral	TVX 21680 (Bt)	134	1.1	4.7	52	15.2
Y Pfister	3321	134	0.6	5.3	47	14.8
Y Callahan	7655	133	0.8	5.7	51	14.5
Y AgriGold	XA 3809	131	1.1	5.0	48	14.2
Y Terral	TVX 21481	131	1.5	5.3	50	14.7
Y AgriGold	AG 6569 (Bt)	130	1.0	3.3	44	14.1
Y AgriGold	9689 (Bt)	130	0.7	4.7	45	15.2
Y AgriGold	AG 6490	129	0.9	5.0	42	14.3
Y FFR	797 IT	128	0.9	4.3	46	15.3
Y Funk	G 5575	128	0.9	3.3	49	14.4
Y Gutwein	2633 (Bt)	128	0.6	4.0	45	15.4
Y Terral	TVX 21280 (Bt)	128	0.6	5.0	45	14.1
Y Pioneer	32Y52	127	1.0	4.7	48	14.9
Y Gutwein	2696	127	1.0	5.0	49	14.7
Y Mycogen	2888 IMI	126	1.0	4.0	51	15.5
Y Garst	8222 IT	126	1.3	4.3	46	16.4
Y Terral	TVX 21580	125	0.6	5.7	48	14.7
Y Terra	TR 1167	125	1.0	4.3	50	15.2
Y AgriGold	XA 3715	124	1.2	4.3	49	14.3
Y AgriGold	A 6590	123	1.3	5.0	43	14.4
Y Garst	8464	123	1.1	4.0	42	14.2
Y Northrup King	N 79-L 3	123	1.1	5.3	43	15.2
Y Zimmerman	Z 37	121	1.3	4.7	50	15.8
Y Garst	8335	120	1.4	5.3	50	14.1
Y Terra	TR 1157	120	1.2	5.0	49	15.1

Table 8. Continued

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture At Harvest
		Bu/A	Avg.	No. Rating ¹	In	%
W TN Exp.	TN 99-4	119	4.1	5.3	49	16.9
W TN Exp.	TN 99-3	119	2.6	4.7	48	16.1
Y Northrup King N	73-03	118	0.9	4.7	46	14.1
Y Garst	8343	118	1.9	4.7	41	13.9
Y Terra	TR 1185	117	1.4	4.7	48	16.2
Y DeKalb	DK 668	114	0.5	4.0	49	15.2
Y Callahan	C 9466 (IMI)	114	1.3	4.7	40	13.9
Y AgriGold	XA 2814 RR	114	1.1	5.3	49	14.9
Y AgriGold	AG 6605	113	1.5	4.0	44	13.9
Y Pioneer	32Z18	112	1.3	5.0	44	15.5
Y Terra	TR 1147 RR	111	1.9	5.3	43	14.0

¹Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 9. Corn: Yield of medium-season (Group 500 & 600) hybrids evaluated in 10 environments from 1998 through 1999.¹

Color	Brand	Hybrid	Avg. Yield	Knox-ville	Greene-ville	Cross-ville	Spring Hill	Spring-field	Milan	Martin
			-----Number of environments (Years)-----							
			10	2	1	1	1	2	2	1
			-----Bushels per acre-----							
Y Pioneer	31B13		154	165	161	193	102	139	165	144
Y Funk	DG 5510 A		151*	169	172	180	132	129	160	115
Y Pioneer	3223		145	160	163	177	100	121	163	117
Y Garst	8220		144*	161	160	202	102	128	151	98
Y Terral	TVX 2140		143	156	140	185	96	116	170	127
Y Terra	TR 1154		139*	157	144	204	115	108	140	113
Y Pfister	3977		139	151	140	175	92	111	170	113
Y Mycogen	2888 IMI		136	154	135	204	92	111	160	85
Y Zimmerman	Z 37		135	151	141	205	92	116	140	98
Y DeKalb	DK 687		134	149	142	183	96	115	139	116
Y Garst	8222 IT		132	133	136	182	90	112	162	95
Y Terra	TR 1157		131*	149	138	199	80	116	136	93
Y Terra	TR 1167		131*	142	149	175	84	106	138	124
Y AgriGold	AG 6490		130	142	144	151	114	109	146	95
Y FFR	797 IT		125	141	128	166	100	98	139	96
Y Terra	TR 1185		124	140	159	194	100	113	95	89
Y AgriGold	AG 6590		120	131	120	127	79	121	145	86
L.S.D. (.05)			9.2	13.2	21.8	27.8	N.S.	16.6	26.3	25.4
C.V. %			15.4	8.9	10.6	10.7	22.0	14.4	17.9	16.8
Avg.			136.0	150.1	145.4	182.5	97.8	115.7	148.2	106.2
R-Square			0.77	0.79	0.52	0.61	0.47	0.66	0.76	0.56

*Hybrids evaluated in the 600 group only in 1998 and all other hybrids were evaluated in the 500 group in 1998.

¹In 1999 all hybrids (500 & 600) were evaluated in the same test.

Table 10. Corn: Yield of medium-season (Group 500 and 600) hybrids evaluated in 17 environments from 1997 through 1999.¹

Color Brand Hybrid	Avg. Yield	Knox- ville	Greene- ville	Cross- ville	Spring Hill	Spring- field	Milan	Martin
-----Number of environments (Years)-----								
	17	3	1	1	3	3	3	3
-----Bushels per acre -----								
Y Funk DG 5510 A	163*	171	172	180	132	151	185	148
Y Garst 8220	161*	168	160	202	102	153	188	144
Y Terral TR 1154	158*	165	144	204	115	148	176	147
Y Pioneer 3223	156	169	163	177	100	143	175	145
Y Terral TVX 2140	154	156	140	185	96	145	181	146
Y Terral TR 1157	152*	158	138	199	80	156	171	136
Y Pfister 3977	148	162	140	175	92	117	182	140
Y Terral TR 1185	146*	156	159	194	100	148	148	127
Y Zimmerman Z 37	145	154	141	205	92	142	157	129
Y DeKalb DK 687	145	153	142	183	96	138	158	135
Y Terra TR 1167	144*	151	149	175	84	132	162	139
Y FFR 797 IT	135	151	128	166	100	115	153	125
L.S.D. (.05)	7.6	11.0	22.6	24.5	18.9	18.0	21.2	14.8
C.V. %	15.0	8.6	10.6	9.1	18.9	16.4	15.8	13.0
Avg.	146.0	158.0	148.0	187.1	100.2	135.8	165.4	140.9
R-Square	0.79	0.72	0.47	0.46	0.36	0.78	0.82	0.90

*Evaluated with the 600 group only in 1997 & 1998. All other hybrids were evaluated in the 500 group only in 1997 & 1998.

¹In 1999 all hybrids (500 & 600) were evaluated in one test.

Table 11. Corn: Yield of full-season hybrids evaluated at 4 locations in 1999.

Color Brand	Hybrid	Yield	Knox- ville	Spring Hill	Ames Plantation	---Jackson--- Non-Irr. Irr.	
-----Bushels per acre-----							
Y Callahan	7975 (Bt)	144	176	69	135	148	192
Y FFR	849 IT	140	185	72	127	131	185
Y FFR	943	140	189	80	120	134	177
Y DeKalb	DK 697	135	187	50	128	131	178
Y Pioneer	31A13	134	164	78	101	141	184
Y FFR	828	132	178	60	113	136	173
Y Pioneer	31G20	130	182	43	110	146	172
Y AgriGold	6725	130	167	66	113	133	172
Y Terral	2930	130	167	73	127	132	151
Y Garst	8222 IMI	128	143	79	110	136	172
W Asgrow	RX 921 W	128	169	60	109	134	165
Y Funk	X 5583	125	161	68	88	128	179
Y Novartis	N 82 N 5	124	168	62	99	123	167
Y Mycogen	2815	121	168	58	74	139	167
Y FFR	897	121	167	57	109	110	164
Y Zimmerman	Z 39	121	165	62	90	127	161
Y Cargill	8412	121	151	66	99	119	168
Y AgriGold	AG 6725	120	160	65	111	116	149
W Asgrow	RX 901 W	120	165	50	107	125	154
Y Gutwein	2810	119	169	57	95	121	156
Y TN Exp.	TN 99-2	119	149	64	99	116	167
Y Crow's	691	117	158	45	96	124	161
Y TN Exp.	TN 99-1	114	147	49	113	114	149
Y AgriGold	AG 9843	107	144	51	74	122	141
L.S.D. (.05)		8.6	12.5	19.2	22.8	14.3	20.6
C.V.%		11.0	5.4	122.0	15.2	7.9	8.7
Avg.		125.8	165.8	61.9	106.1	128.7	166.8
R-Square		0.92	0.76	0.52	0.58	0.58	0.54

Table 12. Corn: Yield and other characteristics of full-season hybrids evaluated at 4 locations in 1999.

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture at Harvest
		Bu/A	No.	Rating ¹	No.	%
Y Callahan	7975 Bt	144	2.9	2.5	38	14.9
Y FFR	849 IT	140	1.8	2.7	40	14.8
Y FFR	943	140	1.9	2.5	41	15.0
Y DeKalb	DK 697	135	1.3	3.6	43	15.2
Y Pioneer	31A13	134	0.9	3.9	42	16.3
Y FFR	828	132	2.4	3.4	39	13.7
Y Pioneer	31G20	130	3.1	2.5	40	15.4
Y AgriGold	6725	130	2.4	2.7	43	15.1
Y Terral	2930	130	2.6	1.9	44	16.8
Y Garst	8222 IMI	128	2.4	1.7	41	16.8
W Asgrow	RX 921 W	128	3.6	2.4	39	15.5
Y Funk	X 5583	125	3.2	2.4	39	15.5
Y Novartis	N 82 N5	124	2.1	2.6	44	15.1
Y Mycogen	2815	121	1.6	2.3	36	14.2
Y FFR	897	121	2.1	2.5	38	14.7
Y Zimmerman	Z 39	121	1.6	2.4	44	14.3
Y Cargill	8412	121	3.1	3.5	42	15.0
Y AgriGold	AG 6725	120	2.6	2.9	44	14.7
W Asgrow	RX 901 W	120	2.1	2.3	42	15.7
Y Gutwein	2810	119	2.4	1.8	44	14.8
Y TN Exp.	TN 99-2	119	4.1	2.4	45	17.5
Y Crow's	691	117	2.7	3.2	43	14.9
Y Tn Exp.	TN 99-1	114	4.9	2.3	42	17.2
Y AgriPro	9843	107	1.4	2.0	40	15.0

¹Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 13. Corn: Yield of full-season hybrids evaluated at 4 locations for two years (1998-99).

Color Brand	Hybrid	Avg. Yield	Knox-ville	Ames Plantation	Spring Hill	----Jackson----- Non-Irr. Irr.	
-----Bushels per acre-----							
FFR	828	116	178	76	60	102	164
AgriGold	AG 6725	114	160	86	65	104	152
FFR	897	106	167	67	57	88	155
Crow's	691	105	158	63	45	102	153
L.S.D. (.05)		7.2	9.1	17.0	N.S.	7.5	N.S.
C.V. %		13.2	3.4	22.2	27.3	7.3	9.3
Avg.		109.9	165.7	73.6	46.7	98.9	156.1
R-square		0.93	0.84	0.88	0.19	0.95	0.56

Table 14. Corn: Yield and other characteristics of full-season hybrids evaluated at 4 locations for two years (1998-99).

Color Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Plant Ht.	Grain Moisture at Harvest
		Bu/A	Avg. No.	Rating ¹	In.	%
Y FFR	828	116	2.4	3.4	39	14.4
Y AgriGold	AG 6725	114	2.6	2.9	44	15.5
Y FFR	897	106	2.1	2.5	38	15.1
Y Crow's	691	105	2.7	3.2	43	15.4

Table 15. Corn: Yield of extra hybrids evaluated at 4 locations in 1999.

