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1986 Performance of Field Crop Varieties

University of Tennessee Agricultural Experiment Station

Charles R. Graves

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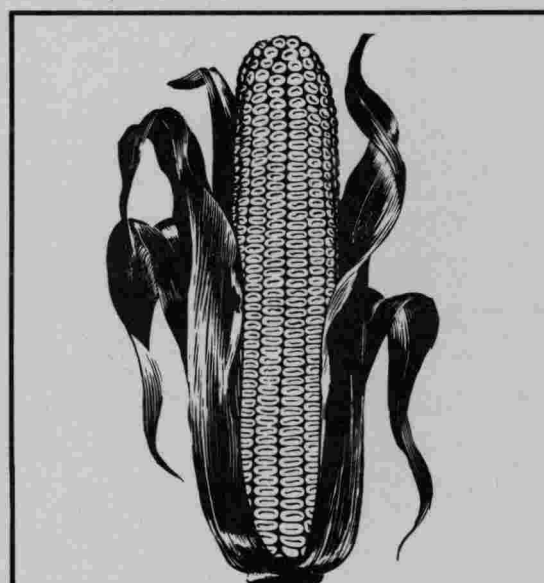
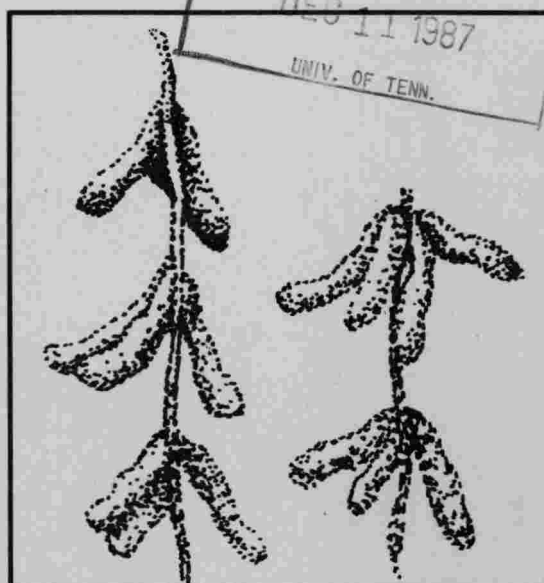
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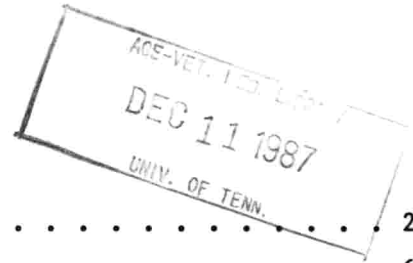
1986 Performance of Field Crop Varieties

Charles R. Graves



The University of Tennessee
Agricultural Experiment Station
Knoxville, Tennessee
D. M. Gossett, Dean

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1986
 PERFORMANCE
 OF FIELD CROP VARIETIES
 DATA FOR 1986 WITH SUMMARIES
 OF
 RESULTS FROM PREVIOUS YEARS
 CORN-GRAIN SORGHUM-SUMMER ANNUALS-OATS
 BARLEY-WHEAT-ALFALFA-SOYBEANS

by

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RECOMMENDED CROP VARIETIES

Listed Alphabetically

Corn Hybrids

Yellow-Early-Season: Pioneer brand 3389, Asgrow/O's Gold 2570, McCurdy 7676, FFR 788C, Pioneer brand 3358, FFR 747C, USS 7001, Super Crost 5438, Funk G-4522, Asgrow/O's Gold 3344, Beck's 65X, DeKalb-Pfizer DK-656, FFR 799C¹ and N.K. PX 79¹.

Yellow-Medium-Season: DeKalb-Pfizer DK-748, DeKalb-Pfizer DK-689, Zimmerman Z-27y, Asgrow/O's Gold 5509, Funk G-4765, Coker 21, Pioneer brand 3320, McCurdy 8150, RA 1502, McCurdy 84AA, Beck's 85XA, SeedTec H-2686A, Funk G-4733, Pioneer brand 3184, Coker 19A¹ and FFR 848C¹.

White-Medium-Season: Asgrow/O's Gold 2680W¹.

Yellow-Full-Season: Pioneer brand 3165, DeKalb-Pfizer DK-789, Funk G-4858, GK 900, Pioneer brand 3147, Cargill 980, McCurdy 8172, Paymaster 8990, FFR 955C¹ and USS 2020¹.

White-Full-Season: GK 927w, Zimmerman Z-14w, Zimmerman Z-11w, FFR 929w¹, RA 2606w¹, SeedTec H-2660w¹ and Princeton SX910¹.

Cotton

Coker 208, DES 422, Deltapine 50, McNair 220, McNair 235, Stoneville 506, Stoneville 825 and Tifcot 56.

Oats

Fall-seeded - Southern States 76-30, Coker 716, and Cumberland.

Wheat

Auburn, Caldwell, Coker 747, Coker 916, Fillmore, Massey, Pioneer brand 2550, Scotty and Tyler.

¹ Present plans indicate that these varieties will not be recommended after 1986.

Barley

Henry and Volbar.

Alfalfa

Apollo, Armor, Cimarron, Classic, Gladiator, Hi-phy, Liberty, Olympic, Pioneer brand 532, Saranac AR, Voris A77 and Williamsburg.

Red Clover

Kenstar, Redland II and Redman.

Soybeans

Variety	Resistant to cyst nematode races	Variety	Resistant to cyst nematode races
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Medium Maturity Group V

Asgrow A5474	3,4	TN 5-85	3
Bedford	3,4	Bay	None
Coker 355	3,4	Coker 425	None
Pioneer brand 9571	3,4	Deltapine 105	None
Coker 485	3	Essex	None
Forrest	3	FFR 561	None
Hartz 5171	3	Pioneer brand 5482	None
Hartz 5252	3	York ^{1/}	None
Hartz 5370	3	RA 502	None
Pioneer brand 9561	3		

Late and Very Late Maturity Groups VI & VII

Asgrow A6520	3,4	Hartz 7126	3
Asgrow A6242	3,4	Yield King	3
Jeff ^{1/}	3,4	Coker 156	None
Centennial	3	N.K. S69-96	None
Hartz 6383R	3	N.K. S72-60 ^{1/}	None
RA 604	3		

Early Maturing Group IV

Mitchell ^{1/}	None
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Grain Sorghum

Bird Resistant: DeKalb-Pfizer BR64 and Savanna 5.

Non-Bird Resistant: Asgrow/O's Gold GS 712, Chaparral, Coker 7675DeKalb-Pfizer DK-64, DeKalb-Pfizer DK-42y, FFR 321DR, Funk G-1711, Funk G-522DR, Funk G-522A¹, HT-126DR, Hy-performer 1330DR, P.A.G. 5572, Paymaster R1090, Penngrain yE, Pioneer brand 8333, Pioneer brand 8300, Stauffer S9740y, Topaz and T. E. Dinero.

Burley Tobacco

Burley 64, Clay 501, Co-op 313, Co-op 543, Ky 14, Ky 17, MS Bu. 21xKy 10, MS Ky 14xL8, R7-11, TN 86, and Va. 509.

Dark-Fire Cured Tobacco

Broad Leaf Madole, Black Mammoth, DF-300, DF 485, and DF-911.

Dark-Air Cured Tobacco

Ky 160 and OS 802.

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

Sorghum x Sudangrass crosses

DeKalb-Pfizer SX-17, DeKalb-Pfizer ST-6+, Funk HW 6986, Funk FP4, FFR 74A¹, Haygrazer II, Summergrazer III, and Sordan 79.

Sudangrass

Trudan 8.

Millet

Gahi-1 and Millex 24.

¹Present plans indicate that these varieties will not be recommended after this year.

The Recommended Corn Hybrids for 1987 are as Follows:

3 Year Average (1984-86)

Make yield comparisons only within a given maturity group because all maturity groups are not evaluated at the same locations.

Maturity Group	Grain Color	Hybrid	Tolerance ^{2/} to Corn Virus Complex		Erect Plants %	Quality Rating (1-9)	Moisture at Harvest %	Yield Bu/A
Early-Maturing	Yellow	Pioneer brand 3389	Med-Low		100	2.5	20.6	148
		Asgrow/O's Gold 2570	Low		99	2.9	22.3	147
		McCurdy 7676	Low		99	2.7	21.9	146
		FFR 788C	Low		100	3.4	21.7	143
		Pioneer brand 3358	Low		100	2.8	21.6	141
		FFR 747C	Low		100	2.3	20.9	139
		USS 7001	Low		100	3.4	21.5	138
		Super Crost 5438	Low		100	3.3	21.4	138
		Funk G-4522	Low		100	2.7	21.6	138
		Asgrow/O's Gold 3344	Med-Low		99	3.0	20.9	137
		Beck's 65X	Low		99	3.2	21.2	137
		DeKalb-Pfizer DK-656	Low		100	2.9	21.4	136
		FFR 799C ^{1/4/}	Low		-	-	-	-
		N.K. PX 791 ^{1/}	Med-Low		-	-	-	-
Medium-Season	Yellow	DeKalb-Pfizer DK-748 ^{3/}	Low		-	-	-	-
		DeKalb-Pfizer DK-689	Med-High		97	2.6	19.1	158
		Zimmerman Z-27Y	Low		95	2.7	20.4	157
		Asgrow/O's Gold 5509	Low		93	3.4	20.4	153
		Funk G-4765	Low		95	3.5	20.1	152
		Coker 21	Low		93	3.6	20.4	151
		Pioneer brand 3320	Low		97	2.5	18.7	150
		McCurdy 8150	Low		94	3.1	20.4	150
		RA 1502	Low		93	3.2	18.8	150
		McCurdy 84AA	Low		91	3.5	19.8	149
		Beck's 85XA	Med		99	3.2	20.1	149
		SeedTec H-2686A	Low		94	3.4	20.0	149
		Funk G-4733	Med		96	2.5	20.3	148
		Pioneer brand 3184	Med-Low		98	3.5	20.2	147
		Coker 19A ^{1/}	Low		96	3.8	19.0	143
		FFR 848C ^{1/}	Med		95	2.9	18.7	138
Full-Season	White	Asgrow/O's Gold 2680W ^{1/}	Med		90	3.8	20.5	136
	Yellow	Pioneer brand 3165	Low		98	2.9	22.2	139
		DeKalb-Pfizer DK-789	Med-High		94	3.4	24.2	124
		Funk G-4858	Low		95	3.2	23.7	124
		GK 900	Med-High		98	3.0	22.4	124
		Pioneer brand 3147	Med-High		93	4.0	23.2	124
		Cargill 980	Low		93	3.1	23.2	124
		McCurdy 8172	Med-Low		95	2.8	23.5	121
		Paymaster 8990	Low		94	2.9	22.7	119
		FFR 955C ^{1/}	Med-High		92	3.1	22.6	116
		USS 2020 ^{1/4/}	Low		-	-	-	-
	White	GK 927W	Med-Low		88	3.3	24.2	123
		Zimmerman Z-14W	Med-High		93	2.9	22.7	123
		Zimmerman Z-11W	Med-High		90	2.9	24.1	122
		FFR 929W ^{1/}	Med		91	2.9	24.3	115
		RA 2606W ^{1/4/}	Low		-	-	-	-
		Golden Harvest H-2660W ^{1/4/}	Med		-	-	-	-
		Princeton SX910 ^{1/4/}	Med		-	-	-	-

^{1/}Present plans indicate that this hybrid will not be recommended after 1987. ^{2/}Hybrids rated lower than medium-high are not recommended under heavy virus conditions. ^{3/}Evaluated in 1984 as DK-747. ^{4/}Not evaluated in 1986.

GRAIN SORGHUM

Bird-resistant varieties

DeKalb BR64-A medium tall variety with an open type head. Medium in maturity. Anthracnose, MDMV (maize dwarf mosaic virus) and greenbug resistance with a brown pericarp.

Savanna 5-A tall variety with a tight head. Resistant to downy mildew and anthracnose. Brown pericarp and grain color.

Non-bird resistant varieties

Asgrow/O's Gold GS 712-A tall variety with medium type heads. Red pericarp with a hetero-yellow endosperm. It is reported to be resistant to head smut and downy mildew. May lodge under some growing conditions that induce stalk rots.

Chaparral-A medium variety in plant height with medium-tight type heads. Red pericarp and hetero-yellow endosperm. Has resistance to head smut.

Coker 7675-A medium variety in plant height with tolerance to MDMV, anthracnose, downy mildew, head smut and charcoal rot. Red pericarp and hetero-yellow endosperm.

DeKalb DK-64-A medium-tall variety. Resistant to MDMV, anthracnose, downy mildew and rust. Red pericarp and hetero-yellow endosperm.

DeKalb-Pfizer DK-42y-A medium tall variety with medium type heads. This variety has a yellow endosperm and yellow grain color. DK-42y has been a little erratic in yield. It has performed better at Milan and Martin than it has at Springfield. This variety is medium early in maturity.

FFR 321-A medium variety in plant height, maturity and head type. Red pericarp with a hetero-yellow endosperm. It is reported to be resistant to anthracnose and downy mildew.

Funk G-1711-A medium-tall variety in plant height with medium-tight type heads. Red pericarp with hetero-yellow endosperm. Reported to be resistant to MDMV, head smut, Greenbug, anthracnose, and downy mildew.

Funk G-522A-A medium-tall variety with resistance to MDMV, head smut, and anthracnose. Red pericarp and hetero-yellow endosperm.

Funk G-522DR-A medium variety in plant height with resistance to MDMV, head smut, anthracnose and downy mildew. Red pericarp and hetero-yellow endosperm.

HT-126DR-A medium variety in plant height and maturity. Resistant to anthracnose, MDMV, head smut, and downy mildew. Red pericarp with a hetero-yellow endosperm.

Hy-Performer 1330DR-Tall with medium to open type head. Medium to late in maturity. Bronze pericarp with a hetero-yellow endosperm. Resistant to MDMV, head smut and anthracnose.

Paymaster R-1090-Medium-tall variety with medium to open type heads. Medium in maturity. Resistant to anthracnose. Red pericarp with yellow endosperm.

P.A.G. 5572-A medium-tall variety in plant height with medium-tight heads. Red pericarp with hetero-yellow endosperm. It is reported to be resistant to MDMV, head smut, and downy mildew.

Penngrain yE-Medium tall and medium maturing variety with a brown pericarp and yellow endosperm.

Pioneer brand 8333-A medium variety in plant height with an open type head. Has a yellow endosperm with bronze grain color. It is late maturing and has performed well at Milan under no-till and conventional seedbed.

Pioneer brand 8300-Medium-tall plant height with a medium-open type head. Has a yellow endosperm with yellow grain color and red pericarp. It is reported to have resistance to MDMV, head smut, anthracnose, and downy mildew.

Stauffer S9740y-Medium-tall plant height with a medium-type head. Has a cream color endosperm with a yellow pericarp and cream colored grain. It is reported to have moderate resistance to MDMV.

T.E. Dinero-Medium tall and medium maturing variety with resistance to MDMV, anthracnose and downy mildew. Red pericarp and hetero-yellow endosperm.

Topaz-A medium variety in plant height and maturity. Resistant to head smut and downy mildew. Red pericarp with a hetero-yellow endosperm.

SOYBEANS

Asgrow A5474-Resistant to races 3 and 4 of soybean cyst nematodes with resistance to phytophthora root-rot, bacterial pustule, wildfire, and target spot. Has white flowers, tawny pubescence, and brown pod wall. Maturity similar to Forrest (maturity group V).¹

Asgrow A6242-Has purple flowers, tawny pubescence and seed with a black hila. A few inches shorter in plant height than Centennial and matures about 6 to 7 days earlier. Maturity group IV. A6242 is resistant to races 3 and 4 of soybean cyst nematode.

Asgrow A6520-Has purple flowers, tawny pubescence and seed with a black hila. Resistant to races 3 and 4 of the soybean cyst nematode. Maturity group VI.

Bay-Has purple flower, grey pubescence and seed with buff hila. Resistant to bacterial pustule. Maturity group V.

¹Varieties have been divided into 10 maturity groups, 00 through VII. Varieties recommended in Tennessee are from groups IV, V, VI and VII. Group IV is considered early, group V early to medium, group VI late, and group VII late to very late. The later these varieties of maturity groups V, VI, and VII are planted, the less pronounced is the difference of maturity among varieties.

Bedford-First soybean variety with resistance to race 4 soybean cyst nematode. Released by the USDA and several cooperating states, including Tennessee. Resistant to races 4 and 3, and moderately resistant to root-knot nematodes. Has white flowers, tawny pubescence, and yellow seed with black hila. Maturity group V.

Centennial-Matures (maturity group VI) about the same time as Pickett 71. Tall plants with tawny pubescence and purple flowers. Medium size seeds with yellow seed coat and black hila. Resistant to race 3 of the soybean cyst nematodes, the root-knot nematode (Meloidogyne incognita), the reniform nematode, and phytophthora rot. Seems to be too late for the Cumberland Plateau.

Coker 156-Has white flowers, grey pubescence and seed with a buff hila. Resistant to phytophthora rot resistance with no resistance to soybean cyst nematodes. Maturity group VI.

Coker 425-Has purple flowers, tawny pubescence and seed with a black hila. Similar to Essex in maturity, lodging resistance and a few inches shorter in plant height. Has no resistance to soybean cyst nematode. Maturity group V.

Coker 485-Has purple flowers, tawny pubescence and seed with a black hila. It is reported to have resistance to stem canker, southern root knot nematode, phytophthora rot and race 3 of the soybean cyst nematode. Taller than Essex about a week later in maturity (late Maturity group V).

Coker 355-Has purple flowers, grey pubescence and seed with black hila. Similar to Coker 485 in maturity and a few days later than Forrest. Similar to Forrest in plant height and standing ability. Resistance to race 3 and 4 of the soybean cyst nematode. Maturity group (late) V.

Deltapine 105-Has purple flowers, grey pubescence and seed with imperfect black hila. Tolerant to phytophthora root-rot, susceptible to soybean cyst nematodes. Has yielded well under soybean cyst nematode free conditions. Late maturity group V.

Essex-Early-maturing variety (maturity group V) which is short and stands well. Has purple flowers, grey pubescence, and a tawny pod wall. Has a high yield potential under good moisture conditions, but appears to be more sensitive to moisture stress than many of the other varieties evaluated. Has not performed well on fine-textured soils. Similar to Dare in seed size, quality, and shatter resistance.

FFR 561-Has white flower, grey pubescence and seed with a buff hila. Has no resistance to soybean cyst nematodes. Maturity group V.