Color	Brand	Hybrid	Avg. Yield	Knox- ville	Spring Hill	Spring- field	Martin
-----Bushels per acre-----							
Y Pioneer		31B13 (Bt)	134	191	110	106	132
Y Pioneer		33G27 (Bt)	133	179	125	96	132
Y DeKalb	DK	626 (Bt)	132	190	96	113	128
Y Pioneer		32K62 (Bt)	123	157	107	107	122
Y DeKalb	DK	626 RR	123	151	118	117	103
Y Asgrow		738 RR	122	157	95	111	125
Y Pioneer		32K72	121	158	85	107	134
Y Asgrow	RX	730 YG	117	167	102	79	121
Y DeKalb	DK	679 BTY	117	131	125	93	119
Y Asgrow	RX	770 YG	114	153	109	76	115
L.S.D. (.05)			13.7	21.2	N.S.	19.4	N.S.
C.V. %			15.8	8.9	24.2	13.2	12.0
Avg.			123.5	163.4	107.1	100.5	123.1
R-Square			0.74	0.75	0.32	0.64	0.58

Table 16. Corn: Yield and other characteristics of extra hybrids evaluated at 4 locations in 1999.

Color	Brand	Hybrid	Avg. Yield	Lodged Plants	Husk Cover	Ear Ht.	Grain Moisture at Harvest
			Bu/A	Avg. No.	Rating ¹	In.	%
Y Pioneer		31B13 Bt	134	1.9	5.0	49	15.2
Y Pioneer		33G27 Bt	133	1.6	5.5	47	15.4
Y DeKalb	DK	626 Bt	132	3.6	5.3	46	14.0
Y Pioneer		32K62 Bt	123	2.3	5.8	48	15.6
Y DeKalb	DK	626 RR	123	1.7	5.5	46	14.1
Y Asgrow		738 RR	122	2.8	6.0	44	14.2
Y Pioneer		32K72	121	3.2	5.3	47	14.5
Y Asgrow	RX	730 YG	117	3.0	5.5	46	14.5
Y DeKalb	DK	679 BTY	117	1.7	5.8	52	15.5
Y Asgrow	RX	770 YG	114	3.0	5.5	44	14.5

¹Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Performance of Wheat and Barley varieties for 1999.
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-----WHEAT-----

Forty soft red winter wheat varieties were evaluated at Knoxville, Greeneville, Crossville, Spring Hill, Springfield, Milan, Martin and Jackson in 1999.

The 1999 spring was dry during the maturing stage of wheat and disease was light at most locations. Take-All disease was present at Knoxville and Spring Hill. The wheat trials at Jackson and Spring Hill were evaluated for a response to foliar fungicide. Milan data were reported separately due to deer injury to Northrup King Coker 9663. There were some unexplained lodging examples in other plots in the test.

The 1999 wheat data are reported in Tables 17 through 19. Pioneer brand 2568, Pioneer brand 2552, Pioneer brand 25R26, Northrup King Coker 9663, and USG 97-41 were among the top producers in 1999 (Table 17). Northrup King Coker 9474 and Patterson were among the lowest producing varieties. At Milan USG 97-41, Pioneer brand XW 674, Jackson, FFR 555 and Pioneer brand 2552 were among the highest yielding varieties.

Test weights were higher in 1999 than in previous years. The test weight and protein data will be reported later in another publication.

The three-year wheat data are shown in Tables 22 and 23. The leading varieties in yield were Pioneer brand 2540, Pioneer brand 2552, Pioneer brand 2568, N.K. Coker 9663, Pioneer brand 25R26, and FFR 555.

The recommended wheat varieties for 1999-2000 are Clemens¹, FFR 555, FFR 522, Foster¹, Madison¹, American Patriot¹, Pioneer brand 2552, Pioneer brand 2540, Pioneer brand 2568, Pioneer brand 25R26, Northrup King Coker

9663, Pioneer brand 2684¹, Northrup King Coker 9543¹, Jackson, Shiloh, and Verne¹.

-----BARLEY-----

Three winter barley varieties were evaluated in 1999 (Tables 26 and 27). Nomini produced the highest average yield (Table 26).

-----FALL-SEEDED OATS-----

No data are reported for 1999.

¹Present plans indicate that this variety will not be recommended after 2000.

Table 17. Wheat: Yield of soft red winter wheat varieties evaluated in 1999.

		Avg. Knox- Cross- Spring-- --Spring Hill-- --Jackson-- Martin								
Brand	Variety	Yield	ville	ville	field	No-Sp.	Sprayed	No-Sp.	Sprayed	
-----Bushels per acre-----										
Pioneer	2568	72	95	80	56	68	75	71	68	66
Pioneer	2552	72	93	82	54	69	73	71	73	64
Pioneer	25R26	71	77	86	57	68	71	69	74	66
N.K. ¹ Coker	9663	70	76	80	58	65	71	68	71	71
USG ²	97-41	70	85	92	52	62	67	65	71	67
AgriPro ³	Shiloh	67	92	78	53	52	56	68	71	68
Pioneer	XW 674	67	90	81	64	59	60	58	63	63
Pioneer	2540	66	91	69	40	67	70	62	66	65
VA	Roane	65	79	78	47	64	64	62	61	65
AgriPro	Shiloh	65	80	86	54	55	54	63	65	60
GA	Roberts	65	86	85	53	55	54	58	60	66
VA Exp.	USG 3209	64	84	81	59	54	55	61	65	56
VA	Jackson	64	87	75	46	50	50	67	68	66
D.K. ⁴	DK 1551	64	69	80	45	67	67	57	62	61
KY Exp.	86C-61-8	63	85	82	46	54	53	65	68	54
FFR	555	63	93	83	44	49	48	61	66	59
N.K.	Coker 9704	63	82	83	47	56	54	62	60	59
Terral	TV 8670	62	70	67	44	54	60	67	70	62
Pioneer	26R46	62	92	86	63	48	50	52	52	49
IL	Kaskaskia	61	65	77	44	73	67	53	57	56
Willcross	795	61	76	82	41	53	60	54	56	66
IL	F322W	61	83	92	51	45	41	62	61	52
AgriPro	Patton	61	72	84	43	49	51	63	64	59
USG	3408	60	81	80	49	61	55	50	54	52
D.K.	DK 9121	60	84	89	41	51	51	51	55	56
AgriPro	Foster	59	75	81	48	45	45	59	64	56
D.K.	DK 9027	59	82	75	33	53	56	55	59	59
FFR	522	59	78	77	42	55	58	51	53	58
D.K.	DK 8051	57	67	79	36	58	56	52	54	57
VA	Madison	57	88	69	47	33	38	60	64	55
Willcross	728	57	68	69	40	57	54	54	56	55
Terral	TV 8557	57	78	80	46	52	53	51	52	40
Terral	TV 8768	56	78	52	48	51	52	57	58	55
KY	Verne	56	79	79	45	43	50	47	49	54
Pioneer	XW 574	56	75	65	38	48	50	56	55	59
USG	97-20	55	82	77	42	40	45	46	53	57
VA	Pocahontas	55	78	75	47	42	44	53	53	49
VA	Wakefield	55	77	72	45	35	38	54	60	58
N.K.	Coker 9474	54	67	65	36	56	56	52	53	51
IN	Patterson	52	73	76	37	44	42	51	51	46
L.S.D. (.05)		3.4	13.6	11.2	11.7	9.7	9.0	5.4	5.6	9.1
C.V.%		11.3	12.1	10.2	17.8	12.8	11.6	6.6	6.6	11.1
Avg.		61.6	80.3	78.3	47.0	54.0	55.4	58.4	60.8	58.4
R-square		0.86	0.55	0.59	0.55	0.71	0.76	0.82	0.81	0.59

¹N.K.=Northrup King. ²USG=UniSouth Genetics. ³Shiloh seed treated with Gaucho.⁴D. K.= Delta King.

Table 18. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated in eight environments in 1999.

Brand	Variety	Avg. Yield	Date Headed	Date Mature	Plant Height
		Bu/A			In.
Pioneer	2568	72	4-29	6-1	35
Pioneer	2552	72	4-30	6-2	34
Pioneer	25R26	71	4-30	6-2	34
Northrup King Coker	9663	70	4-29	6-1	36
USG	97-41	70	4-30	5-31	36
AgriPro (Gaucho)	Shiloh	67	4-29	5-31	34
Pioneer	XW 674	67	4-29	5-31	34
Pioneer	2540	66	5-5	6-4	35
VA	Roane	65	5-3	6-3	34
AgriPro	Shiloh	65	4-29	5-31	34
GA	Roberts	65	4-29	5-30	34
VA Exp. (94-54-479)	USG 3209	64	4-29	5-31	30
VA	Jackson	64	4-30	5-31	35
Delta King	DK 1551	64	4-30	6-1	33
KY Exp.	86C-61-8	63	4-29	6-1	36
FFR	555	63	4-30	6-1	35
Northrup King Coker	9704	63	4-28	5-30	33
Terral	TV 8670	62	4-28	5-31	34
Pioneer	26R46	62	4-28	5-30	33
IL	Kaskaskia	61	5-6	6-4	38
Willcross	795	61	5-3	6-4	35
IL	F322W	61	4-29	5-31	38
AgriPro	Patton	61	4-29	5-31	36
USG	3408	60	5-1	6-1	35
Delta King	9121	60	4-29	6-2	34
AgriPro	Foster	59	4-29	6-2	36
Delta King	DK 9027	59	5-1	6-3	36
FFR	522	59	4-30	6-1	33
Delta King	DK 8051	57	4-30	6-1	33
VA	Madison	57	4-28	5-29	34
Willcross	728	57	4-30	6-2	37
Terral	TV 8557	57	4-28	5-29	36
Terral	TV 8768	56	4-30	6-1	38
KY	Verne	56	4-30	6-1	38
Pioneer	XW 574	56	5-4	6-2	33
USG	97-20	55	4-29	6-1	32
VA	Pocahontas	55	4-30	5-31	33
VA	Wakefield	55	4-29	5-31	37
Northrup King Coker	9474	54	4-29	5-31	33
IN	Patterson	52	4-29	5-30	36

Table 19. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at Milan in 1999.

Brand	Variety ¹	Yield	Date Mature	Plant Height
		Bu/A		In.
USG (UniSouth Genetics)	97-41	83	5-30	36
Pioneer	XW 674	77	5-25	35
VA	JACKSON	76	5-27	36
FFR	555	75	6-1	36
Pioneer	2552	75	6-1	35
Terral	TV 8670	73	5-28	35
FFR	522	73	5-29	34
Northrup King Coker	9704	73	5-27	32
AgriPro (Gaucho)	Shiloh	71	5-30	33
Pioneer	2568	70	5-31	35
GA	Roberts	70	5-27	32
KY (Exp.)	Ky 86C-61-8	69	6-1	35
VA	Wakefield	68	5-30	37
VA	Pocahontas	67	5-26	33
Delta King	DK 1551	67	6-1	33
AgriPro	Foster	67	6-1	36
USG	97-20	66	6-1	32
Terral	TV 8557	65	5-24	36
Willcross	728	65	6-1	37
AgriPro	Patton	65	5-31	35
Pioneer	25R26	64	6-1	33
KY	Verne	64	5-31	40
VA (94-54-479) USG	3209	64	5-31	30
Terral	TV 8768	64	5-29	40
Delta King	DK 9027	63	6-3	36
IN	Patterson	63	5-28	39
VA	Madison	63	5-27	33
Willcross	795	63	6-3	37
Delta King	DK 9051	62	5-29	34
Pioneer	2540	61	6-3	36
VA	Roane	61	6-1	33
USG	3408	60	5-26	35
Agri Pro	Shiloh	60	5-29	34
Pioneer	XW 574	60	5-30	33
Delta King	DK 9121	60	5-31	34
Northrup King Coker	9474	60	5-29	35
IL	Kaskaskia	57	6-1	39
IL	F322W	57	5-28	36
Pioneer	26R46	56	5-27	31
L.S.D. (.05)		9.6		
C.V. %		10.3		
Avg.		66.1		
R-Square		0.53		

¹No data reported for Northrup King Coker 9663 due to deer damage to three replications.

Table 20. Wheat: Yield of soft red winter wheat varieties evaluated in 15 environments from 1998 through 1999.

Brand	Variety	Avg. Yield	Knox-ville	Cross-ville	Spring-field	--Spring Hill-- No.Sp. Sprayed	--Jackson-- No.Sp. Sprayed	Martin		
		-----Number of environments-----								
		15	2	2	2	2	1	2	2	2
Pioneer	2568	63	78	48	51	70	75	64	62	59
Pioneer	25R26	62	68	55	55	70	71	63	64	56
Pioneer	2552	62	80	58	56	70	73	59	57	54
Pioneer	2540	61	76	52	50	71	70	60	58	58
N.K. Coker	9663	60	70	61	56	60	71	58	56	57
AgriPro ¹	Shiloh	59	81	60	51	56	56	59	57	54
VA	Roane	58	72	60	47	64	64	54	52	55
FFR	555	57	75	55	47	60	48	56	55	54
AgriPro	Shiloh	57	71	59	52	50	54	58	57	50
VA	Jackson	56	71	49	46	58	50	59	58	55
FFR	522	55	73	58	45	57	58	50	52	49
Willcross	795	55	59	56	44	65	60	51	52	53
AgriPro	Patton	54	64	52	44	58	51	56	53	57
N.K. ² Coker	9704	54	69	52	44	56	54	53	52	50
VA 94-54-479	USG 3209 ⁴	54	65	48	48	53	55	54	55	50
AgriPro	Foster	54	62	52	48	55	45	54	56	49
D.K. ³	DK 9027	53	69	46	39	58	56	54	55	47
GA	Roberts	53	67	51	40	51	54	54	55	50
KY	Verne	52	71	56	45	53	50	48	49	49
Terral	TV 8768	52	68	37	48	55	52	53	52	51
VA	Madison	52	75	48	44	44	38	55	54	49
Terral	TV 8557	51	67	51	44	56	53	49	48	42
N.K. Coker	9474	51	60	47	37	62	56	50	50	46
D.K.	DK 9051	50	58	49	36	60	56	49	49	46
VA	Pocahontas	48	64	48	41	45	44	48	47	45
IL	Patterson	48	65	46	42	48	42	48	47	42
L.S.D. (.05)		2.7	0.80	7.0	6.9	8.9	9.6	5.1	4.6	6.1
C.V.%		14.2	11.8	13.7	15.1	15.5	12.2	9.6	10.7	12.4
Avg.		54.7	68.2	51.8	16.3	58.3	56.1	54.1	53.9	49.8
R-Square		0.80	0.82	0.95	0.61	0.62	0.74	0.74	0.67	0.82

¹Shiloh seed treated with Gaucho. ²N.K.=Northrup King. ³D.K.=Delta King.

⁴USG 3209 is tested as VA 94-54-479.

Table 21. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated in 15 environments from 1998 through 1999.

Brand	Variety	Avg. Yield	Date Headed	Date Mature	Plant Ht.
		Bu/A			
Pioneer	2568	63	4-29	6-2	35
Pioneer	25R26	62	5-2	6-2	33
Pioneer	2552	62	5-2	6-3	35
Pioneer	2540	61	5-5	6-4	35
Northrup King Coker	9663	60	4-31	6-3	37
AgriPro (Gaucho)	Shiloh	59	4-31	6-2	34
VA	Roane	58	5-4	6-3	33
FFR	555	57	5-2	6-3	35
AgriPro	Shiloh	57	4-31	6-1	34
VA	Jackson	56	5-2	6-1	35
FFR	522	55	4-31	6-2	34
Willcross	795	55	5-5	6-4	36
AgriPro	Patton	54	4-30	6-1	36
Northrup King Coker	9704	54	4-29	5-31	32
VA Exp.94-54-479	USG 3209	54	4-30	6-2	35
AgriPro	Foster	54	4-31	6-3	35
Delta King	DK 9027	53	5-2	6-3	35
GA	Roberts	53	4-29	6-2	33
KY	Verne	52	5-2	6-2	38
Terral	TV 8768	52	5-2	6-2	38
VA	Madison	52	4-29	5-31	35
Terral	TV 8557	51	4-30	5-31	37
Northrup King Coker	9474	51	4-30	5-31	34
Delta King	DK 9051	50	5-2	6-2	33
VA	Pocahontas	48	4-30	5-31	33
IL	Patterson	48	4-30	5-31	37

Table 22. Wheat: Yield of soft red winter wheat varieties evaluated in 22 environments from 1997 through 1999.

22 environments from 1997 through 1999:										
Brand	Variety	Avg. Yield	Knox-ville	Cross-ville	Spring-Field	--Spring Hill-- No.Sp. Sprayed	---Jackson--- No.Sp. Sprayed	Martin		
-----Number of environments-(Years)-----										
		22	3	3	3	3	1	3	3	3
-----Bu/A-----										
Pioneer	2540	60	75	53	56	65	70	57	58	51
Pioneer	2552	59	81	52	56	66	73	56	53	47
Pioneer	2568	59	73	55	51	59	75	61	61	54
N.K. Coker	9663	58	71	57	59	58	71	55	55	50
Pioneer	25R26	58	68	50	58	60	71	60	59	49
FFR	555	57	76	54	54	61	48	53	55	49
AgriPro	Shiloh	55	75	56	51	53	54	54	54	46
VA	Jackson	55	72	46	51	55	50	57	58	49
FFR	522	55	74	54	55	58	58	50	50	47
AgriPro	Foster	52	64	48	50	53	45	52	55	47
VA	Madison	50	72	48	41	40	38	54	54	45
KY	Verne	50	69	53	45	48	50	45	48	43
N.K. Coker	9474	49	57	45	40	60	56	46	48	42
IN	Patterson	48	65	45	44	49	42	48	48	39
VA	Pocahontas	47	65	44	44	44	44	47	47	44
L.S.D. (.05)		2.3	6.8	5.8	6.0	7.9	9.6	4.3	4.7	6.5
C.V.%		15.1	11.9	14.2	14.8	17.6	11.9	10.1	12.6	17.2
Avg.		54.3	70.4	50.1	50.2	55.3	56.4	53.0	53.5	46.9
R-Square		0.75	0.76	0.93	0.66	0.65	0.83	0.75	0.63	0.68

Table 23. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated from 1997 through 1999.

Brand	Variety	Avg. Yield	Date Headed	Date Mature	Plant Ht.
		Bu/A ¹			
Pioneer	2540	60 A	5-3	6-6	34
Pioneer	2552	59 A	4-30	6-3	34
Pioneer	2568	59 AB	4-28	6-2	36
Northrup King	9663	58 AB	4-29	6-6	37
Pioneer	25R26	58 AB	5-1	6-4	33
FFR	555	57 BC	5-1	6-4	35
AgriPro	Shiloh	55 C	4-30	6-2	34
VA	Jackson	55 C	5-1	6-2	35
FFR	522	55 C	4-30	6-3	32
AgriPro	Foster	52 D	4-30	6-4	35
VA	Madison	50 DE	4-27	6-4	36
KY	Verne	50 DE	5-1	6-3	41
Northrup King	9474	49 EF	4-29	6-1	36
IN	Patterson	48 F	4-29	6-2	39
VA	Pocahontas	47 F	4-29	6-3	35

¹Figures followed by the same letter are not different in yield at the .05 level.

Table 24. Wheat: Yield of 12 soft red winter wheat varieties evaluated at Ames Plantation in 1999 at two planting dates.

Brand	Variety	Avg. Yield	-----Planted-1998-----	
			Nov. 3	Nov. 23
-----Bushels per acre-----				
FFR	555	67	62	71
FFR	522	66	68	65
Coker	9663	65	58	72
Pioneer	2540	64	61	66
AgriPro	Shiloh	64	54	73
Pioneer	25R26	64	55	72
KY	Verne	63	61	66
Pioneer	2580	62	59	64
AgriPro	Foster	60	56	65
OH	Cardinal	59	55	62
Pioneer	2684	58	53	64
FFR	525	58	52	63
L.S.D. (.05)		N.S.	N.S.	N.S.
C.V.%		13.5	16.8	14.3
Avg.		62.4	57.9	66.9
R-Square		0.80	0.34	0.41

Table 25. Yield and other characteristics of 12 soft red winter wheat varieties evaluated at Ames Plantation in 1999 at two seeding dates.

Brand	Variety	Avg. Yield	Headed	Plant
				Ht.
		Bu/A	Date	In.
FFR	555	67	4-25	36
FFR	522	66	4-24	35
Coker	9663	65	4-21	39
Pioneer	2540	64	4-30	34
AgriPro	Shiloh	64	4-25	36
Pioneer	25R26	64	4-26	34
KY	Verne	63	4-24	39
Pioneer	2580	62	4-22	34
AgriPro	Foster	60	4-25	35
OH	Cardinal	59	5-1	37
Pioneer	2684	58	4-20	33
FFR	525	58	4-23	36
L.S.D. (.05)		N.S.	---	---
C.V.%		13.5	---	---
Avg.		62.4	---	---
R-square		0.80	---	---

Table 26. Barley: Yield of barley varieties evaluated in 1999¹.

Brand	Variety	Avg. Yield	Knox- ville	Cross- ville	Spring Hill	Jackson
-----Bu/a-----						
VA	Nomini	100	117	106	81	97
VA	Starling	97	117	105	85	80
VA	Callao	93	114	102	86	69
L.S.D. (.05)		4.7	N.S.	N.S.	N.S.	11.9
C.V.%		6.6	9.1	8.6	11.1	8.4
Avg.		96.5	115.7	104.5	83.7	82.1
R-Square		0.94	0.38	0.24	0.39	0.88

¹No data are reported for Springfield and Greeneville due to high C.V's.

Table 27. Barley: Yield and other characteristics of barley varieties evaluated in 1999.

Brand	Variety	Avg. Yield	Date Headed	Date Mature	Plant Height	Lodged	Test Weight
		Bu/a			In.	%	Lb/Bu.
VA	Nomini	100	4-18	5-6	37	29	44.3
VA	Starling	97	4-23	5-6	36	44	42.7
VA	Callao	93	4-20	5-5	31	81	45.1

Early Maturing Soybean Varieties (Maturity Group IV)

In 1999 forty early-maturing varieties were evaluated at Knoxville, Crossville, Ames Plantation, and Milan. Commercial strains of maturity group IV were grown at Jackson only. No data are reported for Jackson and Springfield due to low yields. At Springfield many plots did not yield enough to obtain a moisture sample. Ames Plantation yields were reported, but they were not included in the state average. Rainfall data are reported for all locations in another chapter. The early maturing data are reported in Tables 28 and 29. Delta King XTJ 784, HyPerformer AP 4880, Delta King XTJ 584 RR, TN Exp. 93-87, Dixie 478, Delta King XTJ 684, and Asgrow A 4341 were among the higher producing varieties (Table 28). Among the lower yielding varieties in 1999 were FFR 495, Terra TS 438 C, TN 4-94, Deltapine DP 4344 RR, Delta Grow 4640, and Terra TS 4792 (Table 28).

The two-year average yields and other characteristics are presented in Tables 30 and 31. Dixie 478, Deltapine DP 3478, DeKalb CX 450 C, and Hornbeck HBK 4890 were the top four varieties in yield (Table 30). TN 4-94 produced the lowest average yield. TN 93-87 (Exp.) produced the same as the average for the tests at 45 Bu/A (Table 30). Manokin, TN 93-87 (Exp.), Riverside TVS 490, and Asgrow A 4602 were all on the late end of Maturity Group IV.

Three years data are shown in Tables 32 and 33. Deltapine DP

3478, Dixie 478, HyPerformer AP 4880, and Asgrow A 4922 yielded the highest ranging from 48 Bu/A to 50 Bu/A (Table 32). Manokin was the latest maturing variety in Maturity Group IV (Table 33).