Forrest-Selected from the cross Dyer X Bragg. Growth characteristics resemble Bragg (maturity group VII) but plants mature about three weeks earlier and a few days later than Dare (maturity group V). Resistant to root-knot and soybean cyst nematode race 3. Has good resistance to bacterial pustule, wildfire, target spot, and moderate resistance to phytophthora rot. Has white flowers and tawny pubescence. Seeds are yellow with a black hilum. Ideal pH range for Forrest is 6 to 6.5 and it has performed poorly on some soils at a pH of 7 or above.

Hartz 5171-Has white flowers, grey pubescence and seed with a dark buff hila. Resistant to race 3 of the soybean cyst nematode. Maturity group V.

Hartz 5252- Has purple flowers, tawny pubescence and seed with a black hila. Resistant to race 3 of the soybean cyst nematode. Maturity group V.

Hartz 6383R-Has purple flowers, grey pubescence and seed with an imperfect black hila. Resistant to race 3 of soybean cyst nematode. Maturity group VI.

Hartz 7126-Has purple flowers, tawny pubescence and seed with a black hilum. Resistant to race 3 of the soybean cyst nematode. Maturity group VII.

Hartz 5370-Has white flowers, tawny pubescence and seed with a black hila. Taller in plant height than Forrest with a slight tendency to lodge. Reported to be resistant to phytophthora rot, root knot nematode M. incognita, bacterial pustule and race 3 of the soybean cyst nematode. Mature on the late side of Maturity group V.

Jeff-Has purple flowers, tawny pubescence and seed with brown hila. Resistant to races 1,3 and 4 of the soybean cyst nematode. Has a tendency to lodge under certain conditions. Has not been a high yielder under soybean cyst nematode free conditions. Maturity group VI.

Mitchell-A high yielding early-maturing (maturity group IV) variety which has purple flowers, tawny pubescence, tan seed pod, and seed with brown hila. Will shatter under some adverse weather conditions.

N.K. S69-96-Has purple flowers, grey pubescence and seed with a buff hila. Has no resistance to soybean cyst nematodes. Maturity group VI.

N.K. S72-60-Has purple flowers, tawny pubescence and seed with a buff hila. Has no resistance to soybean cyst nematodes. Maturity group VII. This variety has a tendency to lodge more than S69-96.

Pioneer brand 9561-Has white flowers, tawny pubescence and seed with a black hila. Resistant to race 3 of the soybean cyst nematodes. Maturity group V.

Pioneer variety 5482-A few days later than Essex in maturity (group V). Has white flowers, tawny pubescence with black hila. Susceptible to soybean cyst nematodes and phytophthora root-rot. This variety has produced high yields under soybean cyst nematode free conditions.

Pioneer brand 9571-Has white flowers, tawny pubescence and seed with a black hila. It is reported to be tolerant to root knot nematode with resistance to race 3 and 4 of the soybean cyst nematode. Maturity group V.

RA 502-Has purple flowers, tawny pubescence and seed with a black hila. Has no resistance to soybean cyst nematodes. Maturity group V.

RA 604-Is in the early VI maturity group. RA 604 has tawny pubescence with purple flowers. Resistant to race 3 soybean cyst nematode, wildfire, phytophthora, bacterial pustule, target leaf spot, downy mildew and root-knot nematode.

TN 5-85-Has white flowers, grey pubescence and seed with a buff hila. Resistant to race 3 of soybean cyst nematode. Maturity group V.

Yield King 593-Has purple flowers, tawny pubescence and seed with a black hila. Tall growth habit with maturity similar to Centennial. Maturity group VI.

York-Matures at about the same time as Dare (maturity group V) and about 10 days later than Hill. Seeds are slightly off-round with a buff hilum and yellow seed coat. Has purple flowers and grey pubescence. Has good seed-holding qualities but not as good as Lee. Has very good resistance to lodging and has yielded well.

OATS

Fall-Seeded

Coker 716-Slightly superior to Coker 66-22 in winterhardiness, yield, test weight, and lodging resistance. Will not stand as well as Cumberland. Has been evaluated in previous years as Coker 70-16. Reported to have excellent resistance to soil-borne mosaic. Has yielded well in the state variety trials for several years.

Cumberland-A short, stiff-strawed variety of medium-late maturity. Slightly more winter-hardy than Blount. Has good lodging resistance.

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

BARLEY

Henry-An awnleted variety released from Virginia Agricultural Experiment Station in 1975. Heads about the same time as Volbar but matures about a week earlier. Very similar to Surry in maturity and test weight. Has averaged a few inches taller than Surry. Reported to be resistant to powdery mildew, leaf rust and scald.

Volbar-A winter-hardy, six-rowed, tall, rough-awned variety with maturity similar to Harrison and Jefferson. Has yielded well in the state variety test and has resisted lodging. Has slight tolerance to barley yellow dwarf virus disease.

SOFT RED WINTER WHEAT

Auburn-A high yielding late maturing variety which is medium tall with good straw strength. Auburn has good resistance to powdery mildew, septoria leaf blotch and leaf rust. Auburn has excellent milling and good baking quality. Auburn has the H6 gene which confers excellent resistance to biotype A and B of the Hessian fly. This variety is not resistant to all races of Hessian fly.

Caldwell-An early variety with excellent soft wheat milling and baking quality. Is reported to be moderately resistant to barley yellow dwarf virus, take-all root rot and leaf rust. Has good resistance to septoria leaf blotch and powdery mildew. Has the H6 gene which confers resistance to the currently prevalent biotype B of Hessian fly. It is susceptible to other races of Hessian fly.

Coker 747-An early, white chaff variety with good winterhardiness and resistance to lodging. Is a few inches shorter with slightly stiffer straw than Arthur. Is resistant to soil-borne mosaic, and moderately resistant to leaf rust, stem rust, and powdery mildew. Not Hessian fly resistant.

Coker 916-A few days earlier than Coker 747. Is similar to Coker 747 in head type, lodging resistance and plant height. Has good resistance to leaf rust and powdery mildew. Not Hessian fly resistant.

Fillmore-A high-yielding, late-maturing variety with large heads and often fills 3 to 4 kernels per spikelet which suggested the name Fillmore. Fillmore has excellent milling and baking qualities. This variety is moderately resistant to the barley yellow dwarf virus and is resistant to septoria leaf blotch, leaf rust and powdery mildew. It has the H6 gene which confers resistance to biotype B of Hessian fly. Not resistant to all races.

Massey-This variety is white chaffed, awnleted, midtall and medium in maturity. It has good field tolerance to powdery mildew, stem rust and some races of Hessian fly. It is susceptible to leaf rust. This variety has done well at Greeneville in the presence of barley yellow dwarf virus disease. Massey is a Virginia release.

Pioneer brand 2550-An early variety about two inches shorter than Pioneer brand S76. Test weight is good but slightly lower than S76. This variety has very good leaf rust resistance, average stem rust, and powdery mildew. It is reported to have some resistance to barley yellow dwarf virus disease but not as good as S76. Pioneer brand 2550 has resistance to Hessian fly races A, C, and F but is susceptible to other races.

Scotty-This variety is beardless, midtall, and medium in maturity. Scotty has excellent resistance to powdery mildew and moderate resistance to leaf rust. It has some resistance to stem rust but is susceptible to several of the current races of Hessian fly.

Tyler-A high-yielding, medium to late maturing variety and is tall. Stems are white and are moderately stiff. Tyler has shown good resistance to mildew in the state variety test. Tyler is reported to be resistant to spindle streak mosaic virus, but is susceptible to leaf rust, stem rust and Hessian fly. Milling and baking characteristics are good. For consistent high yields, Tyler should probably be treated with a fungicide if leaf rust is a problem, because it is very susceptible to this disease.

ALFALFA

Apollo-A winter-hardy variety with good recovery ability. Has high resistance to phytophthora root rot which is worse on poorly drained soil. In most cases, alfalfa would not be grown on these soils. However, alfalfa can be grown on poorly drained soils (such as Henry) if the surface water is controlled. Alfalfa cannot tolerate flooding for any period of time. Apollo has high resistance to bacterial wilt but this disease has not been a problem in Tennessee.

Cimarron-Flowers range from purple to light blue with a low frequency of white and yellow. Reported to be resistant to pea aphid and has intermediate resistance to the spotted alfalfa aphid. Is similar to Arc and Team in resistance to the alfalfa weevil. Reported to have high resistance to anthracnose and bacterial wilt diseases, and moderate resistance to phytophthora root rot, common leafspot, stem-phylum leafspot, and sclerotinia crown and stem rot diseases.

Classic-Is resistant to bacterial wilt and has moderate resistance to phytophthora root rot and the potato leafhopper. Has a low level of resistance to race 1 anthracnose.

Gladiator-Developed by Northrup, King & Co. and is wilt resistant and has some tolerance to alfalfa weevil and anthracnose. Has yielded well in the state variety trials for a number of years.

Liberty-Moderately winterhardy. Tolerance to alfalfa weevil. Resistant to pea aphid and anthracnose disease. Developed from the same germplasm base as Team and Arc.

Olympic-Has resistance to bacterial wilt, anthracnose and fusarium wilt and is susceptible to phytophthora root rot.

Voris A77-Has resistance to anthracnose, bacterial wilt, and fusarium wilt. Has moderate yellowing and has performed well.

Saranac AR-Wilt and anthracnose resistant. The growth habit of this variety is the same as for Saranac. Seed supply may be limited in Tennessee.

Williamsburg-Developed from selections out of Kansas Common. It is susceptible to bacterial wilt. This variety has been a good producer and is well adapted over the state.

RED CLOVER

Kenstar-Related synthetics have been evaluated in Tennessee for several years. These synthetics were Ky Syn A-1 and A-2. Kenstar was carried as an experimental Ky Syn A-3. A-1 consisted of 20 clones, A-2 of 30 clones, and Kenstar contained 10 of the superior clones common to both A-1 and A-2. Similar to Kenland in resistance to anthracnose, powdery mildew, and general morphological appearance. Has persisted for three years in many tests when Kenland persistent for only one or two years.

Redland II-A synthetic variety similar to Redland in growth habit, and persistence. Was selected from Redland after screening for resistance to pea aphid, northern and southern anthracnose and powdery mildew.

Redman-Has been evaluated for several years. Has performed better than Kenland and slightly less than Kenstar. Reported to have good resistance to northern anthracnose and moderate resistance to powdery mildew.

BURLEY TOBACCO

Burley 64-A closely-spaced, upright-leaf, late flowering variety which has medium-high resistance to black shank, high resistance to black root rot, wildfire and mosaic, and medium-high resistance to fusarium wilt. Is recommended on farms where black shank and black root rot are causing problems.

Clay 501-A high yielding, rapid growing, medium early maturing variety. It is a stand-up type burley with big leaves.

Co-op 313-A high yielding variety with medium-high resistance to black root rot and high resistance to mosaic, fusarium wilt, and wildfire. Has low resistance to black shank and should not be planted on land known to have black shank present.

Co-op 543-A stand-up variety with moderate yield potential. Plants mature about the same time as KY 14. Has medium-high resistance to black shank and medium resistance to black root rot.

Ky 14-A high-yielded variety which has medium resistance to black root rot and high resistance to fusarium wilt, wildfire and mosaic. Has also shown some resistance to Tobacco Vein Mottling Virus (TVMV). Is similar to Va 509 in number of days to flowering, plant height, and leaf number per plant.

Ky 17-A stand-up variety which produces reasonable yields of high quality leaf. Has medium-high resistance to black shank and high resistance to black root rot, mosaic, wildfire, and fusarium wilt.

MS Bu. 21 X Ky. 10-A semi-drooping leaf hybrid which has high resistance to wildfire and mosaic, low resistance to black root rot, medium resistance to fusarium wilt, and no resistance to black shank. Yields about the same as Ky 10 but more than Burley 21. Has better quality than Ky 10, but not as good as Burley 21.

MS Ky 14 x L8-A high-yielding large leaf hybrid which has high resistance to wildfire and mosaic, medium-high resistance to black root rot and medium resistance to fusarium wilt. Not recommended where black shank is known to be present.

R 7-11-A high yielding, large leaf, medium height burley. Has medium resistance to black root-rot and mosaic. Has no resistance to black shank.

TN 86-A stand-up variety with high yield potential. Has high resistance to tobacco vein mottling virus and black root rot, medium-high resistance to tobacco etch virus and potato virus, and medium resistance to black shank. Matures about 10-14 days later than MS Ky 14 x L8. Should be topped at a manageable height since under favorable conditions it can grow tall.

Va 509-A an upright-leaf variety which has medium resistance to black shank, high resistance to wildfire, low resistance to black root rot and medium resistance to fusarium wilt. It was selected from a cross of Burley 37 X Burley 21. The general characteristics are intermediate between those of Burley 21 and Burley 37.

DARK FIRE-CURED TOBACCO

Broad Leaf Madole-A relatively high yielding, high acre value variety. Susceptible to mosaic and wildfire.

Black Mammoth-Leaf is somewhat darker and broader than Madole. Usually does not droop quite as much as Madole. Susceptible to mosaic and wildfire.

DF-300-Moderately resistant to black shank. Is a broad-leaved, open-growing tobacco, lighter green in color than Madole with plant growth similar to Madole. The cured tobacco is usually lighter brown in color than Madole. Is best adapted to the production of wrapping tobacco, but is capable of producing cutting or snuff tobacco.

DF-485-A dark fire-cured variety. Has high resistance to black root rot, wildfire, and mosaic virus and moderate resistance to black shank races "0" and "1". Closely resembles Black Mammoth, except has a longer, wider and darker green leaf. Flowers the same as Madole, is taller and has less leaves than Madole, yet the leaf yield is the same.

DF-911-A multiple disease resistant dark fire-cured variety. Is resistant to black root rot, mosaic, and wildfire but not to black shank. Compared very favorably with Madole in growth, yield and quality but is slightly darker in color. Growth habit and appearance are a little more open than Madole, especially at maturity, and the leaf attachment is more upright.

DARK AIR-CURED TOBACCO

KY 160-A medium to large leaf one sucker variety. Leaves are dark green in color and fairly smooth. Resistant to tobacco mosaic.

OS-802-A one-sucker variety with medium resistance to black shank and high resistance to wildfire and tobacco mosaic. Is light green in color with an open growth habit and tends to have a smoother leaf surface than Ky 160.

1986

PERFORMANCE

OF FIELD CROP VARIETIES

Corn-Grain Sorghum-Summer Annuals-Oats
Barley-Wheat-Alfalfa-Soybeans

DATA FOR 1986 WITH SUMMARIES OF RESULTS
FROM PREVIOUS YEARS

INTRODUCTION

The purpose of the project, "Field Crop Variety Evaluation," is to test field crop varieties available to farmers of this and neighboring states, as well as the best experimental varieties being developed by experimental stations, other agencies, and private companies.

The tests were conducted using field plot designs, fertility levels, and experimental techniques that have been found suitable for each crop.

Committees composed of specialists from the research, resident instruction, and extension staffs of the University of Tennessee Institute of Agriculture study the performance data and determine varieties to be recommended.

For a variety to be recommended, it must yield well and have other characteristics suitable for Tennessee conditions.

PRESENTATION OF DATA

The tests were conducted in each of the principal agricultural regions of the state where the specific crop is grown. Plots of each variety were replicated several times at each location. Locations of field tests are given in each table of data. An average of the performance of a variety across the area of adaption and over a period of years is the best basis for evaluation.

The tables on the following pages have been prepared with the entries listed in order of performance, the highest-yielding entry being listed first.

The least significant difference (L.S.D.) values at the five percent level for the 1986 tests are shown at the bottom of each table. The yields of any two varieties being compared must differ by at least this amount in order for the varieties to be considered different in yielding ability. Also, coefficient of variation values (C.V. %) are shown at the bottom of each table. This value is a measure of the variability found within each experiment. At each location where tests were conducted in 1986, the soil types are reported at the end of the table.

Performance of Corn Hybrids

The medium-season state corn hybrid tests were conducted at seven locations, the full-season at four, and the early-maturing hybrids at five locations. Corn yields at Greeneville and Crossville were reduced due to severe drought during silking and tasseling. The yields in West Tennessee were good to excellent in 1986.

All tests were over-planted and thinned to about 20,000 to 26,000 plants per acre. Population varied from location to location but the population was the same for all varieties at a given location. The reason for the variation from location was due to the changes in spacing between the rows, with the spacing within the row remaining the same. Most tests were conducted using thirty-six inches between rows, but at Milan the spacing between rows was thirty inches. The tests were fertilized with 150 pounds or more of nitrogen per acre. At least as much phosphorous and potassium were applied as recommended by soil test recommendation, sometimes more. The plot size for hand-harvested plots in most cases was two rows 11 feet long, and for the mechanically harvested plots yields were obtained from two rows 25 to 30 feet in length. Plots were replicated four times. The corn hybrid studies at Jackson, Martin, and Milan were harvested with a picker-sheller and all other tests were harvested by hand in 1986.

Corn yields are expressed in bushels per acre, adjusted to 15.5 percent moisture. The percent grain moisture at harvest is presented to show the relative maturity of each hybrid.

The five leading medium-season hybrids in the regular test in 1986 were DeKalb-Pfizer DK-711, DeKalb-Pfizer DK-748, Stauffer 8500, FFR 811C, and Pioneer brand 3147, a full-season hybrid included as a check hybrid. In the extra medium-season hybrid test, the highest producing hybrids were McCurdy 7800, T. E. 6996, Pioneer brand 3320, and Agri Pro HP 77.

The four leading hybrids in the full-season test in 1986 were Pioneer brand 3165, Cargill 980, Bailey SX651, and Pioneer brand 3187.

The highest producing early-maturing hybrids in 1986 were Asgrow/O's Gold 2570, Pioneer brand 3389, DeKalb-Pfizer DK-636, Asgrow/O's Gold Experimental 5L34All, and Pioneer brand 3358.

Table 1. Corn: Yield of medium-season hybrids evaluated at five locations in 1986.

Color	Cross	Hybrid	Avg.	1/ Knox- ville	2/ Spring Hill	3/ Spring- field	4/ Martin	4/ Milan
				Bushels per acre				
y	2X	DeKalb-Pfizer DK-711	143	160	82	166	134	171
y	2X	Pioneer brand 3147	142	164	77	175	149	144
y	2X	DeKalb-Pfizer DK-748	140	162	87	153	133	163
y	2X	Stauffer 8500	138	153	80	153	144	158
y	2X	FFR 811C	138	141	84	156	140	167
y	2X	Funk G-6066X	135	167	74	143	135	157
y	2X	DeKalb-Pfizer DK-689	135	148	82	148	137	158
y	2X	SeedTec H-2675	133	155	79	146	131	152
y	2X	Jacques 8350	132	165	90	140	118	148
y	2X	Zimmerman Z-27Y	131	131	70	160	151	144
y	2X	McCurdy 8150	131	146	77	141	132	158
y	2X	N.K. PX9540	130	145	81	140	134	153
y	2X	SeedTec H-2686A	130	154	69	149	133	148
y	2X	G.K. 750	130	146	81	142	132	150
y	2X	FFR 848c	129	139	80	152	130	144
y	2X	Asgrow/O's Gold 5509	129	152	63	147	117	164
y	2X	McCurdy 84AA	128	138	68	147	129	160
y	2X	Stauffer S7759	128	142	78	133	128	159
y	2X	Funk G-4765	128	160	70	134	125	148
y	M2X	Funk G-4733	127	157	70	141	124	144
y	2X	Asgrow/O's Gold RX892	127	142	81	136	128	147
w	2X	Funk G-6044w	127	140	70	141	138	144
y	2X	RA 1502	126	150	66	146	124	147
y	2X	Pioneer brand 3320	126	141	71	142	135	143
y	2X	N.K. PX9581	126	145	77	134	126	147
y	2X	Pioneer brand 3184	126	146	80	133	132	136
y	M2X	Coker 19A	125	133	74	137	134	148
y	2X	P.A.G. SX352	125	127	76	138	133	152
y	2X	Jacques 8250	125	142	74	145	126	138
y	2X	Cargill 967	125	139	68	138	136	144
y	2X	Coker 8625	125	149	78	119	133	145
y	M2X	TN 82035	124	139	73	141	124	142
w	2X	Asgrow/O's Gold 2680w	123	145	66	136	121	146
y	2X	Coker 21	123	151	59	129	121	153
y	M2X	Funk G-4614	122	142	79	129	130	132
y	2X	Paymaster 7990	122	120	69	144	130	144
y	M2X	Funk G-4734	120	142	59	134	120	143
y	2X	FFR 815C	119	132	65	133	125	139
y	2X	Beck's 85XA	119	146	72	135	114	126
w	2X	TN 85003	118	125	70	137	127	129
L.S.D. (.05)			7.7	27.6	13.9	17.4	14.4	15.1
C.V. %			9.7	13.6	13.4	8.8	7.9	7.3
Avg.			128.0	146.0	74.2	142.0	130.0	148.0

1/Sequatchie silt loam (2% to 5% slopes).

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

3/Huntington silt loam (2% to 5% slopes).

4/Falaya silt loam (2% to 5% slopes).

Table 2. Corn: Yield and other characteristics of medium-season hybrids evaluated at five locations in 1986.

Color	Cross	Hybrid	Avg. Yield	Erect plants	Grain quality	Husk cover	Ear ht.	Grain moisture at harvest
			Bu/A	%	Rating ^{1/}	Rating ^{1/}	In.	%
y	2X	DeKalb-Pfizer DK-711	143	98	2.6	3.8	54	18.3
y	2X	Pioneer brand 3147	142	96	4.6	3.7	56	18.6
y	2X	DeKalb-Pfizer DK-748	140	97	3.4	2.5	59	18.1
y	2X	Stauffer 8500	138	97	2.4	4.5	54	17.9
y	2X	FFR 811C	138	97	3.6	4.7	52	17.0
y	2X	Funk G-6066X	135	99	2.4	2.3	54	16.5
y	2X	DeKalb-Pfizer DK-689	135	98	2.6	2.8	55	17.4
y	2X	SeedTec H-2675	133	92	2.8	2.8	52	17.6
y	2X	Jacques 8350	132	98	2.6	3.2	54	17.6
y	2X	Zimmerman Z-27Y	131	96	3.0	3.7	56	16.2
y	2X	McCurdy 8150	131	96	2.8	2.5	59	19.1
y	2X	N.K. PX9540	130	98	2.8	3.2	50	16.1
y	2X	SeedTec H-2686A	130	96	2.8	2.7	55	19.4
y	2X	G.K. 750	130	99	2.4	2.7	52	15.9
y	2X	FFR 848c	129	98	3.2	2.3	58	17.1
y	2X	Asgrow/O's Gold 5509	129	92	3.2	2.8	54	19.1
y	2X	McCurdy 84AA	128	90	3.2	3.5	53	18.4
y	2X	Stauffer S7759	128	98	3.6	4.5	55	16.2
y	2X	Funk G-4765	128	98	3.2	3.3	54	18.2
y	M2X	Funk G-4733	127	97	2.8	2.7	52	18.7
y	2X	Asgrow/O's Gold RX892	127	94	3.0	3.5	55	17.9
w	2X	Funk G-6044w	127	90	3.0	2.8	53	19.9
y	2X	RA 1502	126	92	3.4	3.2	50	17.6
y	2X	Pioneer brand 3320	126	96	2.4	3.3	52	17.0
y	2X	N.K. PX9581	126	95	2.8	3.3	52	17.6
y	2X	Pioneer brand 3184	126	99	3.2	3.5	50	18.3
y	M2X	Coker 19A	125	97	3.4	3.3	54	17.7
y	2X	P.A.G. SX352	125	97	3.4	4.5	55	15.8
y	2X	Jacques 8250	125	98	4.0	3.5	53	16.8
y	2X	Cargill 967	125	97	4.4	4.8	54	16.4
y	2X	Coker 8625	125	98	2.6	2.8	50	15.9
y	M2X	TN 82035	124	97	2.4	4.0	54	17.7
w	3X	Asgrow/O's Gold 2680w	123	93	3.4	2.3	58	19.5
y	2X	Coker 21	123	94	3.2	3.3	53	18.8
y	M2X	Funk G-4614	122	95	3.2	3.3	53	17.8
y	2X	Paymaster 7990	122	99	4.4	4.5	50	16.7
y	M2X	Funk G-4734	120	98	3.0	3.2	55	19.0
y	2X	FFR 815C	119	99	4.0	4.7	52	16.9
y	2X	Beck's 85XA	119	100	3.0	2.3	52	18.4
w	2X	TN 85003	118	97	2.8	2.3	54	17.4
L.S.D. (.05)			7.7					
C.V. %			9.7					
Avg.			128.0					

^{1/}Ratings based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 3. Corn: Yield of 24 extra medium-season hybrids evaluated at five locations in 1986.

Color	Cross	Hybrid	Avg.	1/	2/	3/	4/	4/	5/6/
				Knox-ville	Spring Hill	Spring-field	Martin	Milan	Greene-ville
Bushels per acre									
y	2X	McCurdy 7800	141	178	79	159	127	160	38
y	2X	T.E. 6996	138	177	72	147	131	160	40
y	2X	Pioneer brand 3320	138	174	85	151	126	151	42
y	2X	Agri Pro HP 77	136	182	79	154	112	154	42
y	2X	T.E. 6994	133	167	77	130	131	158	43
y	2X	SeedTec ST-7750	132	174	79	142	113	152	43
w	2X	Asgrow/O's Gold RX956W	129	168	64	149	109	156	42
y	2X	SeedTec H-2601	129	153	72	148	121	152	39
y	2X	Asgrow/O's Gold RX860	129	170	67	143	122	144	40
y	2X	Zimmerman Z-28	129	157	64	151	111	162	38
y	2X	Cargill 971	129	156	68	139	121	159	42
y	2X	Princeton SX865	129	173	75	142	114	139	36
y	M2X	Super Crost 5454	127	148	63	151	118	153	40
y	M2X	Gold Medal 984	126	169	62	132	117	152	32
y	M2X	Gold Medal 3357	126	160	68	148	107	145	42
y	2X	Agri Pro 830	125	162	58	153	99	150	46
y	M2X	Gold Medal 335	124	160	69	147	106	140	44
y	2X	Super Crost 5438	124	146	67	137	118	152	38
w	2X	SeedTec H-2625W	124	144	56	158	108	152	37
y	2X	FFR 810C	123	150	68	136	108	153	42
w	3X	Funk G-6054W	121	153	61	142	103	148	30
y	2X	T.E. 6995A	121	150	64	140	110	142	37
y	2X	Cargill 973	121	150	68	126	114	146	45
y	2X	Asgrow/O's Gold RX798	120	148	60	139	102	150	36
L.S.D. (.05)			15.4	16.2	10.4	N.S.	18.0	15.4	N.S.
C.V. %			9.1	7.1	10.8	11.5	11.1	7.2	18.6
Avg.			128.0	161.3	68.5	144.6	114.5	151.3	39.8

1/ Sequatchie silt loam (2% to 5% slopes).

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

3/ Huntington silt loam (2% to 5% slopes).

4/ Falaya silt loam (2% to 5% slopes).

5/ Waynesboro silt loam (2% to 5% slopes).

6/ Not included in average because of high C.V. due to severe drought.

Table 4. Corn: Yield and other characteristics of 24 extra medium-season hybrids evaluated at five locations in 1986.

Color Cross		Hybrid	Avg. Yield Bu/A	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. In.	Grain moisture at harvest %
y	2X	McCurdy 7800	141	3.5	4.0	50	16.0
y	2X	T.E. 6996	138	2.5	4.5	54	16.2
y	2X	Pioneer brand 3320	138	2.0	3.0	44	15.8
y	2X	Agri Pro HP 77	136	2.5	3.5	52	15.8
y	2X	T.E. 6994	133	3.0	2.5	58	15.4
y	2X	SeedTec ST-7750	132	3.0	2.0	52	15.0
w	2X	Asgrow/O's Gold RX956W	129	2.0	3.5	52	17.2
y	2X	SeedTec H-2601	129	4.5	5.0	51	14.9
y	2X	Asgrow/O's Gold RX860	129	3.0	2.5	49	15.8
y	2X	Zimmerman Z-28	129	3.5	4.5	55	14.8
y	2X	Cargill 971	129	4.0	3.0	50	15.2
y	2X	Princeton SX865	129	2.0	2.5	54	16.0
y	M2X	Super Crost 5454	127	3.5	4.0	53	14.7
y	M2X	Gold Medal 984	126	2.5	2.0	51	15.6
y	M2X	Gold Medal 3357	126	4.0	3.5	56	15.1
y	2X	Agri Pro 830	125	3.0	3.5	55	15.4
y	M2X	Gold Medal 335	124	3.5	5.0	57	15.4
y	2X	Super Crost 5438	124	4.0	4.5	52	15.0
w	2X	SeedTec H-2625W	124	2.5	3.0	52	16.6
y	2X	FFR 810C	123	2.0	4.0	54	15.4
w	3X	Funk G-6054W	121	2.5	3.0	56	15.8
y	2X	T.E. 6995A	121	3.5	4.0	53	14.4
y	2X	Cargill 973	121	2.5	3.5	46	15.0
y	2X	Asgrow/O's Gold RX798	120	3.0	3.0	52	15.2
L.S.D. (.05)			15.4				
C.V. %			9.1				
Avg.			128.0				

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 5. Corn: Yield of medium-season hybrids evaluated at five locations for two years (1985-86).

Color	Cross	Hybrid	2 Yr. Avg.	Knox- ville	Spring Hill	Spring- field	Martin	Milan
Bushels per acre								
y	2X	Pioneer brand 3147	152	160	102	178	153	168
y	2X	DeKalb-Pfizer DK-689	150	152	104	157	159	178
y	2X	DeKalb-Pfizer DK-748	149	153	96	161	147	188
y	2X	Stauffer 8500	148	146	100	161	157	178
y	2X	Zimmerman Z-27Y	148	138	96	164	165	177
y	2X	FFR 811C	146	138	96	153	154	191
y	2X	SeedTec H-2686A	145	143	92	162	152	176
y	2X	McCurdy 8150	145	144	96	153	160	171
y	2X	Asgrow/O's Gold 5509	144	148	84	162	135	190
y	3X	Funk G-4765	144	148	97	155	145	172
y	2X	Pioneer brand 3320	143	144	100	147	155	171
y	2X	Beck's 85XA	143	150	102	153	142	169
y	2X	McCurdy 84AA	143	140	90	158	148	180
y	2X	RA 1502	142	148	91	150	149	170
y	2X	Pioneer brand 3184	141	143	98	155	143	164
y	2X	Asgrow/O's Gold RX892	140	142	93	148	144	174
y	3X	Stauffer S7759	140	137	94	140	152	179
y	2X	Cargill 967	140	141	87	156	145	171
y	2X	Coker 21	140	147	86	150	138	177
y	M2X	Coker 19A	139	135	89	143	154	172
y	2X	P.A.G. SX352	139	133	87	145	153	174
y	2X	Coker 8625	138	143	94	136	158	161
y	2X	SeedTec H-2675	138	143	90	144	146	168
y	M2X	Funk G-4733	138	148	92	154	136	162
y	2X	N.K. PX 9581	138	140	94	143	142	172
y	2X	N.K. PX 9540	138	135	94	140	154	168
y	M2X	TN 82035	137	142	88	150	136	170
w	3X	Asgrow/O's Gold 2680W	136	140	94	150	130	165
y	2X	FFR 848C	134	131	94	142	142	163
y	M2X	Funk G-4734	134	137	84	143	136	167
w	2X	TN 850003	134	134	88	139	149	161
y	M2X	Funk G-4614	133	140	92	139	145	150

Table 6. Corn: Yield and other characteristics of medium-season hybrids evaluated at five locations for two years (1985-86).

Color	Cross	Hybrid	2 Yr.	Erect plants	Grain quality	Husk cover	Ear ht.	Grain
			Avg. Yield Bu/A					moisture at harvest
				%	Rating ^{1/}	Rating ^{1/}	In.	%
y	2X	Pioneer brand 3147	152	90	4.4	3.8	55	19.5
y	2X	DeKalb-Pfizer DK-689	150	97	2.8	3.0	56	17.9
y	2X	DeKalb-Pfizer DK-748	149	95	3.6	2.9	57	18.3
y	2X	Stauffer 8500	148	94	2.4	4.3	53	18.5
y	2X	Zimmerman Z-27Y	148	93	2.9	4.1	56	16.7
y	2X	FFR 811C	146	97	4.1	4.8	51	17.6
y	2X	SeedTec H-2686A	145	94	3.3	3.4	53	18.9
y	2X	McCurdy 8150	145	94	3.1	2.9	58	19.6
y	2X	Asgrow/O's Gold 5509	144	89	3.3	3.0	53	19.4
y	3X	Funk G-4765	144	94	3.4	3.4	54	19.2
y	2X	Pioneer brand 3320	143	95	2.4	3.4	52	17.6
y	2X	Beck's 85XA	143	99	3.2	2.8	52	19.0
y	2X	McCurdy 84AA	143	88	3.3	3.6	52	18.8
y	2X	RA 1502	142	90	3.2	3.6	50	18.1
y	2X	Pioneer brand 3184	141	98	3.6	4.0	50	19.3
y	2X	Asgrow/O's Gold RX892	140	92	3.1	3.6	54	18.1
y	3X	Stauffer S7759	140	97	3.4	4.4	55	16.6
y	2X	Cargill 967	140	94	4.4	4.6	54	16.6
y	2X	Coker 21	140	90	3.4	3.5	52	19.3
y	M2X	Coker 19A	139	95	4.1	3.6	53	17.9
y	2X	P.A.G. SX352	139	93	3.4	4.3	54	16.1
y	2X	Coker 8625	138	98	2.9	3.3	50	16.1
y	2X	SeedTec H-2675	138	89	3.3	2.9	51	18.0
y	M2X	Funk G-4733	138	95	2.6	3.1	52	19.4
y	2X	N.K. PX 9581	138	93	3.0	3.4	52	18.0
y	2X	N.K. PX 9540	138	96	2.5	3.4	49	16.3
y	M2X	TN 82035	137	95	2.8	3.9	52	17.8
w	3X	Asgrow/O's Gold 2680W	136	89	3.3	2.7	57	20.0
y	2X	FFR 848C	134	96	3.2	3.2	56	17.7
y	M2X	Funk G-4734	134	96	2.7	3.4	54	19.8
w	2X	TN 850003	134	96	3.3	2.9	53	17.5
y	M2X	Funk G-4614	133	94	2.9	3.4	53	18.0

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 7. Corn: Yield of medium-season hybrids evaluated at five locations for three years (1984-86).

Color	Cross	Hybrid	3 Yr. Avg.	Knox- ville	Spring Hill	Spring- field	Martin	Milan
Bushels per acre								
y	2X	Pioneer brand 3147	162	169	121	181	166	174
y	2X	DeKalb-Pfizer DK-689	158	158	119	159	168	184
y	2X	Zimmerman Z-27Y	157	148	116	170	174	177
y	2X	Asgrow/O's Gold 5509	153	157	104	167	149	185
y	3X	Funk G-4765	152	155	109	160	161	176
y	2X	Coker 21	151	158	107	156	150	182
y	2X	Pioneer brand 3320	150	151	113	151	163	174
y	2X	McCurdy 8150	150	152	107	158	166	170
y	2X	RA 1502	150	155	109	157	157	172
y	2X	McCurdy 84AA	149	147	102	160	158	179
y	2X	Beck's 85XA	149	152	116	157	154	167
y	2X	SeedTec H-2686A	149	154	101	162	155	172
y	M2X	Funk G-4733	148	153	109	157	150	168
y	2X	Pioneer brand 3184	147	149	111	160	147	167
y	2X	Cargill 967	145	140	97	152	157	173
y	2X	N.K. PX 9581	144	143	107	151	154	167
y	2X	FFR 811C	144	136	100	147	158	178
y	3X	Stauffer S7759	144	137	104	148	165	170
y	M2X	Coker 19A	143	141	102	148	155	170
y	M2X	Funk G-4734	142	145	102	149	146	169
y	2X	P.A.G. SX352	142	133	100	145	164	167
y	2X	FFR 848C	138	138	106	146	147	159
w	3X	Asgrow/O's Gold 2680W	136	139	98	149	138	157

Table 8. Corn: Yield and other characteristics of medium-season hybrids evaluated at five locations for three years (1984-86).