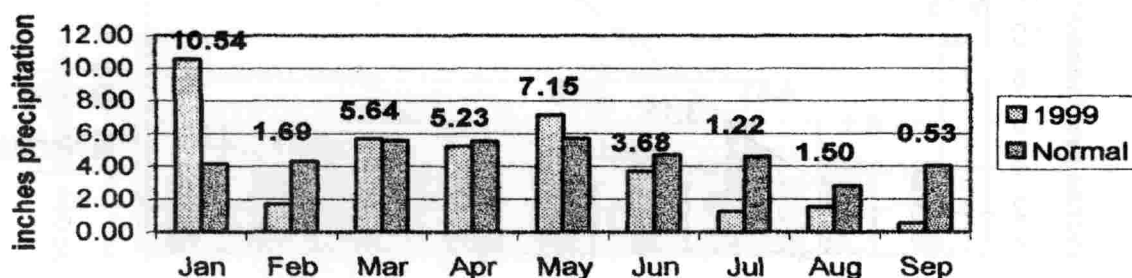
UNUSUAL PRECIPITATION PATTERN ACROSS STATE IN 1999

By Joanne Logan, Climatologist

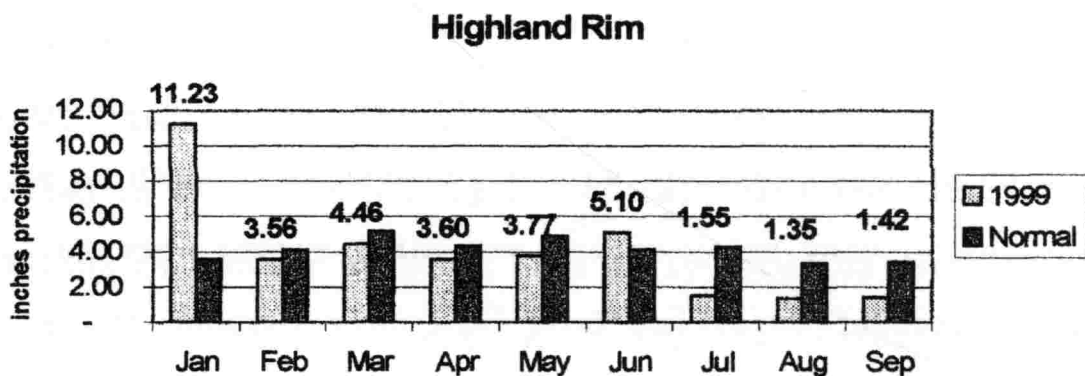
Although the average precipitation that fell at most locations from January through September of 1999 was fairly average, the distribution at many locations was very uneven from month to month. At most sites, a very rainy spring and early summer were followed by a severe drought occurring from late July through the end of September. La Nina, a cooling of the waters in the eastern tropical Pacific, has been implicated in the drought, but La Nina does not normally have much of an effect on summers in Tennessee.

The weather records for the Ames Plantation began in 1976. During 1999, only 3.25" of rain fell during the July through September period, the lowest amount on record.

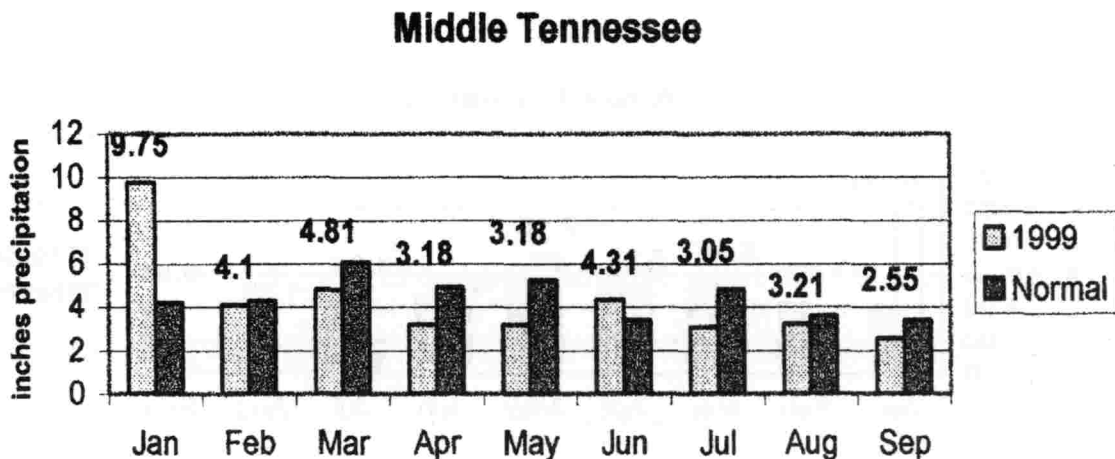
Ames Plantation



The weather records for the Highland Rim Experiment Station in Springfield began in 1944. During 1999, only 4.32" of rain fell during the July through September period, the lowest amount on record.

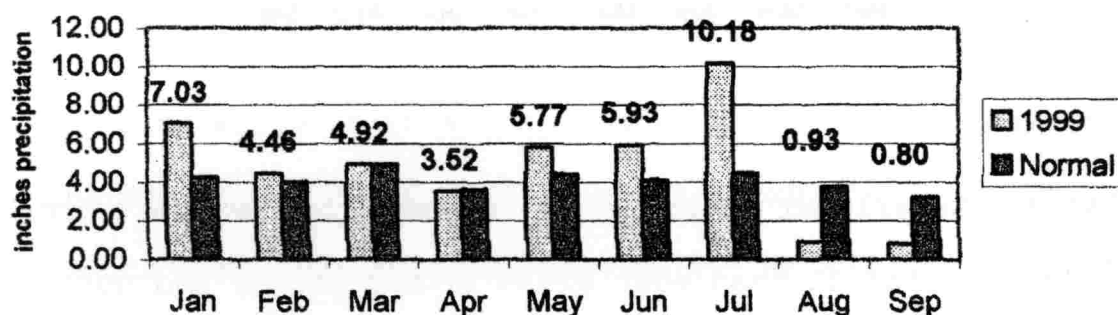


Weather data collection at the Middle Tennessee Experiment Station began in 1953. Rainfall throughout much of the growing season was somewhat below normal. However, the late summer drought was not as pronounced as in other regions of the state.



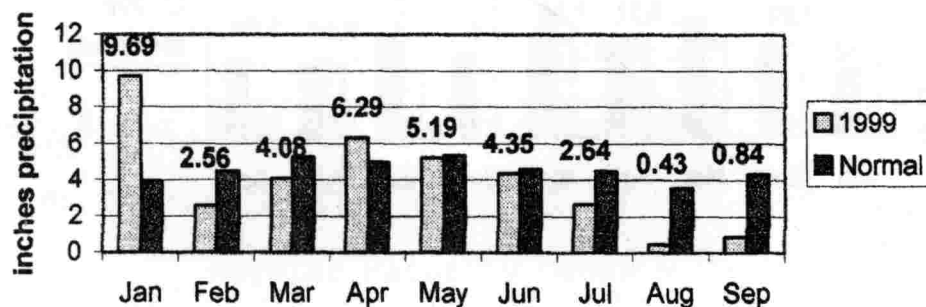
July was one of the rainiest on record for the Knoxville Experiment Station. However, it was quickly followed by a devastating drought. The total precipitation for both August and September at Knoxville was 1.73", which was 5.24" below normal for that two-month period. It was the driest August through September period on record since the station began collecting weather records in 1960.

Knoxville

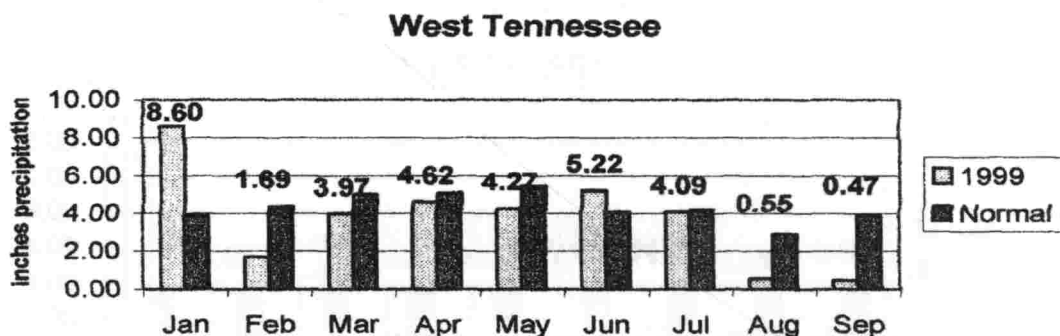


Milan Experiment also experienced a record-breaking drought from August to September.

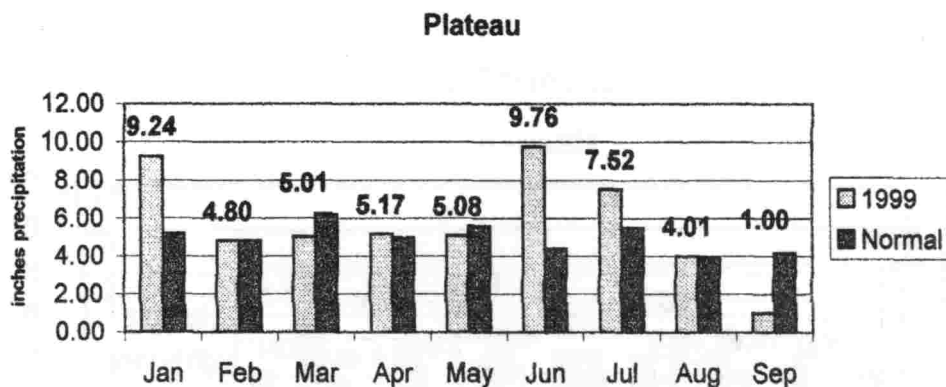
Milan



The West Tennessee Experiment Station in Jackson also encountered a late summer drought, breaking the record for the lowest amount of August through September rainfall.



The Plateau Experiment Station in Crossville, which normally receives more rainfall than most areas of the state, had normal or above rainfall until September.



Roundup Ready Varieties of Maturity Group IV

Thirty Roundup Ready varieties were evaluated at five locations in 1999. No data are reported for Ames Plantation and Springfield due to very low yields as a result of the lack of rainfall during the growing season. The rainfall data are reported in the previous chapter by Dr. Logan.

Knoxville and Milan trials were conducted on Sequatchie silt loam and Collins silt loam respectively. The test at Knoxville was irrigated once. This irrigation at Knoxville seemed to stimulate growth, which may have resulted in Sudden Death Syndrome disease (SDS), being worse at this location in 1999. Ratings were made for SDS and are shown in Table 34 for the Knoxville location.

Delta King 4965 RR, Sure Grow SG 498 RR and Pioneer brand 9492 RR produced higher yields than the mean (Table 34). USG 7478 RR, Delta King 4762 RR and Hornbeck HBK 4660 RR produced lower yields than the mean (Table 34). The early-maturing Roundup Ready varieties ranged from 9 - 12 through 9 - 26 in maturity (Table 35).

The two year results for early Roundup Ready varieties are presented in Tables 36 and 37. Asgrow AG 4301, Asgrow A 4702 and Pioneer Brand 9492 RR were among the leading Roundup Ready varieties for two years (Table 36).

Regular Maturity Group V Varieties

Forty medium maturing regular varieties and non-Roundup Ready

varieties were evaluated in 1999. The regular variety trial results for maturity group V are shown in Tables 38 through 42. No yield data for maturity group V were reported for Springfield in 1999 due to low yields.

Asgrow A 5944, Delta King 5995, Asgrow A 5959, and Hornbeck HBK 5990 were among the leading varieties in yield (Table 38). The lower yielding varieties in regular maturity group V were Northrup King S 51-00, Riverside TS 520 and Deltapine DP 5354.

The two years data are presented in Tables 40 and 41. Asgrow A 5944, Asgrow A 5959, Delta King 5995, and Hornbeck HBK 5990 were among the leading varieties in yield (Table 40). Deltapine DP 5354 and Riverside RVS 520 were two of the lower producing varieties (Table 41).

The three years data are presented in Tables 42 and 43. Asgrow A 5944 and Delsoy 5500 produced higher yields than the mean of 44.9 bu/a (Table 42).

Roundup Ready Maturity Group V Results

The average 1999 yields for five locations ranged from 29 bu/a to 40 bu/a (Table 44).

Due to the extremely dry weather in the fall of 1999, all soybean varieties matured earlier than normal. The two year results for Roundup Ready maturity group V varieties are presented in Tables 46 and 47. Asgrow AG 5901, Deltapine DP 5806 RR, FFR RT

587 RR, and Deltapine DP 5644 RR yielded well over a two year period.

The three years data are presented in Tables 48 and 49. Asgrow AG 5901 and Sure Grow SG 597 RR were the two leading varieties (Table 48).

Table 28. Soybeans: Yield of Maturity Group IV varieties evaluated at 4 locations in 1999.