Color	Cross	Hybrid	3 Yr.	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. In.	Grain moisture at harvest
			Avg. Yield Bu/A					%
y	2X	Pioneer brand 3147	162	92	4.4	3.9	56	20.7
y	2X	DeKalb-Pfizer DK-689	158	97	2.6	2.7	55	19.1
y	2X	Zimmerman Z-27Y	157	95	2.7	3.8	57	17.6
y	2X	Asgrow/O's Gold 5509	153	93	3.4	2.9	52	20.4
y	3X	Funk G-4765	152	95	3.5	3.2	55	20.1
y	2X	Coker 21	151	93	3.6	3.2	52	20.4
y	2X	Pioneer brand 3320	150	97	2.5	3.0	52	18.7
y	2X	McCurdy 8150	150	94	3.1	2.8	58	20.4
y	2X	RA 1502	150	93	3.2	3.5	51	18.8
y	2X	McCurdy 84AA	149	91	3.5	3.5	52	19.8
y	2X	Beck's 85XA	149	99	3.2	2.9	52	20.1
y	2X	SeedTec H-2686A	149	94	3.4	3.7	54	20.0
y	M2X	Funk G-4733	148	96	2.5	2.9	52	20.3
y	2X	Pioneer brand 3184	147	98	3.5	4.4	50	20.2
y	2X	Cargill 967	145	94	4.6	4.5	54	17.5
y	2X	N.K. PX 9581	144	94	3.2	3.4	52	18.9
y	2X	FFR 811C	144	97	4.2	4.8	51	18.8
y	3X	Stauffer S7759	144	97	3.5	4.5	55	17.4
y	M2X	Coker 19A	143	96	3.8	3.3	53	19.0
y	M2X	Funk G-4734	142	96	2.7	3.2	54	20.9
y	2X	P.A.G. SX352	142	94	3.5	4.3	54	17.2
y	2X	FFR 848C	138	95	2.9	3.1	56	18.7
w	3X	Asgrow/O's Gold 2680W	136	90	3.8	3.0	58	20.5

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 9. Corn: Yield of full-season hybrids evaluated at four locations in 1986.

Color	Cross	Hybrid	Avg.	1/ Knox- ville	2/ Spring Hill	3/ Jackson	4/ Ames Plantation
				Bushels per acre			
y	2X	Pioneer brand 3165	120	154	69	124	133
y	2X	Cargill 980	118	132	70	125	143
y	2X	Bailey SX651	116	134	79	115	135
y	2X	Pioneer brand 3187	116	136	82	119	126
y	2X	GK 850	113	136	67	120	129
w	2X	TN 840023	112	138	80	114	119
y	2X	GK 900	112	132	75	111	130
y	2X	P.A.G. SX383	111	128	68	114	135
w		Pioneer brand 3144W	111	126	73	104	142
y	2X	Gold Medal 1070	111	135	74	116	117
y	2X	Jacques 8400	110	136	80	104	123
y	2X	Stauffer S8655	110	130	82	107	123
y	2X	McCurdy 8172	110	129	68	123	119
y	M2X	Bailey SX684	109	139	75	107	114
y	2X	Paymaster 8990	108	124	67	118	125
w	2X	Zimmerman Z-60W	108	134	67	115	116
w	2X	Zimmerman Z-14W	108	132	68	107	124
y	M2X	Super Crost Ell8	106	121	74	109	121
w	3X	GK 927W	105	143	60	92	123
y	M2X	Funk G-4858	105	136	61	105	117
y	2X	DeKalb-Pfizer DK-789	104	136	65	96	121
w		Zimmerman Z-54	104	121	64	106	123
w	2X	FFR 925W	104	132	60	105	118
w	2X	FFR 717W	103	120	66	109	117
y	M2X	Sunbelt 1816	103	134	65	97	115
y	2X	Pioneer brand 3147	102	117	65	97	131
w	3X	DeKalb-Pfizer DK-77W	102	138	57	99	115
y	M3X	Funk G-4868	102	144	54	99	110
y	2X	Sun Prairie SP550	102	114	72	102	115
y	2X	N.K. PX95	99	117	54	108	118
y	2X	Super Crost Ell9	98	127	67	101	100
w	2X	Zimmerman Z-11W	98	126	53	87	127
w	M2X	T82-2051	98	137	50	87	115
w	2X	Princeton SX906	96	120	63	95	106
y	2X	Jacques 8700	96	112	57	100	115
y	M2X	Gold Medal 770	95	122	64	84	112
y	2X	Stauffer S8818	95	111	52	112	105
w	2X	Princeton SX933	94	113	59	99	104
w	3X	FFR 929W	93	114	54	84	118
y	M2X	FFR 955C	92	102	51	99	115
y	3X	Asgrow/O's Gold 5L44Ell	87	107	56	90	96
w	3X	Funk G-4787W	76	105	46	65	87
L.S.D. (.05)			18.2	21.2	13.7	17.3	15.7
C.V. %			11.2	11.9	15.0	11.9	9.4
Avg.			103.9	127.3	65.1	104.0	119.0

1/Sequatchie silt loam (2% to 5% slopes).

3/Memphis silt loam (2% to 5% slopes).

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

4/Loring silt loam (2% to 5% slopes).

Table 10. Corn: Yield and other characteristics of full-season hybrids evaluated at four locations in 1986.

Color	Cross	Hybrid	Avg.	Erect	Grain	Husk	Ear	Grain
			Yield	plants	quality	cover	ht.	moisture
			Bu/A	%	Rating ^{1/}	Rating ^{1/}	In.	at harvest
y	2X	Pioneer brand 3165	120	99	2.8	3.2	54	22.5
y	2X	Cargill 980	118	89	3.5	1.8	54	22.9
y	2X	Bailey SX651	116	98	4.0	4.5	55	20.5
y	2X	Pioneer brand 3187	116	96	2.6	3.2	54	21.7
y	2X	GK 850	113	95	2.8	4.5	53	21.3
w	2X	TN 840023	112	88	3.2	3.2	57	22.5
y	2X	GK 900	112	97	4.0	4.5	53	22.6
y	2X	P.A.G. SX383	111	87	3.8	3.5	53	22.6
w		Pioneer brand 3144W	111	96	3.5	4.0	59	22.1
y	2X	Gold Medal 1070	111	99	3.2	2.5	53	20.5
y	2X	Jacques 8400	110	97	3.8	5.0	51	22.7
y	2X	Stauffer S8655	110	97	4.0	3.2	54	20.2
y	2X	McCurdy 8172	110	96	3.0	4.0	54	23.9
y	M2X	Bailey SX684	109	97	3.5	2.8	55	21.6
y	2X	Paymaster 8990	108	90	3.7	3.2	52	22.9
w	2X	Zimmerman Z-60W	108	93	3.3	2.8	56	22.7
w	2X	Zimmerman Z-14W	108	89	3.2	2.5	54	22.3
y	M2X	Super Crost Ell8	106	97	3.8	3.2	51	19.4
w	3X	GK 927W	105	84	3.4	3.0	55	25.8
y	M2X	Funk G-4858	105	93	3.5	3.2	54	24.6
y	2X	DeKalb-Pfizer DK-789	104	92	3.8	3.5	53	22.6
w		Zimmerman Z-54	104	92	3.0	2.5	55	23.0
w	2X	FFR 925W	104	94	3.6	2.2	57	22.9
w	2X	FFR 717W	103	81	3.5	3.0	50	24.1
y	M2X	Sunbelt 1816	103	96	3.8	3.8	56	24.6
y	2X	Pioneer brand 3147	102	94	4.8	3.8	53	22.5
w	3X	DeKalb-Pfizer DK-77W	102	94	3.3	2.8	60	23.2
y	M3X	Funk G-4868	102	97	3.5	2.5	56	28.4
y	2X	Sun Prairie SP550	102	90	4.0	4.8	50	21.4
y	2X	N.K. PX95	99	86	3.4	3.5	58	22.8
y	2X	Super Crost Ell9	98	98	4.0	3.0	55	21.0
w	2X	Zimmerman Z-11W	98	91	3.6	3.0	56	24.8
w	M2X	T82-2051	98	97	3.5	2.2	58	25.7
w	2X	Princeton SX906	96	94	4.0	3.0	55	25.6
y	2X	Jacques 8700	96	93	3.8	3.2	52	22.5
y	M2X	Gold Medal 770	95	92	4.0	4.8	54	21.6
y	2X	Stauffer S8818	95	91	3.8	3.5	52	23.7
w	2X	Princeton SX933	94	90	3.7	3.8	54	25.0
w	3X	FFR 929W	93	91	3.6	2.5	57	26.0
y	M2X	FFR 955C	92	93	4.0	3.0	57	23.8
y	3X	Asgrow/O's Gold 5L44Ell	87	96	3.5	3.8	55	21.5
w	3X	Funk G-4787W	76	95	4.6	2.5	57	26.0
L.S.D. (.05)			18.2					
C.V. %			11.2					
Avg.			103.9					

^{1/}Ratings based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 11. Corn: Yield of full-season hybrids evaluated at four locations for two years (1985-86).

Color	Cross	Hybrid	2 Yr. Avg.	Knox- ville	Spring Hill	Jackson	Ames Plantation
Bushels per acre							
y	2X	Pioneer brand 3165	135	157	109	127	146
y	2X	Cargill 980	123	141	94	124	134
w	2X	TN 840023	122	142	101	116	130
y	2X	Jacques 8400	122	144	99	111	132
y	2X	GK 900	121	142	99	114	129
w	2X	Zimmerman Z-14W	120	143	94	114	130
y	M3X	Funk G-4868	120	147	95	109	130
y	2X	Pioneer brand 3147	120	134	95	108	143
y	M3X	Funk G-4858	120	142	93	111	133
y	2X	P.A.G. SX383	118	136	94	113	130
y	2X	GK 850	118	142	87	113	130
w	2X	Zimmerman Z-60W	118	141	94	108	128
y	2X	McCurdy 8172	118	135	90	120	126
y	2X	Dekalb-Pfizer DK-789	118	142	96	103	130
y	2X	Paymaster 8990	117	138	88	114	128
w	2X	Zimmerman Z-11W	117	140	90	97	140
w	3X	GK 927W	116	145	82	101	137
w	3X	DeKalb-Pfizer DK-77W	114	142	87	105	122
y	M2X	FFR 955C	112	123	90	103	131
w	M2X	T82-2051	111	140	85	96	124
w	2X	FFR 917W	110	130	82	106	122
w	3X	FFR 929W	110	129	83	97	129
y	2X	Jacques 8700	109	124	82	110	120
y	2X	Stauffer S8818	109	129	80	112	115

Table 12. Corn: Yield and other characteristics of full-season hybrids evaluated at four locations for two years (1985-86).

Color	Cross	Hybrid	2 Yr.	Erect plants	Grain quality	Husk cover	Ear ht.	Grain
			Avg. Yield Bu/A					moisture at harvest
				%	Rating ^{1/}	Rating ^{1/}	In.	%
y	2X	Pioneer brand 3165	135	99	2.7	3.7	52	22.4
y	2X	Cargill 980	123	94	3.0	3.2	51	23.2
w	2X	TN 840023	122	91	3.4	3.1	54	21.7
y	2X	Jacques 8400	122	96	3.1	4.8	48	22.4
y	2X	GK 900	121	98	3.1	4.5	49	22.2
w	2X	Zimmerman Z-14W	120	94	2.9	2.4	52	22.9
y	M3X	Funk G-4868 ^{2/}	120	97	3.0	3.2	54	27.1
y	2X	Pioneer brand 3147	120	94	4.0	3.6	52	22.8
y	M3X	Funk G-4858	120	96	3.3	3.8	51	23.7
y	2X	P.A.G. SX383	118	92	3.2	3.3	50	22.6
y	2X	GK 850	118	97	3.2	4.1	50	21.4
w	2X	Zimmerman Z-60W	118	96	3.1	2.7	54	23.0
y	2X	McCurdy 8172	118	96	2.8	3.8	51	23.4
y	2X	Dekalb-Pfizer DK-789	118	94	3.3	4.0	51	23.6
y	2X	Paymaster 8990	117	94	3.1	3.6	50	22.8
w	2X	Zimmerman Z-11W	117	91	2.9	2.8	54	24.1
w	3X	GK 927W	116	89	3.4	3.1	54	24.4
w	3X	DeKalb-Pfizer DK-77W	114	94	3.4	2.6	57	23.7
y	M2X	FFR 955C	112	93	3.1	3.4	54	22.8
w	M2X	T82-2051	111	96	3.1	2.5	54	24.3
w	2X	FFR 917W ^{3/}	110	89	3.2	3.3	48	23.6
w	3X	FFR 929W	110	91	2.9	3.0	54	24.8
y	2X	Jacques 8700	109	94	3.7	3.4	49	22.5
y	2X	Stauffer S8818	109	92	3.6	3.2	49	23.0

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

^{2/}Tested in previous years as Experimental 9002y.

^{3/}Tested in previous years as Experimental 18509.

Table 13. Corn: Yield of full-season hybrids evaluated at four locations for three years (1984-86).

Color	Cross	Hybrid	3 Yr.	Knox-	Spring	Ames	
			Avg.	ville	Hill	Jackson	Plantation
Bushels per acre							
y	2X	Pioneer brand 3165	139	170	122	123	140
y	2X	DeKalb-Pfizer DK-789	124	156	114	103	123
y	M3X	Funk G-4858	124	153	106	113	124
y	2X	GK 900	124	149	111	113	122
y	2X	Pioneer brand 3147	124	145	110	106	134
y	2X	Cargill 980	124	151	107	110	126
w	3X	GK 927W	123	158	106	103	127
w	2X	Zimmerman Z-14W	123	155	107	108	119
w	2X	Zimmerman Z-11W	122	158	106	97	128
y	2X	McCurdy 8172	121	146	104	117	118
y	2X	Paymaster 8990	119	149	102	109	116
y	2X	GK 850	119	146	102	107	121
y	2X	P.A.G. SX383	119	142	102	109	122
w	3X	DeKalb-Pfizer DK-77W	119	155	102	112	116
y	M2X	FFR 955C	116	141	102	101	121
w	M2X	T82-2051	116	152	104	92	114
w	3X	FFR 929W	115	146	98	96	122

Table 14. Corn: Yield and other characteristics of full-season hybrids evaluated at four locations for three years (1984-86).

Color	Cross	Hybrid	3 Yr.	Erect plants	Grain	Husk	Ear ht.	Grain
			Avg. Yield Bu/A		quality Rating ^{1/}	cover Rating ^{1/}		moisture at harvest %
y	2X	Pioneer brand 3165	139	98	2.8	3.8	51	22.2
y	2X	DeKalb-Pfizer DK-789	124	94	3.4	4.0	50	24.2
y	M3X	Funk G-4858	124	95	3.2	3.4	50	23.7
y	2X	GK 900	124	98	3.0	4.5	49	22.4
y	2X	Pioneer brand 3147	124	93	4.0	3.6	50	23.2
y	2X	Cargill 980	124	93	3.1	3.1	50	23.2
w	3X	GK 927W	123	88	3.3	2.9	53	24.2
w	2X	Zimmerman Z-14W	123	93	2.9	2.3	50	22.7
w	2X	Zimmerman Z-11W	122	90	2.9	2.7	54	24.1
y	2X	McCurdy 8172	121	95	2.8	3.6	51	23.5
y	2X	Paymaster 8990	119	94	2.9	3.5	49	22.7
y	2X	GK 850	119	96	3.4	3.9	48	21.3
y	2X	P.A.G. SX383	119	92	3.2	3.5	49	22.7
w	3X	DeKalb-Pfizer DK-77W	119	93	3.4	2.5	56	24.0
y	M2X	FFR 955C	116	92	3.1	3.3	52	22.6
w	M2X	T82-2051	116	95	3.0	2.2	54	24.2
w	3X	FFR 929W	115	91	2.9	3.1	53	24.3

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 15. Corn: Yield of 26 early-maturing hybrids evaluated at four locations in 1986.

Color	Cross	Hybrid	Avg.	1/ Knox- ville	2/ Martin	2/ Milan	3/ Ames Plantation
				Bushels per acre			
y	2X	Asgrow/O's Gold 2570	137	147	109	166	127
y	2X	Pioneer brand 3389	137	141	125	166	117
y	2X	DeKalb-Pfizer DK-636	137	133	132	157	126
y	2X	Asgrow/O's Gold 5L34All	136	155	113	167	109
y	2X	Pioneer brand 3358	136	139	118	161	125
y	2X	DeKalb-Pfizer DK-656	134	136	107	171	124
y	2X	Agri Pro HP 555	134	151	100	164	121
y	2X	Super Crost 5438	134	136	100	168	130
y	2X	Pioneer brand 3378	133	131	116	166	118
y	2X	FFR 788C	133	138	100	171	121
y	2X	McCurdy 7676	132	145	102	151	130
y	2X	Agri Pro 818	131	138	119	156	113
y	2X	Asgrow/O's Gold 3344	131	133	122	160	109
y	2X	Beck's 65X	131	126	116	156	124
y	2X	Funk G-4626	130	134	105	165	118
y	2X	McCurdy 83-40	130	144	103	152	122
y	2X	Asgrow/O's Gold RX788	129	135	121	154	105
y	2X	FFR 747C	129	134	113	153	115
y	2X	DeKalb-Pfizer DK-672	128	141	97	161	114
y	2X	Funk G-4635	128	136	103	164	110
y	2X	USS 7001	127	132	108	147	120
y	M2X	Funk G-4522	126	130	104	164	108
y	2X	Sun Prairie SP230	124	124	107	154	109
y	2X	Coker 8575	122	129	98	160	102
y	2X	N.K. PX79	120	117	105	147	113
y	M2X	FFR 767C	107	111	90	133	95
L.S.D. (.05)			8.5	15.0	20.9	16.1	16.8
C.V. %			9.4	7.9	13.6	7.2	10.2
Avg.			129.9	135.2	109.0	158.9	116.4

1/Sequatchie silt loam (2% to 5% slopes).

2/Falaya silt loam (2% to 5% slopes).

3/Loring silt loam (2% to 5% slopes).

Table 16. Corn: Yield and other characteristics of 26 early-maturing hybrids evaluated at five locations in 1986.

Color	Cross	Hybrid	Avg.	Grain	Husk	Ear	Grain
			Yield	quality	cover	ht.	moisture
			Bu/A	Rating ^{1/}	Rating ^{1/}	In.	at harvest
y	2X	Asgrow/O's Gold 2570	137	3.0	3.0	57	21.5
y	2X	Pioneer brand 3389	137	3.0	5.5	54	20.3
y	2X	DeKalb-Pfizer DK-636	137	2.5	3.0	53	19.1
y	2X	Asgrow/O's Gold 5L34A11	136	3.5	3.0	49	19.5
y	2X	Pioneer brand 3358	136	3.0	4.5	53	20.8
y	2X	DeKalb-Pfizer DK-656	134	3.5	4.5	56	19.9
y	2X	Agri Pro HP 555	134	3.0	2.8	57	21.7
y	2X	Super Crost 5438	134	3.0	4.5	55	20.6
y	2X	Pioneer brand 3378	133	3.0	4.2	52	18.3
y	2X	FFR 788C	133	4.0	4.2	53	21.8
y	2X	McCurdy 7676	132	3.0	3.0	57	21.4
y	2X	Agri Pro 818	131	4.0	3.2	52	19.7
y	2X	Asgrow/O's Gold 3344	131	4.0	4.0	55	20.4
y	2X	Beck's 65X	131	4.0	4.0	55	20.8
y	2X	Funk G-4626	130	2.0	3.0	54	20.8
y	2X	McCurdy 83-40	130	3.5	2.5	54	21.4
y	2X	Asgrow/O's Gold RX788	129	2.5	2.8	53	20.3
y	2X	FFR 747C	129	2.5	3.0	52	20.8
y	2X	DeKalb-Pfizer DK-672	128	3.5	2.8	54	20.0
y	2X	Funk G-4635	128	3.0	3.5	59	22.0
y	2X	USS 7001	127	4.0	3.2	54	21.5
y	M2X	Funk G-4522	126	3.0	3.2	53	21.2
y	2X	Sun Prairie SP230	124	4.0	5.0	51	19.2
y	2X	Coker 8575	122	3.5	4.0	49	18.4
y	2X	N.K. PX79	120	4.0	3.8	54	18.6
y	M2X	FFR 767C	107	4.0	3.8	55	19.4
L.S.D. (.05)			8.5				
C.V. %			9.4				
Avg.			129.9				

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 17. Corn: Yield of early-maturing hybrids evaluated at four locations for two years (1985-86).

Color	Cross	Hybrid	2 Yr.	Knox-	Ames		
			Avg.	ville	Martin	Milan	Plantation
Bushels per acre							
y	2X	Pioneer brand 3389	149	144	147	178	129
y	2X	Asgrow/O's Gold 2570	149	155	127	179	135
y	2X	McCurdy 7676	147	152	132	170	134
y	2X	Agri Pro HP 555	147	162	117	179	128
y	2X	Pioneer brand 3358	146	142	129	173	137
y	2X	DeKalb-Pfizer DK-636	145	141	135	171	132
y	2X	Pioneer brand 3378	144	140	137	172	127
y	2X	DeKalb-Pfizer DK-672	144	155	115	176	128
y	2X	USS 7001	143	143	131	169	127
y	2X	Super Crost 5438	143	138	119	179	135
y	2X	FFR 788C	142	148	111	185	126
y	2X	Beck's 65X	141	134	130	172	126
y	2X	DeKalb-Pfizer DK-656	141	142	117	184	121
y	2X	FFR 747C	141	148	126	167	123
y	2X	Asgrow/O's Gold 3344	140	138	133	171	117
y	2X	Funk G-4635	138	139	121	175	117
y	2X	Funk G-4522	136	139	126	163	114
y	2X	Coker 8575	130	143	105	165	107
y	M2X	FFR 767C	124	128	112	150	108

Table 18. Corn: Yield and other characteristics of early-maturing hybrids evaluated at four locations for two years (1985-86).^{1/}

			2 Yr.	Grain	Husk	Ear	Grain
			Avg.	quality	cover	ht.	moisture
Color	Cross	Hybrid	Yield	Rating ^{2/}	Rating ^{2/}	In.	at
			Bu/A				harvest
							%
y	2X	Pioneer brand 3389	149	2.4	5.2	54	20.6
y	2X	Asgrow/O's Gold 2570	149	2.9	3.2	56	22.0
y	2X	McCurdy 7676	147	2.5	2.8	56	21.4
y	2X	Agri Pro HP 555	147	2.5	2.4	56	22.1
y	2X	Pioneer brand 3358	146	2.6	5.0	53	21.0
y	2X	DeKalb-Pfizer DK-636	145	2.4	2.8	52	19.8
y	2X	Pioneer brand 3378	144	3.0	5.2	53	19.2
y	2X	DeKalb-Pfizer DK-672	144	2.6	2.6	53	20.8
y	2X	USS 7001	143	3.2	3.8	52	21.5
y	2X	Super Crost 5438	143	3.1	4.5	54	20.9
y	2X	FFR 788C	142	3.2	4.5	53	21.6
y	2X	Beck's 65X	141	3.0	4.3	54	21.0
y	2X	DeKalb-Pfizer DK-656	141	2.8	4.2	54	20.9
y	2X	FFR 747C	141	2.2	2.5	51	20.8
y	2X	Asgrow/O's Gold 3344	140	2.9	3.3	54	20.8
y	2X	Funk G-4635	138	2.8	3.8	57	22.0
y	2X	Funk G-4522	136	2.8	3.6	50	21.6
y	2X	Coker 8575	130	3.0	4.5	48	19.5
y	M2X	FFR 767C	124	3.6	4.1	54	19.6

^{1/}No lodging data reported because tests were harvested before any lodging had occurred.

^{2/}Ratings based on scale of 1 through 9 with 1 being excellent and 9 poor.

Table 19. Corn: Yield of early-maturing hybrids evaluated at four locations for three years (1984-86).

Color Cross		Hybrid	3 Yr. Avg.	Knox- ville	Martin	Milan	Ames Plantation
			Bushels per acre				
y	2X	Pioneer brand 3389	148	146	147	174	124
y	2X	Asgrow/O's Gold 2570	147	159	127	176	125
y	2X	McCurdy 7676	146	158	136	165	124
y	2X	FFR 788C	143	148	125	179	118
y	2X	Pioneer brand 3358	141	139	129	168	127
y	2X	FFR 747C	139	150	124	165	117
y	2X	USS 7001	138	144	131	156	121
y	2X	Super Crost 5438	138	138	121	167	126
y	M2X	Funk G-4522	138	141	135	168	109
y	2X	Asgrow/O's Gold 3344	137	139	134	164	110
y	2X	Beck's 65X	137	137	130	162	118
y	2X	DeKalb-Pfizer DK-656	136	146	112	173	115

Table 20. Corn: Yield and other characteristics of early-maturing hybrids evaluated at four locations for three years (1984-86).

Color Cross		Hybrid	3 Yr. Avg. Yield Bu/A	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. In.	Grain moisture at harvest %
y	2X	Pioneer brand 3389	148	100	2.5	5.0	52	20.6
y	2X	Asgrow/O's Gold 2570	147	99	2.9	3.3	54	22.3
y	2X	McCurdy 7676	146	99	2.7	3.0	55	21.9
y	2X	FFR 788C	143	100	3.4	4.0	51	21.7
y	2X	Pioneer brand 3358	141	100	2.8	5.0	51	21.6
y	2X	FFR 747C	139	100	2.3	2.8	50	20.9
y	2X	USS 7001	138	100	3.4	4.0	51	21.5
y	2X	Super Crost 5438	138	100	3.3	4.7	53	21.4
y	M2X	Funk G-4522	138	100	2.7	3.5	49	21.6
y	2X	Asgrow/O's Gold 3344	137	99	3.0	3.4	50	20.9
y	2X	Beck's 65X	137	99	3.2	4.5	53	21.2
y	2X	DeKalb-Pfizer DK-656	136	100	2.9	4.3	53	21.4

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 21. Corn: Yield and other characteristics of 40 extra hybrids evaluated at Knoxville in 1986.^{1/}

Color	Cross	Hybrid	Avg. Yield Bu/A	Grain quality Rating ^{2/}	Husk cover Rating ^{2/}	Ear ht. In.	Grain moisture at harvest
							%
y	2X	Asgrow/O's Gold 5L34A11	164	2.5	3.0	57	21.9
y	2X	Beck's 85MDM	160	3.0	4.0	61	25.3
y	2X	McCurdy 85-60	159	3.0	3.0	56	22.0
y	2X	SeedTec EX-209	158	2.0	3.0	56	21.9
y	2X	Zimmerman Z-15	155	3.0	2.5	55	25.8
y	2X	Coker 3020	155	3.0	4.0	50	21.8
y	2X	Sunbelt 1802	151	3.0	4.0	54	22.8
y	2X	Pfister 4470	147	3.5	4.5	56	20.8
y	2X	Zimmerman Z-35	146	2.5	2.5	56	21.5
y	2X	Pioneer brand 3184	146	3.5	3.5	50	23.6
w	2X	Asgrow/O's Gold 5L44D44	146	3.5	3.5	53	21.9
w	3X	FFR Exp 1413W	143	2.0	2.0	59	24.8
w	2X	G.K. Exp 5921W	143	3.0	2.0	60	23.0
y	M2X	McCurdy 85-61	140	3.5	2.5	58	25.3
y	2X	N.K. X6674	139	3.0	4.0	54	24.8
y	M2X	Sun Prairie SP2405	139	3.0	3.0	53	22.9
y	2X	P.A.G. SX16A	138	3.0	4.0	56	20.4
y	2X	Pfister 4571	137	3.0	4.0	58	23.6
y	2X	P.A.G. SX351	134	5.0	4.0	56	22.5
w	2X	Paymaster Exp 126022	134	3.5	4.0	48	20.8
y	2X	P.A.G. SX352	132	4.0	5.0	54	19.0
y	M2X	Coker 8696	132	3.0	3.0	57	22.1
w	3X	FFR Exp 1414W	132	3.5	2.0	59	25.2
y	3X	Asgrow/O's Gold 5L45A13	130	3.5	3.5	54	22.8
y	2X	Agri Pro EX 670	130	3.0	3.5	54	20.3
y	2X	P.A.G. Exp 185059	130	2.0	3.0	56	22.8
w	2X	FFR Exp 16992	129	4.0	5.0	50	21.2
y	2X	Madison GL271	129	4.0	4.0	54	19.6
y	2X	McCurdy 84-50	128	4.0	3.0	48	19.3
y	2X	Madison GL40	128	3.0	4.0	46	21.6
y	2X	Sun Prairie SP2750	128	2.5	2.5	54	20.8
w	2X	Asgrow/O's Gold 5L44D43	127	2.5	2.0	59	23.0
y	2X	TN 850809	124	2.5	4.0	49	23.7
y	3X	Asgrow/O's Gold 5L45A34	124	4.0	3.5	52	23.0
w	2X	FFR Exp 16990	122	3.5	3.0	52	20.6
y	2X	P.A.G. Exp 125618	121	4.0	4.0	52	22.0
y	2X	Pfister 3450	121	4.0	3.5	55	22.6
w	2X	FFR Exp 15848 ^{3/}	119	4.0	2.0	50	23.4
y	2X	Cargill Exp 126016	117	4.0	4.5	50	20.3
w	2X	FFR Exp 16991	108	4.0	3.0	52	21.9
L.S.D. (.05)			18.3				
C.V. %			9.6				
Avg.			136.3				

^{1/}Sequatchie silt loam (2% to 5% slopes).^{2/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.^{3/}FFR Exp 15848 had 15846 on package.

Table 22. Corn: Yield and other characteristics of medium-season hybrids evaluated at Crossville in 1986.

Color	Cross	Hybrid	Avg. Yield Bu/A	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. In.	Grain moisture at harvest
							%
y	2X	DeKalb-Pfizer DK-711	111	3.0	2.5	58	26.5
y	2X	Stauffer S7759	106	3.0	3.5	56	23.7
y	2X	SeedTec H-2675	103	2.5	3.0	57	25.8
y	2X	Stauffer 8500	102	3.5	4.5	58	25.8
y	2X	N.K. PX 9540	101	3.0	3.0	55	22.4
y	2X	Zimmerman Z-27Y	101	3.5	5.0	62	25.9
y	2X	P.A.G. SX352	99	3.0	4.5	57	23.9
y	2X	Beck's 85XA	99	3.0	3.0	58	25.2
y	2X	GK 750	98	2.5	3.0	56	23.0
y	2X	FFR 811C	98	4.0	4.0	54	25.8
y	2X	Coker 8625	96	3.0	3.0	56	18.8
y	2X	Pioneer brand 3320	94	3.5	3.5	60	28.0
y	2X	Funk G-6066X	93	3.5	3.0	58	27.3
y	2X	McCurdy 8150	93	3.5	4.5	65	26.8
y	2X	Cargill 967	92	4.5	4.5	63	24.0
y	2X	Jacques 8350	90	3.0	3.0	59	24.8
y	2X	DeKalb-Pfizer DK-689	90	3.0	3.0	64	27.2
y	2X	N.K. PX 9581	89	3.0	5.5	58	26.2
y	2X	Asgrow/O's Gold 5509	88	3.5	3.5	58	27.6
y	M2X	Funk G-4614	87	3.5	3.0	60	25.2
y	2X	Paymaster 7990	87	4.5	4.5	54	27.8
y	M2X	Funk G-4734	84	3.5	3.5	62	25.8
y	M2X	Coker 19A	84	3.5	4.0	58	24.6
y	2X	FFR 815C	84	3.5	4.5	56	27.0
y	2X	Asgrow/O's Gold RX892	83	3.0	4.0	58	24.9
y	M2X	Funk G-4733	82	3.0	3.0	52	27.2
y	2X	Jacques 8250	81	3.0	4.0	54	25.7
y	2X	McCurdy 84AA	80	3.5	3.5	57	26.2
y	2X	DeKalb-Pfizer DK-748	77	3.0	3.0	62	27.3
y	2X	RA 1502	74	4.5	4.0	56	29.2
y	3X	Funk G-4765	69	3.5	3.5	60	27.2
y	2X	Pioneer brand 3184	68	3.5	4.5	52	25.6
y	2X	Pioneer brand 3147	68	5.0	5.0	65	31.0
y	2X	SeedTec H-2686A	60	4.5	3.0	64	26.6
y	2X	Coker 21	58	4.0	3.5	58	29.4
w	2X	Funk G-6044W	55	3.5	3.0	62	31.0
w	2X	TN 850003	51	3.5	3.0	58	27.0
y	M2X	TN 82035	47	4.0	3.0	60	25.8
y	2X	FFR 848C	38	3.0	3.0	62	27.0
w	3X	Asgrow/O's Gold 2680W	36	3.5	3.0	64	30.8
L.S.D. (.05)			27.1				
C.V. %			23.4				
Avg.			82.4				

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 23. Corn: Yield and other characteristics of 24 medium-season hybrids evaluated at Crossville in 1986.

Color	Cross	Hybrid	Avg.	Grain	Husk	Ear	Grain
			Yield	quality	cover	ht.	moisture
			Bu/A	Rating ^{1/}	Rating ^{1/}	In.	at harvest %
y	2X	McCurdy 7800	118	3.0	5.5	60	24.4
y	2X	T.E. 6996	113	3.0	4.5	59	25.5
y	2X	Agri Pro HP 771	112	3.0	3.5	62	24.3
y	2X	SeedTec ST-7750	107	3.0	2.5	60	23.2
y	2X	Cargill 971	106	3.0	3.0	58	24.6
y	2X	Princeton SX865	104	3.5	3.0	57	23.4
y	2X	FFR 810C	104	4.0	3.5	55	21.5
y	2X	Zimmerman Z-28	103	3.5	4.5	62	22.3
y	2X	Asgrow/O's Gold RX798	102	3.5	3.0	56	20.7
y	2X	Agri Pro 830	101	3.0	3.5	58	22.4
y	2X	Cargill 973	98	3.0	3.0	50	25.4
y	2X	T.E. 6994	97	3.0	3.0	54	22.3
w	2X	Asgrow/O's Gold RX956W	96	3.0	3.0	56	23.6
y	2X	Pioneer brand 3320	95	3.0	2.5	53	25.2
y	M2X	Super Crost 5454	94	2.5	3.5	59	23.2
y	M2X	Gold Medal 3357	91	3.0	3.0	60	23.5
y	2X	Super Crost 5438	91	3.5	3.5	57	23.0
y	M2X	Gold Medal 984	90	4.0	3.0	64	24.0
y	2X	SeedTec H-2601	88	3.5	4.0	52	24.0
y	M2X	Gold Medal 335	88	3.5	3.5	60	23.8
y	2X	T.E. 6995A	84	3.5	3.0	62	24.0
w	2X	SeedTec H-2625W	76	2.5	3.0	62	26.2
y	2X	Asgrow/O's Gold RX860	74	4.0	2.5	54	22.7
w	3X	Funk G-6054W	59	3.0	2.5	58	25.4
L.S.D. (.05)			21.0				
C.V. %			15.6				
Avg.			95.4				

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 24. Corn: Yield and other characteristics of medium-season hybrids evaluated at Crossville for three years (1984-86).

Color	Cross	Hybrid	3 Yr.	Erect plants	Grain quality	Husk cover	Ear ht.	Grain
			Avg. Yield					moisture
			Bu/A	%	Rating ^{1/}	Rating ^{1/}	In.	at harvest
y	2X	Beck's 85XA	156	99	2.8	3.0	59	28.7
y	2X	Stauffer S7759	150	99	2.6	4.5	59	23.6
y	2X	Zimmerman Z-27Y	149	100	2.8	4.5	66	26.3
y	2X	Cargill 967	147	100	4.2	5.3	62	25.3
y	2X	P.A.G. SX352	145	98	3.2	4.7	58	23.6
y	2X	McCurdy 8150	145	99	3.2	3.3	66	27.9
y	2X	N.K. PX 9581	143	100	3.5	4.7	59	26.4
y	2X	Asgrow/O's Gold 5509	141	96	3.8	3.8	58	28.8
y	2X	DeKalb-Pfizer DK-689	141	99	3.2	3.8	62	28.2
y	2X	Pioneer brand 3320	140	99	2.7	3.7	59	27.2
y	2X	Pioneer brand 3184	139	100	3.8	4.3	55	27.3
y	2X	McCurdy 84AA	138	95	3.7	3.2	58	27.4
y	M2X	Funk G-4733	137	99	3.0	2.8	57	28.2
y	M2X	Coker 19A	136	99	3.5	3.7	58	26.4
y	2X	RA 1502	136	98	3.8	3.8	55	27.7
y	2X	FFR 811C	135	96	4.0	4.7	54	25.7
y	2X	SeedTec H-2686A	132	98	3.7	3.5	62	28.4
y	M2X	Funk G-4734	129	98	3.8	3.5	61	29.6
y	2X	Coker 21	129	99	4.0	3.3	58	31.0
y	2X	Pioneer brand 3147	126	100	5.0	4.0	64	31.9
y	3X	Funk G-4765	124	99	3.8	3.2	62	31.0
w	3X	Asgrow/O's Gold 2680W	121	98	3.8	3.2	66	30.2
y	2X	FFR 848C	117	98	3.2	3.2	65	27.8

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 25. Corn: Yield and other characteristics of early-maturing hybrids evaluated at Crossville in 1986.