Brand	Variety	Avg. Yield	Knox- ville	Cross- ville	Milan	Ames ¹ Plantation
-----Bushels per acre-----						
Delta King	XTJ 784	49	54	40	52	9
HyPerformer	AP 4880	48	51	43	51	14
Delta King	XTJ 584 RR	48	43	46	55	14
TN Exp.	TN 93-87	48	47	52	45	12
Dixie	478	47	46	46	50	11
Delta King	XTJ 684	47	54	39	47	12
Asgrow	A 4341	47	47	42	50	12
AgriPro	APX 94882	46	50	42	47	12
Deltapine	DP 3478	46	46	40	51	10
Deltapine	DP 4750 RR	46	47	43	46	9
Riverside	TVS 490	45	44	53	40	10
Hornbeck	HBK 4891	45	46	45	45	10
MD Exp.	92-5769	45	39	53	42	12
Deltapine	DP 4690 RR	45	43	44	47	16
Pioneer	9482	44	51	43	39	17
Pioneer	9492	44	40	41	50	13
USG	7499	44	45	42	45	8
Terral	TVX 4881	44	42	42	48	16
MD	Manokin	44	40	46	45	14
FFR	HT 4985 STS	43	41	45	44	14
Deltapine	DP 4909	43	43	41	46	14
Delta King	XTJ 974	43	42	42	45	9
HyPerformer	HY 4540	42	42	35	51	14
Delta King	4860	42	39	37	50	17
Asgrow	A 4922	42	44	39	44	10
Asgrow	A 4604	42	44	40	43	15
Hornbeck	HBK 4600	42	40	37	49	15
Terral	TV 4664	42	43	38	45	12
AgriPro	APX 94546	42	45	35	46	13
Asgrow	AG 5602	42	40	44	41	9
DeKalb	CX 4506	41	43	35	45	17
Hornbeck	HBK 4890	41	45	53	26	6
Terra	RVS 499	41	41	48	35	8
Erwin-Keith	XP 4900	41	37	41	45	16
FFR	495	40	44	43	34	8
Terra	TS 438 C	40	41	34	45	14
TN	TN 4-94	37	43	36	32	13
Deltapine	DP 4344 RR	37	38	38	34	10
Delta Grow	4640	36	32	38	40	12
Terra	TS 4792	36	38	31	39	17
L.S.D. (.05)		4.2	7.5	7.2	6.5	5.8
C.V.		12.0	12.4	12.4	10.4	33.4
Avg.		43.2	43.4	41.8	44.4	12.5
R-Square		0.59	0.50	0.62	0.69	0.52

¹Data not included in state average.

Table 29. Soybeans: Yield and other characteristics of varieties (Maturity Group IV) evaluated at 3 locations in 1999.

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Ht. In.	Lodged %	Flower ¹ Color	Pubes- cence ² Color	Moisture at Harvest %
		Bu/A	Date	Date	In.	%			
Delta King	XTJ 784	49	7-4	9-14	41	58	P	T	12.2
HyPerformer	AP 4880	48	7-3	9-18	40	42	P	T	12.2
Delta King	XTJ 584 RR	48	7-7	9-16	39	3	W	T	12.5
TN Exp.	TN 93-87	48	7-18	9-25	35	32	P	G	12.4
Dixie	478	47	7-8	9-16	46	12	P	G	12.6
Delta King	XTJ 684	47	7-3	9-15	39	75	P	T	12.3
Asgrow	A 4341	47	7-4	9-13	33	7	P	T	13.0
AgriPro	APX 94882	46	7-6	9-14	39	65	P	LT	12.1
Deltapine	DP 3478	46	7-6	9-14	38	28	P	LT	12.4
Deltapine	RR DP 4750	46	7-5	9-23	45	53	P	T	12.1
Riverside	TVS 490	45	7-17	9-27	47	28	P	G	15.5
Hornbeck	HBK 4891	45	7-4	9-14	37	50	P	LT	12.5
MD Exp.	92-5769	45	7-15	9-25	30	30	P	G	14.1
Deltapine	RR DP 4690	45	7-4	9-18	39	43	P	T	12.0
Pioneer	9482	44	7-6	9-15	40	42	W	T	12.2
Pioneer	9492	44	7-9	9-16	38	8	W	T	12.6
USG	7499	44	7-5	9-22	39	15	P	T	15.3
Terral	TVX 4881	44	7-5	9-17	38	45	P	T	11.8
MD	Manokin	44	7-15	9-26	31	20	W	T	13.9
FFR	HT 4985 STS	43	7-17	9-27	36	23	P	T	13.1
Deltapine	DP 4909	43	7-8	9-26	45	20	W	T	14.4
Delta King	XTJ 974	43	7-4	9-15	37	28	P	T	12.2
HYPerformer	HY 4540	42	7-8	9-15	38	3	W	T	13.1
Delta King	4860	42	7-8	9-15	37	2	W	T	13.2
Asgrow	A 4922	42	7-5	9-20	42	18	W	T	12.5
Asgrow	A 4604	42	7-6	9-15	37	32	P	T	13.0
Hornbeck	HBK 4600	42	7-9	9-16	39	5	W	T	12.8
Terral	TV 4664	42	7-5	9-14	42	18	W	T	12.5
AgriPro	APX 94546	42	7-7	9-14	39	25	P	T	13.2
Asgrow ³	AG 5602	42	7-20	10-3	37	30	W	G	17.7
DeKalb	CX 450 C	41	7-5	9-03	42	32	P	T	12.8
Hornbeck	HBK 4890	41	7-11	9-20	44	3	P	G	12.7
Terra	RVS 499	41	7-16	9-26	48	37	P	G	14.0
Erwin-Keith	XP 4900	41	7-6	9-17	43	35	W	T	13.3
FFR	495	40	7-12	9-24	44	00	W	G	12.4
Terra	TS 438 C	40	7-5	9-13	33	53	W	T	12.9
TN	TN 4-94	37	7-8	9-22	47	52	P	G	12.8
Deltapine	RR DP 4344	37	7-4	9-17	43	68	W	T	12.0
Delta Grow	4640	36	7-6	9-16	36	7	W	T	13.5
Terra	TS 4792	36	7-6	9-16	43	55	P	T	12.3

¹Flower color: W=White P=purple.

²Pubescence color: T=Tawny, G=Gray and (LT)=Brown or light Tawny.

³Should have been evaluated in Maturity Group V Roundup Ready trials.

Table 30. Soybeans: Yield of Maturity Group IV varieties evaluated in 8 environments for two years (1998-99).

Brand	Variety	Avg. Yield	Knox- ville	Cross- ville	Spring- field	Ames Plantation	Milan
-----Number of environments (Years)-----							
		(8)	(2)	(2)	(1)	(1)	(2)
-----Bushels per acre-----							
Dixie	478	49	51	47	34	39	61
Deltapine	DP 3478	48	55	42	32	40	59
DeKalb	CX 450 C	48	52	41	35	30	65
Hornbeck	HBK 4890	47	55	46	36	34	50
HyPerformer	AP 4880	46	55	42	29	29	60
Terral	TV 4664	46	50	39	36	39	58
Pioneer	9492	46	49	43	34	32	59
Asgrow	A 4604	45	50	41	30	41	56
Pioneer	9482	45	54	42	32	33	53
Asgrow	A 4922	45	53	39	36	34	54
TN Exp.	TN 93-87	45	45	47	26	36	58
Asgrow	A 4602	45	49	41	38	37	52
Delta King	4860	45	49	39	40	28	57
MD	Manokin	44	48	44	27	29	54
Hornbeck	HBK 4600	43	47	38	36	28	56
Riverside	TVS 490	43	46	42	22	36	55
TN	TN 4-94	40	52	34	32	33	43
L.S.D. (.05)		5.0	5.7	5.2	10.3	11.0	5.8
C.V. %		22.4	11.4	12.5	22.1	22.7	10.5
Avg.		45.4	50.6	41.6	32.7	34.1	55.9
R-Square		0.53	0.73	0.60	0.48	0.41	0.88

Table 31. Soybeans: Yield and other characteristics of Maturity Group IV varieties evaluated in 8 environments for two years (1998-99).

Brand	Variety	Avg. Yield	Full Bloom	Matured	Plant Ht.	Lodged	Flower	¹ Pubes- cence	Moisture at Harvest
		Bu/A	Date	Date	In.	%	Color	Color	%
Dixie	478	49	7-8	9-15	42	23	P	G	12.5
Deltapine	DP 3478	48	7-4	9-16	38	28	P	G	12.0
DeKalb	CX 450 C	48	7-6	9-14	36	25	P	T	12.8
Hornbeck	HBK 4890	47	7-10	9-18	40	7	P	G	12.6
HyPerformer	AP 4880	46	7-3	9-16	38	28	P	G	12.2
Terral	TV 4664	46	7-4	9-13	37	10	W	T	12.4
Pioneer	9492	46	7-6	9-15	36	14	W	T	12.6
Asgrow	A 4604	45	7-4	9-15	37	24	P	T	12.7
Pioneer	9482	45	7-4	9-14	37	25	W	T	12.1
Asgrow	A 4922	45	7-4	9-18	40	18	W	T	12.6
TN Exp.	TN 93-87	45	7-16	9-20	33	24	P	G	12.3
Asgrow	A 4602	45	7-9	9-21	38	28	P	T	14.2
Delta King	4860	45	7-5	9-14	36	4	W	T	13.0
MD	Manokin	44	7-16	9-22	29	11	W	T	13.6
Hornbeck	HBK 4600	43	7-5	9-15	36	5	W	T	12.9
Riverside	TVS 490	43	7-16	9-21	45	24	P	G	13.3
TN	TN 4-94	40	7-6	9-20	44	36	P	G	12.9

¹Flower color: W=White P=purple.

²Pubescence color: T=Tawny, G=Gray and (T)B=Brown.

Table 32. Soybeans: Yield of Maturity Group IV varieties evaluated in thirteen environments for three years (1997-99).

Brand	Variety	Avg. Yield	Knox- ville	Cross- ville	Spring- field	Milan	Ames Plantation
		-----Number of environments (Years)-----					
		13	3	3	2	3	2
		-----Bushels per acre-----					
Deltapine	DP 3478	50	54	42	34	72	40
Dixie	478	49	52	46	36	69	35
HyPerformer	AP 4880	48	54	42	31	68	35
Asgrow	A 4922	48	54	40	37	64	36
DeKalb	CX 450 C	47	51	40	31	72	32
Pioneer	9482	47	53	41	34	64	37
Terral	TV 4664	47	50	39	35	66	38
Pioneer	9492	46	49	42	33	65	33
TN Exp.	TN 93-87	46	48	42	29	67	33
Deltapine	DP 4860	45	49	37	36	65	33
MD	Manokin	45	50	40	32	61	32
Hornbeck	HBK 4600	43	46	38	33	61	30
TN	TN 4-94	42	51	33	35	51	34
L.S.D. (.05)		2.6	5.3	4.6	6.2	5.3	6.2
C.V.%		14.4	13.0	14.2	18.5	10.1	18.2
Avg.		46.4	50.7	40.3	33.5	65.0	34.5
R-Square		0.85	0.59	0.48	0.37	0.89	0.45

Table 33. Soybeans: Yield and other characteristics of Maturity Group IV varieties evaluated in 13 environments for three years (1997-99).

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Plant Ht.	Lodged	Flower	Pubes- cence
		Bu/A	Date	Date	In.	%	Color	Color
Deltapine	DP 3478	50	7-7	9-17	36	29	P	G(LT)
Dixie	478	49	7-10	9-16	39	31	P	G
HyPerformer	AP 4880	48	7-6	9-18	35	32	P	B
Asgrow	A 4922	48	7-8	9-20	38	14	W	T
DeKalb	CX 450 C	47	7-9	9-14	34	29	P	T
Pioneer	9482	47	7-7	9-16	35	26	W	T
Terral	TV 4664	47	7-7	9-15	35	8	W	T
Pioneer	9492	46	7-9	9-16	33	12	W	T
TN Exp.	TN 93-87	46	7-17	9-22	32	21	P	G
Delta King	4860	45	7-8	9-16	33	6	W	T
MD	Manokin	45	7-17	9-24	29	19	W	T
Hornbeck	HBK 4600	43	7-9	9-17	33	3	W	T
TN	TN 4-94	42	7-9	9-21	40	31	P	G

¹Flower color: W=White P=Purple.

²Pubescence color: T=Tawny, G=Gray and (LT)=Light Tawny.

Table 34. Soybeans: Yield of Maturity Group IV Roundup Ready varieties evaluated at 3 locations in 1999.