Color Cross		Hybrid	Avg. Yield Bu/A	Husk cover Rating ^{1/}	Ear ht. In.	Grain moisture at harvest %
y	2X	Asgrow/O's Gold 5L34A11	89	3.5	52	23.6
y	2X	McCurdy 83-40	89	3.5	59	21.1
y	2X	McCurdy 7676	84	5.0	58	23.4
y	2X	FFR 747C	83	3.0	57	22.8
y	2X	Agri Pro HP 555	82	3.0	64	22.4
y	2X	DeKalb-Pfizer DK-656	80	4.5	62	23.8
y	2X	Asgrow/O's Gold 2570	79	3.0	66	22.5
y	2X	Pioneer brand 3358	76	5.0	55	21.5
y	2X	Asgrow/O's Gold 3344	73	4.0	60	26.8
y	2X	Super Crost 5438	73	4.0	56	23.3
y	2X	Funk G-4635	72	3.5	60	23.4
y	M2X	Funk G-4522	71	3.5	58	24.4
y	2X	DeKalb-Pfizer DK-636	70	3.5	60	23.4
y	2X	USS 7001	66	3.5	50	23.4
y	2X	DeKalb-Pfizer DK-672	65	4.5	59	24.8
y	2X	Asgrow/O's Gold RX788	65	3.5	59	22.5
y	2X	Funk G-4626	63	3.0	56	24.4
y	2X	Pioneer brand 3389	62	3.0	60	22.2
y	2X	Sun Prairie SP230	61	3.5	56	22.0
y	2X	Pioneer brand 3378	60	4.5	56	24.0
y	2X	Coker 8575	58	3.0	50	21.8
y	2X	Beck's 65X	57	4.0	60	23.3
y	2X	FFR 788C	57	3.0	56	24.2
y	M2X	FFR 767C	56	3.0	63	23.6
y	2X	Agri Pro 818	54	4.0	58	22.6
y	2X	N.K. PX 79	54	3.5	60	22.9
L.S.D. (.05)			21.6			
C.V. %			22.1			
Avg.			69.3			

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 26. Corn: Yield and other characteristics of early-maturing hybrids evaluated at Crossville for three years (1984-86).

Color	Cross	Hybrid	3 Yr.	Erect plants	Grain quality	Husk cover	Ear ht.	Grain
			Avg. Yield					moisture
			Bu/A	%	Rating ^{1/}	Rating ^{1/}	In.	at harvest
y	2X	Asgrow/O's Gold 2570	143	97	3.5	2.7	65	23.6
y	2X	McCurdy 7676	142	99	2.8	3.5	61	23.7
y	2X	Pioneer brand 3358	141	100	3.2	5.8	57	23.4
y	2X	DeKalb-Pfizer DK-656	139	99	3.0	3.7	60	23.5
y	2X	Super Crost 5438	137	100	3.8	4.2	56	23.1
y	2X	FFR 747C	137	98	3.0	3.5	56	23.4
y	2X	FFR 788C	137	99	3.5	3.3	56	24.3
y	2X	Pioneer brand 3389	136	100	3.2	5.2	59	23.0
y	2X	USS 7001	135	95	3.5	3.7	52	23.8
y	2X	Beck's 65X	134	97	3.5	3.8	60	22.8
y	M2X	Funk G-4522	134	100	4.0	2.8	56	25.0
y	2X	Asgrow/O's Gold 3344	127	95	3.5	4.0	57	24.5

^{1/}Rating based on a scale of 1 through 9 with 1 being excellent and 9 poor.

Table 27. Corn: Performance data for 39 corn hybrids evaluated for susceptibility to Gray Leaf Spot and Northern Leaf Spot in Johnson County, TN, in 1986.^{1/}

Hybrid	Yield Bu/A	Standing Plants %	Moisture at Harvest %	Gray Leaf Spot	Northern Leaf Spot
				Rating	Rating
Pioneer brand 3352	143	99	19.9	2/ 1.6	3/ 1.0
Pioneer brand 3192	133	83	24.0	2.4	1.0
DeKalb-Pfizer DK-789	132	89	25.5	1.5	2.6
FFR 747C	123	98	21.7	2.7	3.0
Pioneer brand 3233	115	92	21.0	1.2	1.8
Zimmerman Z-11W	111	70	25.0	1.8	2.6
Pioneer brand 3389	111	97	19.8	3.5	1.6
FFR 810C	110	88	18.7	2.6	3.6
Pioneer brand 3358	109	96	18.0	2.9	1.0
Asgrow/O's Gold 2570	107	48	20.8	3.2	3.5
FFR 811C	107	75	22.8	2.2	1.4
FFR 848C	105	89	24.0	1.5	1.5
Pioneer brand 3320	105	72	19.3	3.6	0.5
McCurdy 8150	103	69	26.4	3.0	3.0
N.K. PX 95	102	79	27.2	1.6	2.1
Coker 19A	102	88	22.0	2.0	3.2
RA 1502	102	90	23.0	3.5	3.2
Asgrow/O's Gold 3344	101	63	20.6	1.8	0.5
Beck's 85XA	101	90	23.4	1.9	2.6
Mol7 x NC250	99	72	20.1	1.2	1.8
FFR 955C	99	70	23.4	2.6	3.5
Zimmerman Z-14W	97	79	24.7	1.6	1.4
USS 7001	96	79	22.6	2.1	2.7
Pioneer brand 3165	96	65	22.6	2.1	1.7
Pioneer brand 3147	94	77	23.3	2.5	1.1
Pioneer brand 3110	91	96	25.6	1.4	1.5
SeedTec H-2686A	91	91	25.6	2.7	2.7
Pioneer brand 3184	89	85	23.4	3.3	3.5
DeKalb-Pfizer DK-689	88	77	23.6	1.6	1.6
Funk G-4522	87	80	20.8	5.0	3.8
Funk G-4733	82	62	24.3	3.8	3.5
Coker 21	79	71	23.1	3.1	4.0
McCurdy 84AA	77	73	23.1	3.6	3.7
DeKalb-Pfizer DK-748	76	91	23.7	2.2	3.4
Funk G-4868	76	89	26.8	3.0	0.5
FFR 929W	76	82	25.6	1.5	2.7
N.K. PX 79	75	75	23.3	1.5	1.6
Asgrow/O's Gold 5509	74	63	25.1	3.4	3.8
Asgrow/O's Gold 2680W	72	79	25.3	1.4	2.9
L.S.D. (.05)	34.0	19.0	2.0	0.9	0.9
C.V. %	26.0	18.0	4.3	27.0	30.0
Avg.	98.0	80.0	23.0	2.4	2.3

^{1/}Data obtained in cooperation with Tom Fortune, Cooperative Extension Service, Johnson County, TN; Wayne Ward, Farm Manager, Maymeade Farm, Johnson County, TN; D. R. West and D. R. Kincer, University of Tennessee, Knoxville.

^{2/}Rating scale of 1 to 5, where 1 = no leaf lesions and 5 = severe leaf blighting.

^{3/}Rating scale of 0 to 5, where 0 = no leaf lesions and 5 = severe leaf blighting.

Table 28. Corn: Yield and virus rating for 47 corn hybrids grown on the Knoxville Holston Farm in 1986.^{1/}

Hybrid	Yield	Moisture	Virus	Virus
		at Harvest	Diseased Plants	
	Bu/A	%	%	Severity Rating ^{2/}
Jaques 8400	97.4	19.0	59.3	3.0
Pioneer brand 3378	94.3	17.5	44.4	2.2
McCurdy 85-60	91.8	21.6	43.6	2.2
DeKalb-Pfizer DK-689	85.7	21.5	45.4	2.1
MDM4	85.4	20.0	52.2	2.7
FFR 815C	84.8	22.4	33.6	1.9
Gold Medal 335	81.4	19.1	64.6	2.9
Asgrow/O's Gold 5L34A02	78.9	19.2	70.3	3.2
FFR 767C	78.3	18.7	38.4	2.2
Beck's 85MDM	74.6	23.0	32.5	1.9
Gold Medal 3357	74.4	18.7	52.8	2.4
McCurdy 83-40	73.7	20.2	70.4	3.2
McCurdy 85-61	73.6	21.7	48.2	2.2
P.A.G. SX 16A	73.3	18.9	45.6	2.0
Gold Medal 1070	72.3	19.3	77.2	3.5
Jaques 8250	71.4	20.7	55.6	2.7
Pioneer brand 3147	71.2	22.7	40.6	2.1
SeedTec ST7750	69.1	18.2	76.1	3.3
Stauffer S8645	68.6	18.5	69.1	3.0
Funk G-4858	66.7	22.7	73.1	3.2
N.K. PX79	64.4	19.5	55.9	2.6
FFR 955C	62.7	22.6	52.6	2.3
Funk G-6066X	60.7	20.1	71.2	3.1
Zimmerman Z-14W	60.6	22.9	84.0	3.7
N.K. PX95	60.6	21.3	65.1	2.9
Asgrow/O's Gold 5L44D43	60.0	20.6	52.4	2.6
Funk G-4734	58.3	21.5	73.0	3.3
Funk G-4868	57.8	25.9	65.4	3.1
Zimmerman Z-60W	57.5	21.2	74.2	3.6
Funk G-6054W	57.1	21.2	79.3	3.7
Coker 8696	54.6	21.4	34.6	1.9
DeKalb-Pfizer Dk-77W	54.6	22.6	91.5	4.3
FFR 925	54.3	21.6	93.6	4.4
Asgrow/O's Gold 5E44E11	52.8	20.4	80.0	3.4
Gold Medal 770	51.4	21.1	81.5	4.0
Funk G-4765	50.8	19.7	81.4	4.1
Gold Medal 984	50.4	21.4	68.9	3.1
Sunbelt 1860	44.0	24.9	68.6	3.2
DeKalb-Pfizer DK-789	43.8	22.7	48.6	2.2
FFR 848C	43.0	20.6	42.7	2.3
Pioneer brand 3187	42.8	20.9	66.2	2.6
FFR Exp 1414W	37.4	21.5	72.4	3.1
(K55xC.I.66) x T163	35.2	22.6	88.5	4.0
FFR Exp 1413W	33.4	22.6	70.6	3.3
FFR 929W	25.4	21.5	78.3	3.7
Zimmerman Z-11W	24.6	22.6	77.7	3.6
Funk G-4787W	18.3	21.8	91.0	4.3
L.S.D. (.05)	18.7	1.8	21.1	0.9
C.V. %	22.6	4.2	24.6	21.7
Avg.	61.3	21.1	63.9	3.0

^{1/}This test was grown in an area heavily infested with johnsongrass to insure virus disease pressure. In addition, the test was under heavy drought stress in 1986. Hybrid yields were thus influenced by weed competition, drought stress, and virus disease susceptibility. The correlations between yield and percent diseased plants, and between yield and virus severity rating were -0.45 and -0.48, respectively. These correlations were in the -0.8 range in 1985.

^{2/}Virus severity rated on 1 to 9 scale, where 1 = no virus symptoms and 9 = dead plants.

Virus data obtained in cooperation with D. R. Kincer and D. R. West.

Table 29. Corn: Yield and virus rating of corn hybrids grown at the Knoxville Holston Farm for two years (1985-86).

Hybrid	Yield Bu/A	Moisture at Harvest %	Virus Diseased Plants %	Virus Severity Rating ^{1/}
DeKalb-Pfizer DK-689	103	20.9	60	2.7
FFR 815C	99	21.2	55	2.8
Beck's 85MDM	88	21.5	76	2.9
FFR 955C	86	21.6	69	3.3
Jaques 8400	86	19.4	74	4.2
Funk G-4858	84	22.8	78	3.7
FFR 767C	84	18.1	65	3.5
Pioneer brand 3147	82	22.6	62	2.8
Zimmerman Z-14W	81	22.4	87	4.3
P.A.G. SX16A	81	18.1	67	3.3
Zimmerman Z-60W	80	20.9	80	4.0
FFR 848C	78	19.8	60	3.0
Funk G-4734	73	21.0	82	3.9
Funk G-4868	72	25.0	77	4.0
DeKalb-Pfizer DK-789	69	23.0	64	3.1
Funk G-4765	67	19.9	88	4.6
DeKalb-Pfizer DK-77W	62	22.4	94	5.0
FFR Exp 1414W	60	21.3	81	4.0
Zimmerman Z-11W	58	21.9	82	4.0
FFR 929W	53	21.7	84	4.2
FFR Exp 1413W	53	21.6	80	4.1
Avg.	76	21.3	75	3.7

^{1/}Virus severity rated on 1 to 9 scale, where 1 = no virus symptoms and 9 = dead plants.

Performance of Wheat, Barley, Oats and Rye Varieties

Wheat

Thirty-two soft red winter wheat varieties were evaluated at eight locations in 1986. No data were reported for Springfield, Crossville and Greeneville in 1984 or for Crossville in 1985 due to conditions that made the data too variable to be reliable.

The winter of 1985-86 had warm days and cold nights with little or no snow cover resulting in winter killing of wheat, oats and barley at many locations. Winter kill was severe at Crossville with no small grain variety performing well.

Small grain yields were further reduced, especially at Knoxville and Greeneville, by the dry spring of 1986.

With the dry spring of 1986, very little disease was noted at any location. Little or no response to foliar fungicide treatment on wheat varieties was obtained at Knoxville, Spring Hill and Jackson in 1986. These results will be reported in another publication.

Coker 762, Terral 817, Terral 812 and Coker 9227 did not perform well at most locations. Terral 812 seed were weak, resulting in thin stands at most locations. Florida 302 had performed well in 1984 and 1985, with little or no winter kill; however, in 1986 it showed winter killing at several locations with reduced yields. Coker 747 performed better relative to other varieties in 1986 than it had in previous years.

In 1986 the leading cultivars in yield of wheat were HW 3021, HW 3015, Coker 747, Saluda, Pioneer brand 2550 and Becker. Coker 916, Coker 983, and Magnum did not perform as well in 1986 as they had in 1984 and 1985. Using the three-year average, the leading varieties were Coker 916, Caldwell, Scotty, Compton, and Pioneer brand 2250.

The recommended wheat varieties for 1986-87 are Auburn, Caldwell, Coker 747, Coker 916, Fillmore, Massey, Pioneer brand 2550, Scotty and Tyler.

Barley

Nine barley cultivars were evaluated at six locations in 1986. No yield data are reported for Greeneville because of winter killing and poor stands for all varieties.

Wysor and Henry were the two leading varieties in average yield. Yields at Knoxville, Crossville and Springfield were erratic for most varieties due to winter killing. The injury was not uniform across all replications, resulting in high C.V.'s for these locations. Spring Hill and Jackson data were averaged because of their low C.V.'s; however, the varieties ranked the same for this average yield as when the locations with high C.V.'s were included in the state average. These types of data can be expected in years where significant winter killing occurs.

The recommended barley varieties for 1986-87 are Volbar and Henry.

Fall Seeded Oats

All fall seeded winter oats winter-killed in 1984. In 1985 some winter killing occurred but snow cover during severe cold reduced injury. In 1986 Jackson was the only location where little winter killing occurred. No yields were reported for Greeneville due to severe winter killing for all varieties.

Madison variety winter-killed at all locations with yields being recorded at Jackson only. The two leading varieties, Cumberland and Coker 716, suffered winter injury at most locations.

The recommended fall seeded oats for 1986-87 are Southern States 76-30, Coker 716 and Cumberland.

Spring Oats

Thirteen spring oat varieties were evaluated for grain and forage at Knoxville in 1986. Don, Ogle, Larry and Noble were the leading varieties in grain yield. Forage and grain yield for most varieties were reduced by the extremely dry spring and early summer at this location.

Rye

Several varieties or strains were evaluated in 1986 at Knoxville for Gurley's Seed Company and Samuel Roberts Noble Foundation, Inc. The leading varieties in grain yield were AFC 20-20, GI 85, N.F. 142, and GI 87x. Considering the growing season of 1985-86, the rye varieties performed well. Most varieties lodged severely with GI 87 lodging the least. Test weight (weight per bu) was very similar for most varieties.

Table 30. Wheat: Yield of soft red winter wheat varieties evaluated at eight locations in 1986.

Variety	Avg.	Greene ^{1/} ville	Knox ^{2/} ville	Spring ^{3/} field	Spring ^{4/} Hill	5/ Jackson	6/ Milan	Cross ^{7/} ville	8/ Martin
Bushels per acre									
HW 3021	37	53	28	37	32	39	52	11	45
HW 3015	36	52	28	32	36	36	51	10	42
Coker 747	35	50	30	34	28	39	43	16	36
Saluda	34	53	25	31	32	43	45	7	39
Pioneer brand 2550	34	48	28	27	32	40	48	12	39
Becker	34	39	21	27	33	41	53	10	49
Fillmore	33	44	34	26	33	35	36	18	40
Tyler	32	47	22	31	29	39	44	6	37
Pioneer brand 2551	32	37	25	21	35	39	44	15	44
T79-307	31	45	22	32	30	25	42	17	37
Scotty	31	50	24	28	23	35	37	16	34
Auburn	31	36	26	21	24	42	35	25	42
Garst Exp 4055	31	42	22	24	28	39	36	15	40
Caldwell	31	44	28	27	29	32	34	12	44
Coker 9323	30	43	23	32	25	40	31	14	30
Massey	30	45	16	29	26	34	43	9	36
Compton	30	44	32	17	28	33	34	10	41
Coker 916	29	45	18	32	30	34	43	4	29
HW 3027	29	47	19	31	25	32	42	6	32
T80-312	29	41	20	31	26	26	37	19	33
Magnum	28	42	26	31	27	24	31	16	26
HW 3022	28	37	18	27	23	38	42	2	33
Twain ^{10/}	28	42	15	28	28	32	37	6	35
Newton	27	35	19	20	20	37	33	21	32
AKS (N-80)	26	45	10	27	26	22	32	6	37
Florida 302	25	37	5	25	20	41	40	5	--9/
Coker 983	24	37	16	28	19	36	34	3	21
Blazer	24	37	15	24	19	23	32	7	32
Coker 762	27	46	9	30	--9/	43	27	7	--9/
Terral 817	20	34	10	24	--9/	28	25	3	--9/
Terral 812	19	33	2	22	--9/	34	17	4	--9/
Coker 9227	13	12	3	12	--9/	16	33	4	--9/
Bailey 4287			14						
L.S.D. (.05)		9.7	6.1	6.3	5.4	5.2	7.5	4.1	
C.V. %		16.4	22.0	16.7	14.1	10.8	14.1	27.8	
Avg.		41.9	19.8	27.1	27.3	34.4	37.9	10.6	

^{1/}Waynesboro silt loam (2% to 5% slopes).^{2/}Decatur silt loam (2% to 5% slopes).^{3/}Dickson silt loam (2% to 5% slopes).^{4/}Maury silt loam (2% to 5% slopes).^{5/}Calloway silt loam (2% to 5% slopes).^{6/}Memphis silt loam (2% to 5% slopes).^{7/}Hartsells loam (2% to 5% slopes).^{8/}Falaya silt loam (2% to 5% slopes).^{9/}No yield reported because of disease, poor germination or weed problems.^{10/}Tested as Agri Pro 78-044-111.

Table 31. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at eight locations in 1986.

Variety	Yield bu/A	Date Headed	Date Mature	Plant Height in.	Lodging %	1/ Test Weight lb/bu	2/ Leaf Rust Rating (0-5)	2/ Mildew Rating (0-5)	3/ Stand Rating (0-10)
HW 3021	37	4-29	6-2	32	0.7	57.0	1.8	1.0	3.2
HW 3015	36	4-28	6-2	33	1.8	55.4	0.1	0.3	3.8
Coker 747	35	4-28	6-1	28	0.7	58.4	0.9	1.2	5.2
Saluda	34	4-28	6-1	28	0.6	57.4	0.2	0.8	3.2
Pioneer brand 2550	34	4-30	6-3	31	1.4	56.4	0.1	1.2	3.0
Becker	34	5-1	6-2	28	0.7	56.2	0.7	3.6	3.2
Fillmore	33	5-4	6-7	34	1.0	51.8	0.0	0.3	5.5
Tyler	32	5-1	6-5	32	1.6	53.8	4.7	1.5	1.8
Pioneer brand 2551	32	4-30	6-1	29	0.8	55.9	0.5	0.4	7.2
T79-307	31	4-28	6-1	33	2.4	54.8	1.8	1.4	5.8
Scotty	31	4-28	6-2	31	1.1	54.9	0.1	1.2	7.2
Auburn	31	5-4	6-6	30	0.6	54.9	0.0	1.0	8.0
Garst Exp 4055	31	4-28	6-2	31	1.3	56.6	0.1	1.2	6.8
Caldwell	31	4-28	6-1	32	2.4	53.1	0.0	1.1	4.2
Coker 9323	30	4-28	6-2	27	0.7	54.6	0.4	0.2	6.5
Massey	30	4-28	6-2	31	1.7	55.3	4.3	0.1	3.0
Compton	30	4-29	6-1	30	1.1	54.7	0.0	0.9	6.0
Coker 916	29	4-27	5-31	28	2.2	56.1	0.1	0.6	1.0
HW 3027	29	4-27	5-31	29	1.0	55.2	0.3	0.9	2.0
T80-312	29	4-28	6-2	33	1.4	54.4	3.5	1.5	6.2
Magnum	28	4-27	5-31	28	0.7	54.1	0.7	1.5	5.0
HW 3022	28	4-29	6-3	31	0.7	55.2	1.0	1.6	1.8
Twain	28	4-29	6-2	32	1.4	56.8	0.0	0.1	2.8
Newton	27	5-2	6-2	29	0.6	54.3	0.5	2.0	8.8
AKS (N-80)	26	4-27	5-30	30	1.1	50.3	0.0	1.2	2.0
Florida 302	25	5-1	6-5	28	1.3	55.4	0.0	0.1	0.8
Coker 983	24	4-29	6-3	26	0.4	55.4	0.4	0.1	0.1
Blazer	24	4-28	5-31	30	1.6	54.8	1.5	1.6	2.5
Coker 762 ⁴ /	27	4-30	6-5	25	1.8	55.6	0.1	0.9	3.8
Terral 817 ⁴ /	20	4-27	6-2	28	3.0	54.7	0.0	0.9	1.2
Terral 812 ⁴ /	19	4-28	6-6	26	2.2	55.6	0.2	0.8	0.4
Coker 9227 ⁴ /	13	4-28	6-4	26	0.8	49.1	0.1	-	0.1

1/Test weight for Jackson only.

2/Rating based on a scale of 0 to 5, with 0 being no disease and 5 being severe.

3/A stand rating of 0 to 10 at Crossville, with 0 being no stand or survival and 10 being 100 percent stand or survival.

4/Average of six locations instead of eight.

Table 32. Wheat: Yield of soft red winter wheat varieties evaluated at six locations for two years (1984-85).

Variety	Avg.	Greene- ville	Knox- ville	Spring Hill	Spring- field	Jackson	Milan
Bushels per acre							
HW 3015	46	58	35	42	45	50	48
Saluda	45	63	38	38	37	51	43
Coker 916	43	61	28	38	39	44	49
HW 3021	43	54	34	38	45	43	41
Pioneer brand 2550	41	56	33	38	39	43	36
Scotty	41	61	32	33	37	46	37
Coker 747	40	54	33	33	37	41	43
Florida 302	40	51	24	37	38	49	38
Massey	38	52	26	34	39	41	37
Magnum	38	56	29	34	36	40	35
Caldwell	38	51	34	36	37	40	32
Tyler	38	55	29	35	43	35	32
Coker 983	38	51	28	33	38	45	34
Compton	38	52	33	34	30	45	35
Fillmore	37	48	36	36	36	40	27
Auburn	36	50	30	29	33	44	33
Blazer	32	50	22	28	31	30	28

Table 33. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at six locations for two years (1984-85).

Variety	Yield bu/A	Date Headed	Date Mature	Plant Height in.	Lodging %	Test Weight lb/bu	Rust Rating (0-5)	Leaf Mildew Rating (0-5)
HW 3015	46	4-28	6-1	35	17	55.8	0.7	1.9
Saluda	45	4-28	6-1	30	28	57.3	0.6	0.0
Coker 916	43	4-26	5-30	30	12	56.1	0.2	1.0
HW 3021	43	4-28	6-1	35	16	55.2	2.2	1.3
Pioneer brand 2550	41	4-30	6-3	32	25	56.1	0.9	1.1
Scotty	41	4-28	6-1	32	12	55.8	0.2	0.7
Coker 747	40	4-28	5-31	30	26	57.4	1.8	2.2
Florida 302	40	4-30	6-4	32	21	54.9	0.0	0.0
Massey	38	4-27	6-1	33	18	55.4	2.2	0.4
Magnum	38	4-27	5-30	30	11	56.2	0.8	1.4
Caldwell	38	4-28	6-1	33	23	54.8	0.5	0.7
Tyler	38	5-1	6-3	35	21	53.7	4.0	0.8
Coker 983	38	4-28	6-2	29	8	57.2	0.3	0.2
Compton	38	5-1	6-1	32	25	56.8	0.0	1.4
Fillmore	37	5-5	6-5	37	21	53.2	0.5	0.4
Auburn	36	5-4	6-4	33	10	55.7	0.0	1.2
Blazer	32	4-29	5-30	33	20	55.6	1.0	1.3

Table 34. Wheat: Yield of soft red winter wheat varieties evaluated at five locations for three years (1984-86).

Variety	Avg.	Knoxville	Spring Hill	Jackson	Milan	Martin
Bushels per acre						
Coker 916	47	44	54	44	53	41
Caldwell	46	45	51	45	42	46
Scotty	45	45	43	48	43	47
Compton	45	43	45	49	42	46
Pioneer brand 2550	45	44	50	46	42	42
Auburn	44	42	46	47	41	45
Massey	44	42	48	43	46	43
Magnum	43	43	46	43	42	43
Fillmore	43	45	47	44	38	41
Coker 983	43	44	47	45	43	37
Coker 747	43	42	43	45	48	37
Tyler	--	44	52	43	44	--1/
Florida 302	--	40	50	52	45	--1/

1/No data for 1984.

Table 35. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated at five locations for three years (1984-86).

Variety	Yield	Date Headed	Date Mature	Plant Height	Lodging	Test Weight	Leaf Rust Rating	Mildew Rating
	bu/A			in.	%	lb/bu	(0-5)	(0-5)
Coker 916	47	4-28	6-1	30	9.8	56.1	0.2	0.8
Caldwell	46	4-28	6-1	33	16.1	54.2	0.7	0.8
Scotty	45	4-28	6-1	32	8.7	55.5	0.2	0.9
Compton	45	4-30	6-1	32	17.3	56.1	0.3	1.2
Pioneer brand 2550	45	4-30	6-3	32	16.9	56.2	0.6	1.1
Auburn	44	5-4	6-5	33	7.1	55.4	0.0	1.1
Massey	44	4-27	6-2	32	12.4	55.4	2.9	0.3
Magnum	43	4-27	5-30	30	7.3	55.5	0.8	1.4
Fillmore	43	5-5	6-6	36	14.6	52.7	0.3	0.4
Coker 983	43	4-28	6-2	28	5.6	56.6	0.4	0.1
Coker 747	43	4-28	6-1	35	10.9	55.8	2.1	1.2
Tyler	--1/	5-1	6-3	34	14.4	53.7	4.2	1.0
Florida 302	--1/	4-30	6-5	30	14.2	55.1	0.0	0.1

1/No data for Martin in 1984.

Table 36. Barley: Yield of varieties evaluated at five locations in 1986.

Variety	Avg. Across Five Locations	1/ Knox- ville	2/ Cross- ville	3/ Spring- field	4/ Spring Hill	5/ Jackson	6/ Avg. Spring Hill & Jackson
Bushels per acre							
Wysor	46	32	33	26	67	75	71
Henry	41	36	34	29	55	51	53
Kline	31	2	14	31	45	61	53
Volbar	29	3	14	20	50	61	55
Anson	29	8	13	25	51	50	51
Genesis	28	8	16	19	48	48	48
Dawn	27	7	12	19	45	49	47
R74-203	26	3	12	19	39	58	48
Surveyor	25	0.8	27	20	31	48	25
L.S.D. (.05)		9.4	14.1	10.9	7.4	8.5	
C.V. %		58.2	49.5	32.3	10.6	10.4	
Avg.		11.1	19.6	23.0	47.9	55.6	

1/Decatur silt loam (2% to 5% slopes).

2/Hartsells loam (2% to 5% slopes).

3/Dickson silt loam (2% to 5% slopes).

4/Maury silt loam (2% to 5% slopes).

5/Memphis silt loam (2% to 5% slopes).

6/Jackson and Spring Hill yields were averaged due to low C.V.'s. However, even with the high C.V.'s at the other locations, ranking of average yield varied very little. These erratic yields were due to winter killing.

Table 37. Barley: Yield and other characteristics of varieties evaluated at five locations in 1986.

Variety	Yield bu/A	Date Headed	Date Mature	Plant Height in.	Weight ^{1/} per Bushel lbs
Wysor	46	4-30	5-29	29	43.8
Henry	41	4-26	5-29	28	44.4
Kline	31	5-1	6-4	28	---- ^{2/}
Volbar	29	5-1	6-3	28	41.3
Anson	29	4-30	5-30	29	38.5
Genesis	28	4-21	5-25	25	47.6
Dawn	27	4-20	5-24	26	47.8
R74-203	26	5-3	6-4	27	40.1
Surveyor	25	4-30	5-29	25	---- ^{2/}

^{1/}Knoxville data only.

^{2/}Missing data due to winter killing on most plots.

Table 38. Fall Seeded Oats: Yield of varieties evaluated at four locations in 1986.

Variety	Avg.	1/ Knoxville	2/ Springfield	3/ Spring Hill	4/ Jackson
Bushels per acre					
Cumberland	32	16	39	22	52
Coker 716	31	15	41	11	59
Brook's (Hall)	30	5	37	17	60
Brook's (N.C.)	30	6	40	21	52
AKS County Seed 883	29	9	41	17	49
Coker 277	22	4	31	13	42
Madison	--5/	--	--	--	29

1/Decatur silt loam (2% to 5% slopes).

2/Dickson silt loam (2% to 5% slopes).

3/Maury silt loam (2% to 5% slopes).

4/Memphis silt loam (2% to 5% slopes).

5/No yield due to winter kill.

Table 39. Fall Seeded Oats: Yield and other characteristics of varieties evaluated at four locations in 1986.

Variety	Yield bu/A	Date Headed	Date Mature	Plant Height in.
Cumberland	32	5-9	6-12	26
Coker 716	31	5-9	6-11	25
Brook's (Hall)	30	5-8	6-11	26
Brook's (N.C.)	30	5-8	6-11	27
AKS County Seed 883	29	5-9	6-14	23
Coker 277	22	5-7	6-12	24
Madison	--1/	---	----	--

1/No yield due to winter kill at most locations.

Table 40. Spring Oats: Yield and other characteristics of varieties evaluated at Knoxville in 1986.^{1/}

Variety	Yield		Date Headed	Date Mature	Plant Height in.	Weight per Bushel lbs
	T/A	bu/A				
Don	1.44	51	5-21	6-30	28	30.1
Ogle	1.49	45	5-24	6-30	30	27.6
Larry	1.18	43	5-21	6-29	26	29.1
Noble	1.29	42	5-22	6-29	28	27.2
Otee	1.23	38	5-22	6-27	26	28.7
Bates	1.10	38	5-18	6-29	26	28.7
Porter	1.54	38	5-28	6-29	29	28.2
Lang	1.12	37	5-18	6-28	28	26.7
Hazle	1.25	35	5-26	6-29	27	26.3
Moore	1.62	31	5-28	6-30	36	25.6
Dal	1.27	30	5-30	6-30	30	25.6
Grundy	1.25	29	5-20	6-27	26	26.4
Lodi	1.53	25	6-2	7-2	38	23.4
L.S.D. (.05)	N.S.	11.4				
C.V. %	19.7	21.3				
Avg.	1.35	37.2				

^{1/}Decatur silt loam (2% to 5% slopes).

Table 41. Rye: Yield and other characteristics of varieties evaluated at Knoxville in 1986.^{1/}

Variety	Yield		Date Headed	Plant Height in.	Lodging %	Weight per Bushel lbs
	bu/A	T/A				
AFC 20-20 ^{2/}	31	1.99	6-17	56	60	54.0
GI 85 ^{2/}	31	2.33	6-17	55	60	54.4
N.F. 142 ^{3/}	30	2.26	6-17	57	48	53.6
GI 87x ^{2/}	29	2.24	6-16	56	55	54.8
Gurley Grazer 2000 ^{2/}	28	2.47	6-16	57	45	54.1
GI 87 ^{2/}	28	2.08	6-17	56	35	54.2
N.F. 214 ^{3/}	28	2.44	6-17	56	58	53.2
Elbon ^{3/}	28	2.25	6-17	55	61	54.9
Bonel ^{3/}	25	2.39	6-17	55	69	54.0
Maton ^{3/}	21	2.56	6-17	54	86	53.7
L.S.D. (.05)	N.S.	0.28				
C.V. %	26.7	8.9				
Avg.	26.0	2.30				

^{1/}Decatur silt loam (2% to 5% slopes).

^{2/}Gurley's Seed Co., Selma, NC.

^{3/}Samuel Roberts Noble Foundation, Inc., Ardmore, OK.

Grain Sorghum

The grain sorghum tests were conducted at Spring Hill, Springfield, Milan, Martin, and Ames Plantation. The same forty varieties were evaluated at Martin and Springfield in 1986. At Ames Plantation two planting dates were made. The test at Spring Hill consisted of thirty-six varieties that were not included in the tests at Martin and Ames Plantation. No data are reported for Spring Hill due to bird damage. Fourteen varieties were evaluated at Springfield and Milan. The fourteen varieties at Milan were grown no-till in killed wheat and in a conventional seedbed.

The leading varieties in yield in 1986 at Ames Plantation and Martin were Cargill 61, Paymaster 109A, Coker 7737, Coker 7675, and P.A.G. 5572. The varieties having the highest two-year average yield for Ames Plantation and Martin were Stauffer S9740y, P.A.G. 5572, Pioneer brand 8300, Topaz, and Paymaster 1022. At Springfield, Topaz, Funk G-1711, Funk G-522DR, Hy-Performer 1330DR, and Asgrow/O's Gold GS712 produced the highest two-year average yield.

Fourteen varieties were evaluated at Milan in 1985 and 1986 with ten varieties occurring each year. The six highest grain producers for these two years at Milan were DeKalb-Pfizer DK-42y, Pioneer brand 8333, Hy-Performer 1330DR, and DeKalb-Pfizer DK-64.

Table 42. Grain Sorghum: Yield and other characteristics of varieties evaluated at Ames Plantation and Martin in 1986.

Variety	1/ Avg. Yield	2/3/ Ames Plantation		4/ Martin	Head type	Head exertion	Plant ht.	Grain moisture at harvest
	Bu/A	Early	Late	Bushels per acre	Rating ^{5/}	in.	in.	%
Cargill 61	108	118	98	92	2	9.2	44	15.5
Paymaster 109A	108	111	105	104	3	10.4	48	15.4
Coker 7737	106	111	101	77	2	11.2	50	16.0
Coker 7675	105	112	98	101	3	11.0	48	15.6
P.A.G 5572	105	108	102	99	2	9.8	48	15.4
FFR 421DR	104	109	99	91	3	11.2	51	15.1
Asgrow/O's Gold GS712	104	110	97	92	2	13.0	51	15.9
Paymaster 1096y	103	105	102	91	2	10.6	53	16.4
Hy-Performer 1330DR	103	107	100	79	2	12.8	55	16.0
Funk G-1711	103	109	97	86	2	10.0	50	16.1
Pioneer brand 8333	102	104	100	83	2	10.6	47	15.8
Pioneer brand 8226	102	103	100	114	2	11.2	49	17.3
Paymaster 1022	101	104	98	100	1	9.8	50	15.8
DeKalb-Pfizer DK-59E	101	110	92	77	2	11.2	48	16.1
Funk G-1602	101	102	100	86	2	11.4	49	15.9
Dekalb-Pfizer M-565	100	108	93	113	2	10.8	46	16.2
Stauffer S9750	100	107	93	88	2	8.8	50	16.6
Chaparral	100	104	96	96	2	11.4	48	15.4
P.A.G. 6670	100	109	90	78	2	10.2	50	17.0
Pioneer brand 8300	100	104	95	99	2	8.4	46	16.4
Funk G-522DR	99	105	94	78	2	9.2	46	16.1
Paymaster R1090	98	103	94	87	3	12.6	50	15.4
T.E. y-77	98	96	100	103	2	10.6	50	16.9
Stauffer S9740y	98	110	86	109	2	11.6	48	14.3
Opal	98	103	92	106	2	11.4	47	16.0
Topaz	98	109	87	105	2	10.8	47	16.4
T.E. Dinero	98	108	87	115	3	11.0	44	16.7
FFR 321DR	98	107	88	88	2	10.0	46	16.7
Mustang	97	100	95	102	2	11.2	45	16.2
N.K. 2660	97	96	98	105	2	8.8	46	15.8
Stauffer 7346R	97	97	98	75	2	9.0	44	15.4
Funk G-1645	97	102	91	79	2	11.0	45	16.4
FFR 331DR	96	102	90	63	2	12.0	54	16.2
Pioneer brand 8222	96	104	88	89	2	10.6	46	16.1
Stauffer 530GR	95	99	91	77	2	10.8	49	15.5
DeKalb-Pfizer DK-64	95	102	97	89	2	11.2	51	16.8
DeKalb-Pfizer DK-42y	95	96	94	80	2	11.8	48	16.3
Hy-Performer Honcho	93	101	85	68	2	9.4	42	15.8
Stauffer S9525	85	87	82	82	2	12.2	47	15.4
DeKalb-Pfizer DK-64BR	61	52	71	102	3	16.2	64	16.1
L.S.D. (.05)	11.7	14.7	14.7	29.6				
C.V. %	12.1	10.2	11.2	23.3				
Avg.	98.6	103.3	93.8	91.2				

1/Martin yield not included in average due to high C.V.