Brand	Variety	Avg. Yield	Knox- ville	SDS ¹ Cross- ville	Milan
Rating 0 - 10					
-----Bushels per acre-----					
		bu/a	bu/a	bu/a	bu/a
Delta King	4965 RR	44	52 1.0	29	52
Sure Grow	SG 498 RR	44	44 0.5	34	54
Pioneer	9492 RR	44	36 5.2	37	58
Terral	TVX 4589 RR	43	44 4.5	33	54
Terral	TVX 4787 RR	42	47 1.5	34	44
Asgrow	AG 4301	41	41 3.8	32	51
USG	7489 RR	41	48 1.2	34	42
USG	7459 RR	41	46 1.8	32	45
USG	7499 RR	41	48 1.2	31	43
Asgrow	AG 4702	40	36 5.5	32	53
Asgrow	AG 4901	40	37 7.2	34	48
AgriPro	APX 94888 RR	40	46 2.2	36	37
Sure Grow	SG 468 RR	40	43 1.0	38	37
Hartz	H 4994 RR	40	42 1.5	37	39
Asgrow	AG 4501	39	42 2.5	32	44
Delta King	XTJ 894 RR	39	48 1.5	33	37
Hornbeck	HBK 4855 RR	39	43 1.2	33	40
Terra	TS 466 RR	38	37 1.8	31	45
Asgrow	AG 4602	37	35 4.8	30	47
Delta Grow	4650 RR	37	39 1.0	28	44
Pioneer	94B81 RR	37	46 3.8	29	36
DeKalb	CX 444 C RR	37	34 7.5	32	44
Asgrow	AG 4601	37	33 7.8	29	48
Dyna Gro	3463 RR	36	36 7.0	30	42
Terral	TV 4890 RR	35	33 7.2	28	45
USG	7449 RR	35	39 1.8	29	37
Erwin Keith	XP 4700 RR	34	32 1.2	29	41
USG	7478 RR	33	34 7.8	23	44
Delta King	4762 RR	33	30 7.5	32	38
Hornbeck	HBK 4660 RR	31	31 5.8	27	36
L.S.D. (.05)		5.2	8.6	6.7	10.2
C.V. %		16.7	15.3	15.0	16.5
Avg.		38.6	40.2	31.6	44.2
R-Square		0.65	0.58	0.59	0.52

¹SDS-Sudden Death Syndrome disease ratings for Knoxville only. Ratings based on a scale of 0 - 10, with 0 being none and 10 severe.

Table 35. Soybeans: Yield and other characteristics of Maturity Group IV Roundup Ready varieties evaluated at 3 locations in 1999.

Brand	Variety	Avg. Yield		Full Bloom	Plant Matured		Ht. Lodged	Flower	Pubes- cence	Moisture at Harvest	
		Bu/A		Date	Date	In.	%	Color	Color	%	
Delta King		4965	RR	44	7-6	9-16	38	12	W	T	13.2
Sure Grow	SG	498	RR	44	7-7	9-24	37	5	W	T	12.1
Pioneer		9492	RR	44	7-7	9-15	39	7	W	T	14.4
Terral	TVX	4589	RR	43	7-6	9-12	39	35	W	T	13.7
Terral	TVX	4787	RR	42	7-3	9-15	41	65	P	T	11.5
Asgrow	AG	4301		41	7-5	9-13	36	17	P	T	13.9
USG		7489	RR	41	7-3	9-16	42	43	P	T	12.6
USG		7459	RR	41	7-4	9-14	40	70	P	T	11.9
USG		7499	RR	41	7-4	9-14	42	40	W	T	13.5
Asgrow	AG	4702		40	7-6	9-15	39	8	W	T	14.8
Asgrow	AG	4901		40	7-7	9-18	41	20	W	T	13.2
AgriPro	APX	94888	RR	40	7-5	9-15	41	55	P	T	11.7
Sure Grow	SG	468	RR	40	7-6	9-18	46	48	P	T	13.3
Hartz	H	4994	RR	40	7-15	9-26	36	28	W	T	14.1
Asgrow	AG	4501		39	7-3	9-15	40	37	P	T	13.0
Delta King	XTJ	894	RR	39	7-4	9-15	41	40	P	T	11.4
Hornbeck	HBK	4855	RR	39	7-3	9-14	40	38	P	T	12.0
Terra	TS	466	RR	38	7-5	9-16	43	8	W	T	13.4
Asgrow	AG	4602		37	7-5	9-13	39	17	P	T	13.0
Delta Grow		4650	RR	37	7-6	9-14	40	17	W	T	14.0
Pioneer		94B81	RR	37	7-5	9-13	45	32	W	T	14.0
DelKalb	CX	444 C	RR	37	7-6	9-13	38	13	P	T	14.9
Asgrow	AG	4601		37	7-9	9-12	39	23	W	T	15.8
Dyna Gro		3463	RR	36	7-6	9-14	44	30	W	T	13.9
Terra	TV	4890	RR	35	7-6	9-14	45	48	W	T	15.0
USG		7449	RR	35	7-4	9-13	39	57	P	T	14.5
Erwin Keith	XP	4700	RR	34	7-6	9-14	40	10	W	T	14.0
USG		7478	RR	33	7-7	9-13	44	33	W	T	15.0
Delta King		4762	RR	33	7-7	9-18	45	22	W	T	13.7
Hornbeck	HBK	4660	RR	31	7-9	9-15	45	42	W	T	14.9

Table 36. Soybeans: Yield of Maturity Group IV Roundup Ready varieties evaluated in 7 environments for two years (1998-99).

Brand	Variety	Avg. Yield	Knox- ville	Cross- ville	Spring- field	Spring Hill	Milan
-----Bushels per acre-----							
Asgrow	AG 4301	50	54	32	34	42	66
Asgrow	AG 4702	47	53	32	31	37	62
Pioneer	9492 RR	46	49	37	25	38	63
Asgrow	AG 4601	45	48	29	31	40	60
Sure Grow	SG 498 RR	44	51	34	18	33	61
Asgrow	AG 4901	44	51	34	23	40	55
Asgrow	AG 4501	44	49	32	24	37	56
Terra	TS 466 RR	44	49	31	28	37	56
Pioneer	94B81 RR	43	55	29	24	35	52
Dyna Gro	3463 RR	42	48	30	28	35	53
Delta King	4762 RR	42	47	32	26	39	52
Sure Grow	SG 468 RR	42	52	38	21	31	49
Hartz	H 4994 RR	41	50	37	16	23	55
L.S.D. (.05)		5.5	4.5	6.5	3.8	7.6	7.1
C.V. %		23.7	8.9	13.7	10.3	14.7	12.5
Avg.		44.2	50.4	32.9	25.4	35.9	56.9
R-Square		0.68	0.91	0.76	0.85	0.62	0.82

Table 37. Yield and other characteristics of Maturity Group IV Roundup Ready varieties evaluated in 7 environments for two years (1998-99).

Brand	Variety	Avg. Full Yield	Plant Bloom	Matured	Plant Ht.	Lodged	Flower ¹	Pubes ² - cence	Seed Moist. at harvest
		Bu/A	Date	Date	In.	%	Color	Color	%
Asgrow	AG 4301	50	7-13	9-11	36	11	W	T	13.4
Asgrow	AG 4702	47	7-14	9-10	38	07	P	T	13.2
Pioneer	9492 RR	46	7-15	9-11	37	06	P	T	13.2
Asgrow	AG 4601	45	7-15	9-9	39	14	P	T	13.9
Sure Grow	SG 498 RR	44	7-15	9-17	36	06	P	T	11.9
Asgrow	AG 4901 RR	44	7-14	9-12	40	12	P	T	12.5
Asgrow	AG 4501 RR	44	7-14	9-10	41	24	W	T	12.0
Terra	TS 466 RR	44	7-14	9-11	42	13	P	T	12.8
Pioneer	94B81 RR	43	7-14	9-9	42	26	P	T	13.2
Dyna Gro	3463 RR	42	7-14	9-10	42	14	P	T	13.1
Delta King	4762 RR	42	7-14	9-13	43	12	P	T	12.9
Sure Grow	SG 468 RR	42	7-14	9-13	44	41	W	T	12.6
Hartz	H 4994 RR	41	7-14	9-15	37	37	P	T	13.8

¹W=White and P=Purple.

²T=Tawny.

Table 38. Soybeans: Yield of Maturity Group V varieties evaluated at 5 locations in 1999.

Brand	Variety	Avg. Yield	Ames Plantation	Knox- ville	Spring Hill	Milan	Martin
-----Bushels per acre-----							
Asgrow	A 5944	46	23	53	43	44	64
Delta King	5995	44	23	58	43	45	53
Asgrow	A 5959	44	28	51	37	42	63
Hornbeck	HBK 5990	44	22	51	37	48	60
Delsoy	5500	42	23	48	40	40	61
Asgrow	A 5843	42	23	47	33	45	64
Asgrow	A 5547	42	21	53	34	38	62
Delta King	5850	41	23	49	34	42	58
TN Exp.	94-213	40	21	42	47	41	50
TN Exp.	93-142-17	40	22	37	35	44	62
Riverside	RVS 549	40	19	47	43	38	53
Asgrow	A 5704	40	24	44	36	40	55
HyPerformer	HY 574	40	26	48	35	34	57
Erwin Keith	XP 5700	39	17	43	41	41	55
Hornbeck	HBK 5991	39	20	44	35	41	57
Pioneer	9584	39	17	43	32	40	63
MO	Anand	39	23	55	23	43	51
TN Exp.	93-99	39	24	46	35	36	54
AK	Caviness	39	18	49	35	38	54
HyPerformer	AP 572STS39		21	42	38	39	54
Riverside	Rubin 5	39	21	41	37	39	57
USDA	Fowler	39	20	50	30	38	56
AgriPro	APX 9563	39	20	43	31	47	53
Pioneer	95B33	38	22	43	29	38	60
Deltapine	DP 3519 S	38	21	43	36	39	53
Hornbeck	HBK 5770	38	18	54	35	34	50
Erwin Keith	SP 5400	38	18	43	35	38	57
TN	TN 5-95	38	12	46	32	42	55
N.C.	Holladay	37	17	47	22	43	58
FFR	563	37	14	49	33	38	52
VA	Hutcheson	37	18	40	38	41	48
Delsoy	5710	37	17	51	30	33	52
Deltapine	DP 5655	36	23	44	32	44	39
FFR	542	36	16	48	27	36	52
Riverside	RVS 77	36	19	36	38	39	47
Delta King	5580	36	19	35	30	42	52
Deltapine	DP 5989	35	17	49	29	35	42
Northrup	King S51-00	33	13	41	26	36	47
Riverside	TS 520	32	15	36	28	34	47
Deltapine	DP 5354	32	13	42	26	32	46
L.S.D.	(.05)	4.2	6.1	10.0	9.4	8.6	10.3
C.V.		17.5	22.2	15.6	19.7	15.5	13.5
Avg.		38.7	19.8	45.8	34.0	39.6	54.3
R-Square		0.82	0.50	0.46	0.58	0.39	0.48

Table 39. Soybeans: Yield and other characteristics of Maturity Group V varieties evaluated at 5 locations in 1999.

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Plant Ht.	Lodged	Flower	Pubes- cence	Seed Moist. at Harvest
		Bu/A	Date	Date	In.	%	Color	Color	%
Asgrow	A 5944	46	7-18	10-7	38	15	W	G	12.8
Delta King	5995	44	7-17	10-6	36	26	W	G	12.4
Asgrow	A 5959	44	7-16	10-5	35	26	W	G	12.1
Hornbeck HBK	5990	44	7-17	10-4	35	10	P	T	11.7
Delsoy	5500	42	7-16	10-2	35	20	W	T	12.0
Asgrow	A 5843	42	7-17	10-5	37	17	W	G	12.3
Asgrow	A 5547	42	7-16	10-3	36	29	W	G	11.7
Delta King	5850	41	7-17	10-3	36	44	W	T	11.4
TN Exp.	94-213	40	7-16	9-29	32	05	W	G	12.0
TN Exp.	93-142-17	40	7-20	10-11	38	04	W	G	13.4
Riverside RVS	549	40	7-17	10-4	34	44	P	T	12.1
Asgrow	A 5704	40	7-16	10-2	35	07	P	G	12.1
HyPerformer HY	574	40	7-19	10-7	39	23	P	T	12.9
Erwin Keith XP	5700	39	7-18	10-7	38	13	P	T	12.3
Hornbeck HBK	5991	39	7-17	10-4	37	28	W	T	11.6
Pioneer	9584	39	7-16	10-4	36	21	W	T	11.8
MO	Anand	39	7-15	9-29	30	04	P	T	11.9
TN Exp.	93-99	39	7-17	10-2	32	13	W	G	12.3
AK	Caviness	39	7-16	10-3	35	50	W	G	11.7
HyPerformer AP	572 STS	39	7-17	10-5	34	13	W	G	12.6
Riverside Robin	5	39	7-18	10-6	33	22	W	G	13.4
USDA	Fowler	39	7-14	9-29	34	15	W	T	11.8
AgriPro APX	9563	39	7-16	10-1	35	13	W	T	12.7
Pioneer	95B33	38	7-15	9-28	35	02	P	G	12.1
Deltapine DP	3519 S	38	7-16	9-28	35	03	P	G	12.2
Hornbeck HBK	5770	38	7-18	10-4	42	29	W	T	12.6
Erwin Keith XP	5400	38	7-16	9-29	36	57	P	T	12.8
TN	TN 5-95	38	7-14	9-28	34	03	P	T	12.2
N.C.	Holladay	37	7-14	10-4	29	05	P	G	12.7
FFR	563	37	7-18	10-2	35	00	P	G	12.1
VA	Hutcheson	37	7-17	10-7	31	18	W	G	12.4
Delsoy	5710	37	7-17	9-30	38	13	W	T	12.4
Deltapine DP	5655	36	7-17	10-9	41	66	P	T	11.7
FFR	542	36	7-17	10-7	35	05	P	G	12.2
Riverside RVS	77	36	7-17	10-3	38	53	W	T	13.3
Delta King	5580	36	7-17	10-6	35	59	W	T	11.1
Deltapine DP	5989	35	7-17	9-27	46	34	W	T	12.3
Northrup King S	51-00	33	7-13	10-1	40	02	P	T	12.1
Riverside TS	520	32	7-15	9-30	43	14	W	T	12.4
Deltapine DP	5354	32	7-15	10-4	36	78	P	G	11.8

Table 40. Soybeans: Yield of Maturity Group V varieties evaluated in 8 environments from 1998 through 1999.

Brand	Variety	Avg. Yield	Knox- ville	Spring Hill	Martin	Ames Plantation	Milan
-----Number of environments (Years)-----							
(8) (2) (1) (1) (2) (2)							
-----Bushels per acre-----							
Asgrow	A 5944	51	58	43	64	39	55
Asgrow	A 5959	50	51	37	63	39	61
Delta King	5995	50	54	43	53	36	63
Hornbeck	HBK 5990	49	51	37	60	38	60
Asgrow	A 5547	47	50	34	62	35	54
Delsoy	5500	46	48	40	61	38	49
TN Exp.	94-213	46	44	47	50	34	55
Riverside	RVS 549	45	45	43	53	36	51
Delta King	5850	45	48	34	58	32	53
TN Exp.	93-99	44	45	35	54	36	53
HyPerformer	HY 574	44	46	35	57	36	48
Deltapine	DP 3519 S	44	44	36	53	36	51
N.C.	Holladay	44	50	22	58	34	52
USDA	Fowler	44	50	30	56	32	50
Riverside	Robin 5	43	40	37	57	32	53
Pioneer	9584	43	42	32	63	29	52
HyPerformer	AP 572 STS	42	43	38	54	32	49
VA	Hutcheson	42	39	38	48	36	51
TN	TN 5-95	42	46	32	55	28	48
FFR	563	41	45	33	52	29	49
Riverside	RVS 77	41	37	38	47	33	52
Delsoy	5710	40	47	30	52	28	44
FFR	542	40	45	27	52	30	46
Deltapine	DP 5354	37	37	26	46	27	48
Riverside	RVS 520	37	36	28	47	26	48
L.S.D. (.05)		4.9	5.7	9.3	9.1	5.8	6.2
C.V. %		22.8	12.6	19.7	11.8	17.8	12.2
Avg.		43.9	45.7	34.0	55.1	33.2	51.8
R-Square		0.62	0.59	0.57	0.48	0.89	0.86

Table 41. Soybeans: Yield and other characteristics of Maturity Group V
evaluated in 8 environments from 1998 through 1999.

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Ht. Lodged	Flower	Pubes- cence	Moist. at Harvest	
		Bu/A	Date	Date	In.	%	Color	Color	%
Asgrow	A 5944	51	7-17	10-6	36	11	W	G	12.6
Asgrow	A 5959	50	7-16	10-3	32	19	W	G	12.1
Delta King	5995	50	7-16	10-4	33	21	W	G	12.7
Hornbeck	HBK 5990	49	7-17	10-4	34	8	P	T	12.2
Asgrow	A 5547	47	7-15	10-1	33	22	W	G	12.0
Delsoy	5500	46	7-16	9-30	34	15	W	T	12.0
TN Exp.	94-213	46	7-15	9-27	31	4	W	G	12.4
Riverside	RVS 549	45	7-16	10-2	32	33	P	T	12.3
Delta King	5850	45	7-16	9-30	34	33	W	T	11.7
TN Exp.	93-99	44	7-17	10-1	31	10	W	G	12.3
HyPerformer	HY 574	44	7-19	10-5	37	29	P	T	12.7
Deltapine	DP 3519 S	44	7-15	9-26	34	3	P	G	12.4
NC	Holladay	44	7-14	9-27	28	5	P	G	12.8
USDA	Fowler	44	7-14	9-28	33	11	W	T	12.1
Riverside	Rubin 5	43	7-18	10-4	31	16	W	G	13.3
Pioneer	9584	43	7-15	10-2	35	19	W	T	12.2
HyPerformer	AP 572 STS	42	7-17	10-4	32	9	W	G	12.8
VA	Hutcheson	42	7-16	9-30	31	14	W	G	12.4
TN	TN 5-95	42	7-14	9-27	32	2	P	T	12.7
FFR	563	41	7-17	10-2	34	1	P	G	12.2
Riverside	RVS 77	41	7-16	10-6	36	43	W	T	13.0
Delsoy	5710	40	7-17	10-5	36	16	W	T	12.4
FFR	542	40	7-16	9-28	33	4	P	G	12.3
Deltapine	DP 5354	37	7-15	9-29	35	72	P	G	11.8
Riverside	RVS 520	37	7-15	9-29	45	21	W	T	12.4

Table 42. Soybeans: Yield of Maturity Group V varieties evaluated in 14 environments from 1997 through 1999.

Brand	Variety	Avg. Yield	Knox- ville	Spring Hill	Spring- field	Milan	Ames Plantation	Martin
-----Number of environments-(Years)-----								
		(14)	(3)	(2)	(1)	(3)	(3)	(2)
-----Bushels per acre-----								
Asgrow	A 5944	52	57	44	48	60	42	55
Delsoy	5500	48	50	44	44	53	38	55
Asgrow	A 5547	47	49	36	43	59	37	56
Riverside	RVS 549	46	47	41	42	56	37	53
TN Exp.	94-213	46	47	47	44	59	32	47
Deltapine	DP 3519 S	46	47	40	41	52	38	55
VA	Hutcheson	46	41	39	43	61	36	52
USDA	Fowler	45	51	34	41	52	34	58
NC	Holladay	45	49	33	41	57	33	54
HyPerformer	AP 572 STS	45	45	39	38	54	34	57
FFR	563	45	49	41	43	52	33	51
Pioneer	9584	44	44	36	39	56	30	57
HyPerformer	HY 574	44	47	35	36	50	38	50
FFR	542	43	48	37	43	49	33	50
Riverside	Robin 5	43	43	39	39	57	33	40
TN	TN 5-95	43	47	35	41	51	30	50
TN Exp.	TN 93-99	41	42	37	33	54	30	47
Riverside	RVS 77	41	37	36	34	53	33	50
L.S.D. (.05)		2.6	4.6	6.6	5.5	5.9	4.5	6.6
C.V. %		15.5	12.2	17.4	9.4	13.4	16.3	12.8
Avg.		44.9	46.6	38.5	40.6	54.8	34.5	52.0
R-Square		0.77	0.56	0.61	0.57	0.79	0.87	0.63

Table 43. Soybeans: Yield and other characteristics of Maturity Group V
evaluated in 14 environments from 1997 through 1999.

Brand	Variety	Avg. Yield	Full Bloom	Matured	Plant Ht. Lodged	Flower	Pubes- cence	Seed Moist at Harvest	
		Bu/A	Date	Date	In. %	Color	Color	%	
Asgrow	A 5944	52	7-19	10-5	36	29	W	G	13
Delsoy	5500	48	7-17	9-29	33	8	W	T	13
Asgrow	A 5547	47	7-17	9-30	33	39	W	G	13
Riverside	RVS 549	46	7-17	10-1	33	39	P	T	13
TN Exp.	94-213	46	7-16	9-27	32	4	W	G	13
Deltapine	DP 3519 S	46	7-17	9-26	35	12	P	G	13
VA	Hutcheson	46	7-19	9-30	32	19	W	G	13
USDA	Fowler	45	7-16	9-27	34	19	W	T	13
NC	Holladay	45	7-16	9-26	29	21	P	G	13
HyPerformer	AP 572 STS	45	7-19	10-3	32	13	W	G	13
FFR	563	45	7-19	10-1	35	12	P	G	13
Pioneer	9584	44	7-17	10-1	35	28	W	T	13
HyPerformer	HY 574	44	7-20	10-3	37	49	P	T	13
FFR	542	43	7-17	9-28	34	12	P	G	13
Riverside	Robin 5	43	7-20	10-3	31	19	W	G	14
TN	TN 5-95	43	7-16	9-27	33	18	P	T	13
TN Exp.	93-99	41	7-19	9-30	30	9	W	G	13
Riverside	RVS 77	41	7-18	10-5	36	69	W	T	13

Table 44. Soybeans: Yield of Maturity Group V Roundup Ready varieties evaluated at 5 locations in 1999.

Brand	Variety	Avg. Yield	Ames Plantation	Knox- ville	Spring Hill	Milan	Martin
-----Bushels per acre-----							
Asgrow	AG 5901	40	22	52	27	38	60
USG	7599 RR	39	25	55	21	40	54
Asgrow	AG 5802	38	26	51	21	36	58
FFR	RT 587 RR	38	23	45	23	37	59
Delta King	XTJ 675 RR	37	25	49	20	38	52
Hornbeck	HBK 5588 RR	37	20	49	20	35	60
AgriPro	APX 567 RR	37	22	49	19	36	57
Deltapine	DP 5806	36	20	47	23	36	56
Hornbeck	HBK 5920 RR	36	20	52	20	35	53
DeKalb	CX 556 C RR	36	23	48	17	33	57
Hartz	H 5181 RR	36	20	45	25	30	58
Deltapine	DP 5644 RR	36	19	44	21	37	58
Pioneer	95B32 RR	35	21	43	19	39	54
DeKalb	CX 580 C RR	35	19	47	18	34	58
HyPerformer	AP 588 RR	35	20	44	20	37	56
Sure Grow	SG 597 RR	35	20	44	24	32	55
USG	7528 RR	35	19	48	16	38	54
Deltapine	DP 5960 RR	35	18	44	21	38	55
Delta King	5961 RR	35	20	48	16	37	54
Asgrow	AG 5801	35	22	47	23	34	48
Terral	TV 5486 RR	35	25	45	22	31	51
Pioneer	95B53 RR	35	17	46	20	38	53
Delta King	5664 RR	35	18	44	19	37	54
USG	7547 RR	34	23	38	23	36	51
Terral	TVX 5794 RR	34	22	45	21	28	55
Asgrow	AG 5601	34	18	42	23	32	57
Delta Grow	DG 5550 RR	34	18	43	19	34	57
Hartz	H 5350 RR	34	18	47	22	31	52
Pioneer	95B41 RR	34	19	46	18	31	56
FFR	RT 557 RR	34	14	49	18	32	57
Pioneer	95B95 RR	34	18	46	20	34	52
USG	7577 RR	34	20	40	20	34	54
USG	7557 RR	33	21	43	17	29	56
USG	7548 RR	33	20	44	18	34	50
Hartz	H 4994 RR	33	19	48	15	29	53
Terra	TS 556 RR	33	16	45	17	35	51
Hartz	H 5000 RR	32	17	37	18	37	53
FFR	RT 546 RR	32	18	45	14	28	54
Asgrow	AG 5401	32	13	45	17	29	54
FFR	RT 517 RR	32	23	48	12	26	49

Table 44. Continued.

Brand	Variety		Avg. Yield	Ames Plantation	Knox- ville	Spring Hill	Milan	Martin
-----Bushels per acre-----								
Terra	TS 558	RR	32	14	41	22	29	53
AgriPro	APX 9519	RR	31	15	38	18	36	49
Hartz	HX 5060167	RR	31	16	48	15	27	49
USG	7509	RR	31	22	44	13	31	46
Hornbeck	HBK 5884	RR	30	14	49	18	29	41
Delta King	5263	RR	30	17	46	15	26	46
FFR	RT 5485	RR	30	15	48	17	25	43
Northrup King	553-Q7	RR	29	13	46	16	25	44
L.S.D. (.05)			2.8	6.4	5.4	4.4	6.6	7.0
C.V. %			13.0	23.5	8.5	16.3	14.2	9.4
Avg.			34.1	19.4	15.7	19.2	33.2	53.2
R-Square			0.93	0.43	0.54	0.61	0.52	0.54

Table 45. Soybeans: Yield and other Characteristics of Maturity Group V
Roundup Ready varieties evaluated at 5 locations in 1999.

Brand	Variety	Avg.	Full	Plant		Pubes--		Seed Moist	
		Yield	Bloom	Matured	Ht. Lodged	Flower ¹	cence	at	Harvest
		Bu/A	Date	Date	In. %	Color	Color	%	
Asgrow	AG 5901	40	7-19	10-10	36 13	W	G	13.0	
USG	7599 RR	39	7-14	10-5	40 20	P	G	12.6	
Asgrow	AG 5802	38	7-17	10-8	39 00	W	G	13.0	
FFR	RT 587 RR	38	7-14	10-4	37 14	P	G	12.7	
Delta King	XTJ 675 RR	37	7-15	10-6	39 16	P	G	12.6	
Hornbeck	HBK 5588 RR	37	7-16	10-2	36 30	P	G	12.1	
AgriPro	APX 567 RR	37	7-18	10-6	40 21	P	LT	12.7	
Deltapine	DP 5806 RR	36	7-17	10-9	38 38	W	G	12.3	
Hornbeck	HBK 5920 RR	36	7-15	10-9	39 05	P	G	12.4	
DeKalb	CX 556C RR	36	7-14	9-29	36 12	P	G	12.6	
Hartz	H 5181 RR	36	7-18	10-10	38 73	W	G	13.6	
Deltapine	DP 5644 RR	36	7-15	10-3	36 04	W	T	12.0	
Pioneer	95B32 RR	35	7-14	9-24	31 09	W	G	12.7	
DeKalb	CX 580C RR	35	7-14	10-5	36 08	W	G	12.5	
HyPerformer	AP 588 RR	35	7-14	10-6	39 02	W	G	12.4	
Sure Grow	SG 597 RR	35	7-17	10-8	44 03	W	T	12.6	
USG	7528 RR	35	7-12	9-27	32 00	P	T	12.5	
Deltapine	DP 5960 RR	35	7-18	10-8	40 21	W	G	12.6	
Delta King	5961 RR	35	7-17	10-13	37 07	W	G	13.9	
Asgrow	AG 5801	35	7-16	10-7	36 15	P	G	12.4	
Terral	TV 5486 RR	35	7-17	10-4	43 21	P	G	13.0	
Pioneer	95B53 RR	35	7-14	9-29	32 21	W	T	12.2	
Delta King	5664 RR	35	7-14	10-7	36 12	W	G	12.6	
USG	7547 RR	34	7-15	10-2	36 38	P	G	12.2	
Terral	TVX 5794 RR	34	7-20	10-7	38 01	P	T	13.1	
Asgrow	AG 5601	34	7-14	10-2	35 03	W	G	12.4	
Delta Grow	DG 5550 RR	34	7-13	9-29	35 12	P	G	12.5	
Hartz	H 5350 RR	34	7-16	10-3	34 34	W	LT	12.8	
Pioneer	95B41 RR	34	7-15	9-30	36 17	W	T	12.1	
FFR	RT 557 RR	34	7-15	9-30	36 13	P	G	12.9	
Pioneer	95B95 RR	34	7-17	10-6	38 01	P	G	12.4	
USG	7577 RR	34	7-14	10-2	36 16	P	G	12.6	
USG	7557 RR	33	7-15	10-2	37 15	P	G	12.5	
USG	7548 RR	33	7-13	9-27	34 02	P	G	12.4	
Hartz	H 4994 RR	33	7-13	9-25	34 46	W	T	12.2	
Terra	TS 556 RR	33	7-14	9-28	35 13	P	G	12.5	
Hartz	H 5000 RR	32	7-17	10-1	38 26	P	LT	12.6	
FFR	RT 546 RR	32	7-14	9-30	36 02	P	G	12.8	
Asgrow	AG 5401	32	7-14	9-30	35 06	W	G	12.4	
FFR	RT 517 RR	32	7-13	9-25	35 20	P	G	12.1	
Terra	TS 558 RR	32	7-15	10-6	36 37	W	G	12.7	
AgriPro	APX 9519 RR	31	7-14	9-30	36 03	P	T	12.3	
Hartz	HX 5060167 RR	31	7-16	10-4	42 20	P	G	12.5	
USG	7509 RR	31	7-14	9-23	41 20	W	T	12.4	
Hornbeck	HBK 5884 RR	30	7-18	10-8	34 30	P	G	12.6	

Table 45. Continued.

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Ht. Lodged	Flower ¹	Pubes- ² cence	Seed Moist at Harvest	
		Bu/A	Date	Date	In.	%	Color	Color	%
Delta King	5263 RR	30	7-13	9-26	30	09	P	T	12.0
FFR	RT 5485 RR	30	7-13	9-28	35	19	P	T	12.4
Northrup King	553-Q7 RR	29	7-13	9-30	32	03	W	T	12.4

¹W=White and P=Purple.²Pubescence color: G=Gray, T=tawny and Lt=Light Tawny.

Table 46. Soybeans: Yield of Medium Maturing Roundup Ready varieties evaluated in 8 environments from 1998 through 1999.

Brand	Variety	Avg. Yield	Knox- ville	Spring Hill	Spring- field	Ames Plantation	Milan	Martin
-----Bushels per acre-----								
Asgrow	AG 5901	43	53	27	29	22	51	60
Deltapine	DP 5806 RR	43	53	23	27	20	56	56
FFR	RT 587 RR	42	49	23	31	23	51	59
Deltapine	DP 5644 RR	42	50	21	28	19	54	58
Hornbeck	HBK 5588 RR	41	50	20	28	20	51	60
Deltapine	DP 5960 RR	41	49	21	27	18	56	55
HyPerformer	AP 588 RR	40	50	20	25	20	51	56
Sure Grow	SG 597 RR	40	49	24	27	20	49	55
FFR	RT 557 RR	40	53	18	29	14	49	57
FFR	RT 517 RR	40	50	12	41	23	47	49
Hartz	H 5181 RR	40	47	25	22	20	49	58
Asgrow	AG 5801	40	48	23	28	22	49	48
Delta King	5664 RR	39	49	19	25	18	50	54
Pioneer	95B41 RR	39	50	18	30	19	46	56
Hartz	H 5000 RR	39	44	18	26	17	54	53
Asgrow	AG 5601	38	44	23	24	18	48	57
Delta King	5961 RR	38	48	16	26	20	48	54
FFR	RT 546 RR	38	49	14	30	18	45	54
Terra	TS 556 RR	38	47	17	27	16	49	51
Asgrow	AG 5401	38	46	17	31	13	48	54
Delta King	5263 RR	36	52	15	22	17	43	46
L.S.D. (.05)		3.7	6.0	4.7	5.4	5.9	6.7	6.1
C.V. %		19.1	12.3	16.9	13.7	21.9	13.7	7.9
Avg.		39.8	49.0	19.7	27.8	19.0	49.7	54.8
R-Square		0.85	0.50	0.98	0.62	0.46	0.89	0.60

Table 47. Soybeans: Yield and other characteristics of Maturity Group V
Roundup Ready varieties evaluated from 1998 through 1999.

Brand	Variety	Avg. Yield	Full Bloom	Plant Matured	Ht. Lodged	Flower	Pubes- cence	Seed Moist at harvest	
		Bu/A	Date	Date	In.	Color	Color	%	
Asgrow	AG 5901	43	7-19	10-6	35	11	W	G	13.8
Deltapine	DP 5806 RR	43	7-17	10-4	37	34	W	G	12.9
FFR	RT 587 RR	42	7-15	10-1	37	12	P	G	13.6
Deltapine	DP 5644 RR	42	7-15	9-30	35	07	W	T	12.4
Hornbeck	HBK 5588 RR	41	7-16	9-29	35	26	P	G	12.4
Deltapine	DP 5960 RR	41	7-18	10-4	38	23	W	G	13.0
HyPerformer	AP 588 RR	40	7-15	10-2	37	08	W	G	13.0
Sure Grow	SG 597 RR	40	7-17	10-4	41	08	W	T	13.1
FFR	RT 557 RR	40	7-15	9-28	36	22	P	G	13.3
FFR	RT 517 RR	40	7-13	9-23	33	14	P	G	12.9
Hartz	H 5181 RR	40	7-20	10-7	36	58	W	G	14.4
Asgrow	AG 5801	40	7-17	10-3	35	13	P	G	12.9
Delta King	5664 RR	39	7-15	10-3	36	10	W	G	12.9
Pioneer	95B41 RR	39	7-16	9-27	35	13	W	T	12.6
Hartz	H 5000 RR	39	7-18	9-28	37	19	P	LT	13.0
Asgrow	AG 5601	38	7-14	9-30	35	18	W	G	12.6
Delta King	5961 RR	38	7-18	10-7	36	08	W	G	14.4
FFR	RT 546 RR	38	7-14	9-27	35	05	P	G	13.2
Terra	TS 556 RR	38	7-15	9-26	34	11	P	G	13.0
Asgrow	AG 5401	38	7-14	9-28	34	06	W	G	12.7
Delta King	5263 RR	36	7-13	9-24	30	06	P	T	12.4

Flower Color: W=White and P=Purple.

Pubescence Color: G=Gray, T=Tawny and LT=Light Tawny.

Table 48. Soybeans: Yield of Medium Maturing Roundup Ready varieties evaluated in 14 environments from 1997 through 1999.

Brand	Variety		Avg. Yield	Knox-ville	Spring Hill	Spring-field	Milan	Ames Plantation	Martin
-----Bushels per acre-----									
Asgrow	AG 5901		41	47	31	32	53	23	60
Sure Grow	SG 597	RR	40	46	31	30	53	20	55
Hartz	H 5181	RR	39	44	29	25	53	26	58
FFR	RT 546	RR	39	46	29	34	49	20	54
Asgrow	AG 5801		39	48	30	31	51	19	48
Hartz	H 5000	RR	38	42	27	29	56	17	53
Asgrow	AG 5601		37	41	31	28	52	15	57
L.S.D. (.05)			2.3	5.8	5.7	3.2	4.5	4.4	6.2
C.V. %			15.1	15.9	19.0	10.6	10.6	21.7	7.7
Avg.			38.9	44.9	29.8	29.9	52.2	19.9	54.8
R-Square			0.89	0.52	0.81	0.74	0.90	0.58	0.64

Table 49. Soybeans: Yield and other characteristics of Maturity Group V Roundup Ready varieties evaluated from 1997 through 1999.

Brand	Variety		Avg. Yield	Full Bloom	Plant Matured	Plant Ht.	Lodged	Flower ¹	Pubes ² - cence	Seed Moist. at harvest
			Bu/A	Date	Date	In.	%	Color	Color	%
Asgrow	AG 5901		41	7-20	10-6	33	12	W	G	14
Sure Grow	SG 597	RR	40	7-18	10-5	40	11	W	T	13
Hartz	H 5181	RR	39	7-21	10-8	36	58	W	G	14
FFR	RT 546	RR	39	7-15	9-28	33	12	P	G	13
Asgrow	AG 5801		39	7-18	10-4	33	14	P	G	13
Hartz	H 5000	RR	38	7-20	9-30	35	18	P	LT	13
Asgrow	AG 5601		37	7-15	9-30	33	23	W	G	13

¹Flower color: W=White and P=Purple.

²Pubescence color: G=Gray, T=Tawny and LT=Light Tawny.



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