2/Early planting in 30-inch rows and late planting in 40-inch rows.

3/Loring silt loam (2% to 5% slopes).

4/Falaya silt loam (2% to 5% slopes).

5/Head type is rated 1-3; with 1 = tight and 3 = loose or open head type.

Table 43. Grain Sorghum: Yield and other characteristics of varieties evaluated at two locations for two years (1985-86).

Variety	Avg. Yield	1/ Ames Plantation	2/ Martin	3/ Head Type Rating	4/ Head Extension	Plant Ht.	Grain Moisture at Harvest
		Bushels per acre		(1-3)	In.	In.	%
Stauffer S9740y	104	98 ^{5/}	113	2.0	11.0	52	16.0
P.A.G. 5572	103	99	109	1.7	8.4	51	15.9
Pioneer brand 8300	102	101	102	1.7	8.3	51	16.4
Topaz	100	95	109	1.7	8.7	50	15.9
Paymaster 1022	100	98	103	1.3	9.2	52	16.0
T.E. y-77	99	96	105	1.7	9.4	54	16.7
Chaparral	99	101	95	1.7	10.5	50	15.3
Opal	99	95	104	1.7	9.7	50	15.4
Paymaster R1090	98	100	97	3.0	11.4	52	15.0
Hy-Performer 1330DR	98	104	90	1.7	11.1	59	16.1
Pioneer brand 8333	97	99	94	1.7	9.9	50	15.9
T.E. Dinero	97	90	108	2.0	9.6	48	16.1
Dekalb-Pfizer M565	97	92	104	1.7	8.7	49	15.9
P.A.G. 6670	97	99	93	1.3	8.9	54	16.6
Funk G-1711	97	100	92	1.7	9.1	53	16.6
Pioneer brand 8222	96	94	97	1.7	9.4	48	16.0
FFR 421DR	95	99	90	2.0	10.9	54	14.8
DeKalb-Pfizer DK-64	95	92	100	2.0	9.6	49	17.5
Mustang	95	95	95	1.7	9.8	48	15.6
Asgrow/O's Gold GS712	95	94	97	1.7	10.6	54	16.2
N.K. 2660	94	89	102	2.0	9.2	50	16.2
Coker 7675	93	93	93	1.7	9.6	51	15.9
FFR 321DR	91	90	92	1.7	8.6	48	16.2
FFR 331DR	91	100	77	2.0	10.8	59	16.4
Stauffer S9750	91	88	94	1.7	7.7	54	16.5
DeKalb-Pfizer DK-42y	90	88	94	1.7	11.7	51	16.8
Stauffer 530GR	89	89	88	1.7	9.5	49	15.4
Funk G-522DR	87	97	88	1.7	8.8	49	16.2
Hy-Performer Honcho	85	88	82	2.0	8.9	45	15.4
DeKalb-Pfizer DK-64BR	80	66	101	2.0	15.0	66	15.9

1/Average of two tests in 1986 and one in 1985.

2/Average of one test each year (1985-86).

3/Head type is rated 1-3; with 1 = tight and 3 = loose or open head type.

4/Head extension is expressed in inches the head extends above the flag leaf.

5/Yield adjusted because Stauffer S9740y was only evaluated in one test in 1986 instead of two as all other varieties.

Table 44. Grain Sorghum: Yield and other characteristics of varieties evaluated at Springfield for two years (1985-86).

Variety	1985-86 Yield Bu/A	Head Type (1-3)	Head Exertion In.	Plant Ht. In.
Topaz	123	1.7	9.2	47
Funk G-1711	120	3.0	6.0	45
Funk G-522DR	120	2.0	6.8	46
Hy-Performer 1330DR	120	1.5	11.5	57
O's Gold GS712	118	1.5	8.2	50
Stauffer S9740y	116	32.0	9.8	54
Coker 7675	115	2.2	9.8	54
Pioneer brand 8333	115	2.8	5.2	45
T.E. Dinero	113	1.8	5.2	45
T.E. y-77	112	1.2	7.8	52
FFR 321DR	110	2.2	5.5	46
DeKalb-Pfizer DK-42y	108	2.5	9.0	50
Paymaster 1022	105	1.2	6.2	46
DeKalb-Pfizer DK-64	100	2.8	9.8	50
L.S.D. (.05)	20.5			
C.V. %	18.1			
Avg.	114.0			

Table 45. Grain Sorghum: Yield of varieties evaluated at Milan for two years (1985-86).

Variety	Avg.	1986	1985
Bushels per acre			
DeKalb-Pfizer DK-42y	135	124	146
Pioneer brand 8333	134	128	140
Topaz	134	131	138
Funk G-522DR	133	137	130
Hy-Performer 1330DR	134	128	134
DeKalb-Pfizer DK-64	130	125	136
FFR 321	124	122	127
O's Gold GS 712	122	134	111
Coker C7675	119	122	116
Funk G-522A	117	124	110
Paymaster 1022	116	118	115

Performance of Summer Annuals
(Sorghum X Sudangrass Crosses and Pearl Millets)

Sixteen summer annuals were evaluated in 1986 for forage production at Knoxville and Spring Hill. The plants were cut to a six-inch stubble when they reached 30 to 36 inches in height. The test at Knoxville was harvested three times and at Spring Hill four. All yields are reported as tons of oven dry forage. The test at Spring Hill was harvested with a forage chopper and at Knoxville by hand.

The leading cultivars in yield in 1986 were Funk HW 6986, DeKalb-Pfizer ST-6+, and DeKalb-Pfizer SX-17; using a two year average, DeKalb-Pfizer ST-6+, DeKalb-Pfizer SX-17, Haygrazer II and Sordan 79 performed well.

Table 46. Summer Annuals: Yields of varieties evaluated at Knoxville and Spring Hill in 1986.

Company	Variety	Avg.	1/ Knoxville	2/ Spring Hill
			Tons per acre	
Funk's	Funk HW 6986	3.19	3.04	3.34
DeKalb-Pfizer	ST-6+	3.11	3.15	3.06
DeKalb-Pfizer	SX-17	3.10	2.86	3.34
T.E.	Haygrazer II	3.04	3.41	2.66
N.K.	Sordan 79	3.02	3.10	2.94
Co-op	FFR 202	3.00	3.27	2.72
Pennington	Summergrazer III	2.92	3.01	2.83
Asgrow	Grazer N-2	2.88	3.01	2.74
Funk's	Funk FP4	2.87	3.00	2.73
Mayo	M-Grazer	2.70	2.76	2.64
N.K.	Millex 24	2.69	2.78	2.59
Cal/West	Bravo II	2.52	2.72	2.32
N.K.	Trudan 8	2.51	2.85	2.17
Cal/West	HS 30405	2.46	2.63	2.28
Pennington	Tifleaf 20	2.30	2.11	2.48
Co-op	FFR 105 (Exp 38505)	2.29	2.59	1.98
L.S.D. (.05)			0.64	0.24
C.V. %			14.8	6.5
Avg.			2.89	2.68

1/Etowah and Captiva silt loam (2% to 5% slopes).

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

Table 47. Summer Annuals: Yield of varieties evaluated at Knoxville and Spring Hill for two years (1985-86).

Variety	Avg.	Knoxville		Spring Hill	
		1986	1985	1986	1985
Tons per acre					
DeKalb-Pfizer ST-6+	3.58	3.15	4.16	3.06	3.94
DeKalb-Pfizer SX-17	3.55	2.86	4.05	3.34	3.93
Haygrazer II	3.53	3.41	4.12	2.66	3.92
Sordan 79	3.40	3.10	3.84	2.94	3.73
Funk HW 6986	3.39	3.04	3.21	3.34	3.97
Summergrazer III	3.33	3.01	3.57	2.83	3.92
Funk FP4	3.32	3.00	3.65	2.73	3.89
Grazer N-2	3.28	3.01	3.60	2.74	3.76
M-Grazer	3.24	2.76	3.78	2.64	3.79
Trudan 8	3.16	2.85	3.63	2.17	3.97
Millex 24	3.05	2.78	3.07	2.59	3.75
FFR 105 (Exp 38505)	2.32	2.59	3.19	1.98	3.53

Alfalfa

Alfalfa results are from tests grown at Spring Hill, Jackson, Knoxville, and Springfield. Data are reported from two tests at Knoxville, one seeded in the spring of 1983 and another in the fall of 1985 for a total of 37 varieties. Liberty and Cimarron were included in the 1985 seeding as check varieties with the remaining varieties being relatively new releases. Shenandoah, Liberty, Cimarron, Funk G-7808 and Milkmaker were the five leading varieties in hay yield. Most alfalfa varieties evaluated in recent years show very little difference in yield among varieties the first year or so. At Springfield, the leading alfalfa varieties based on two years data were Voris A77, Dart Cimarron, Pike and Armor.

The highest producing alfalfa varieties using a four-year average from tests seeded in the spring of 1983 were Armor, Vanguard, Cimarron, Voris A77, and Olympic.

Using a five-year average, the leading varieties at Jackson were Apollo, Voris A77, DeKalb 130, Vanguard, and Weevlc hek. At Spring Hill the top varieties for the past five years were Apollo, Vanguard, Cimarron, Saranac AR, and Pioneer brand 524.

Table 48. Alfalfa: Yield of varieties seeded at Knoxville Sept. 3, 1985.

Variety	Yield Tons/acre	Variety	Yield Tons/acre
Shenandoah	3.39	N-17	3.23
Liberty	3.36	Mohawk	3.21
Cimarron	3.35	Pike	3.17
Funk G-7808	3.28	Vancor	3.17
Milkmaker	3.28	Husky	3.11
WL 320	3.28	Medistan	3.04
RAidor	3.27	Advantage	3.04
DeKalb 135	3.26	Agate	3.04
Arrow	3.24	Eagle	3.02
Dart	3.24	Spreador II	2.24
L.S.D. (.05)	0.43		0.43
C.V. %	9.6		9.6
Avg.	3.16		3.16

Table 49. Alfalfa: Yield of varieties seeded at Knoxville in the spring of 1983.^{1/}

Variety	1983-86	1986	1985	1984	1983
	Avg.				
Tons per acre					
Armor	3.83	3.57	5.08	5.32	1.36
Vanguard	3.79	3.42	4.86	5.44	1.45
Cimarron	3.68	3.23	4.58	5.45	1.46
Voris A77	3.67	3.29	4.64	5.37	1.37
Olympic	3.62	3.13	4.56	5.46	1.31
Acclaim	3.60	2.54	5.01	5.53	1.32
Apollo	3.58	3.24	4.64	5.16	1.29
Saranac AR	3.53	3.13	4.33	5.14	1.52
Classic	3.48	2.98	4.53	5.16	1.26
Funk G-7808	3.48	3.03	4.54	5.11	1.25
Pioneer brand 555	3.46	3.17	4.44	4.91	1.30
Hi-phy	3.43	2.85	4.44	5.11	1.31
Tempo	3.43	2.91	4.37	5.04	1.41
Pioneer brand 532	3.42	2.94	4.45	5.17	1.10
Pioneer brand 531	3.32	2.88	4.26	5.02	1.14
Weevlchek	3.31	2.88	4.33	4.86	1.16
Gladiator	3.23	2.96	4.24	4.48	1.23
Pioneer brand 526	3.20	2.62	4.20	4.82	1.18
Pioneer brand 524	3.19	2.76	3.97	4.84	1.20
L.S.D. (.05)		N.S.	0.48	0.44	N.S.
C.V. %		12.0	7.6	6.2	18.2
Avg.		3.10	4.40	5.12	1.30

^{1/}Etowah silt loam (2% to 5% slopes).

Table 50. Alfalfa: Yield of varieties seeded at Springfield in 1984.^{1/}

Variety	Avg.	1986	1985	Variety	Avg.	1986	1985
	Tons per acre				Tons per acre		
Voris A77	4.70	4.62	4.78	RAidor	4.46	4.36	4.58
Dart	4.66	4.56	4.75	DeKalb 130	4.46	4.35	4.57
Cimarron	4.59	4.55	4.63	Acclaim	4.46	4.38	4.54
Pike	4.58	4.40	4.75	Shenandoah	4.46	4.44	4.49
Armor	4.56	4.53	4.59	Liberty	4.44	4.44	4.44
Vancor	4.53	4.50	4.56	N-7	4.30	4.31	4.30
Arrow	4.51	4.56	4.46	Vanguard	4.22	4.22	4.22
Mohawk	4.48	4.46	4.49	Funk G-7808	4.19	4.19	4.19
				Spreador II	3.82	3.87	3.78
L.S.D. (.05)		0.35	0.44			0.35	0.44
C.V. %		5.6	6.95			5.6	6.95
Avg.		4.39	4.48			4.39	4.48

^{1/}Dickson silt loam (2% to 5% slopes).

Table 51. Alfalfa: Yield of varieties seeded at Jackson in the fall of 1981.^{1/}

Variety	1982-86	1986	1985	1984	1983	1982
	Avg.					
	Tons per acre					
Apollo	5.62	4.86	6.24	5.73	4.88	6.38
Voris A77	5.58	4.44	6.55	5.71	4.55	6.66
DeKalb 130	5.48	4.81	6.56	5.62	4.63	5.78
Vanguard	5.42	4.26	6.47	5.85	4.38	6.12
Weevlc hek	5.41	4.46	6.09	5.54	4.89	6.09
Classic	5.38	4.21	6.26	5.47	4.41	6.57
Pioneer brand 532	5.35	4.62	6.28	5.60	4.69	5.55
Cimarron	5.30	4.36	6.32	5.57	4.33	5.90
Agate	5.27	4.56	6.50	5.46	4.32	5.53
Hi-phy	5.24	4.68	6.01	5.24	4.42	5.86
Pioneer brand 524	5.22	3.92	6.28	5.39	4.53	6.00
Tempo	5.22	3.75	6.25	5.79	4.54	5.76
Saranac AR	5.15	4.24	6.24	5.29	4.04	5.96
Olympic	5.14	3.78	6.24	5.29	4.32	6.08
Gladiator	5.12	3.65	6.25	5.47	4.31	5.90
Arc	5.05	4.04	5.90	5.14	4.37	5.78
Liberty	5.03	4.05	5.78	5.13	4.38	5.81
Spreador II	4.32	2.87	5.20	4.42	3.40	3.69
L.S.D. (.05)		0.55	0.64	0.50	0.47	0.55
C.V. %		9.3	7.3	6.9	7.6	6.4
Avg.		4.20	6.19	5.12	4.39	5.97

^{1/}Grenada silt loam (2% to 5% slopes).

Table 52. Alfalfa: Yield of varieties seeded at Spring Hill in the fall of 1981.^{1/}

Variety	1982-86	1986	1985	1984	1983	1982
	Avg.					
Tons per acre						
Apollo	4.71	2.86	5.53	5.53	4.98	4.65
Vanguard	4.69	2.85	5.44	5.52	4.93	4.69
Cimarron	4.65	2.86	5.33	5.57	4.88	4.62
Saranac AR	4.47	2.54	5.17	5.12	4.81	4.71
Pioneer brand 524	4.44	2.68	5.14	5.38	4.71	4.30
Olympic	4.41	2.66	4.84	5.30	4.86	4.38
Dekalb 130	4.41	2.58	4.85	5.26	4.68	4.66
Voris A77	4.38	2.64	5.08	5.15	4.54	4.46
Arc	4.32	2.70	5.02	4.90	4.50	4.46
Weevlchek	4.20	2.21	4.96	5.06	4.46	4.32
Liberty	4.16	2.50	4.67	4.88	4.62	4.13
Classic	4.15	2.26	4.78	5.06	4.50	4.13
Tempo	4.10	2.14	4.53	4.95	4.53	4.36
Agate	4.03	2.55	4.88	4.59	4.42	3.73
Gladiator	3.99	2.12	4.43	4.60	4.59	4.19
Pioneer brand 532	3.96	2.53	4.78	4.70	4.29	3.51
Hi-phy	3.84	2.25	4.56	4.47	4.03	3.85
Spreador II	2.63	1.20	2.78	2.84	3.48	2.84
L.S.D. (.05)		0.50	0.83	0.90	N.S.	0.85
C.V. %		14.5	12.6	12.9	12.1	14.2
Avg.		2.45	4.68	4.94	4.55	4.22

^{1/}Maury silt loam (2% to 5% slopes).

Soybeans

The soybean variety trials (Maturity group V) were conducted at seven locations across the state (Tables 1 and 2). The data from Spring Hill will be presented later in another report due to the plots being harvested late. The wet weather during November delayed harvest at several locations. The yields were good at all locations except Springfield and Ames Plantation. A second and later planting (May 14) of Maturity group V varieties was grown at Ames Plantation and produced higher yields than the earlier planting (April 26) due to the favorable rainfall which occurred later in the growing season. Usually beans planted late at this location would result in yield reduction instead of the yield advantages that were obtained in 1986. The results from this second planting will be reported later with the Spring Hill results. At Knoxville, Temik was used to control the soybean cyst nematode. Dry weather occurred in the early part of the growing season at Knoxville, with adequate moisture occurring during the later stages of growth. Flowering and pod development were delayed due to this lack of moisture during the early flowering period for most varieties in Maturity group V. The maturity of Essex was delayed at Knoxville where Temik had been used for nematode control. The beans of this variety matured normally but leaf drop was delayed and second growth occurred under these conditions. Several varieties were stunted at Knoxville where Temik had been used, especially if emergence was delayed due to crusting or slow germinating seed. The worst stunting occurred where the beans were covered with some soil from rotary hoeing to break the crust. Most varieties recovered and grew normally. TN 83-26 (an experimental) showed the most symptoms of Temik injury primarily of leaf crinkling. Forrest has shown the same symptoms under similar conditions where Temik has been used. Excellent soybean cyst nematode control was obtained at this location in 1986. In 1985 at Knoxville where Furadan had been used, very little cyst nematode control was noted especially in some "hot" spots in the field.

In 1986 at Knoxville, Terra Vig 515, Pioneer brand 9591, Yield King 577, Hartz 5252, Hartz 5370, TN 5-85, and Forrest produced sixty or more bushels of beans.

Coker 425 is a high yielding, lodging resistant variety that seems to do better under good growing conditions. Due to its growth habit of being short without much lateral branching, it might respond to close row spacing. However, in wide rows under drought conditions, this variety's yields may be reduced more than other varieties due to its growth habit. At Greeneville in 1985 this variety grew taller and branched more than normal when compared with other locations in Tennessee.

The leading varieties in yield of Maturity group V were Terra Vig 515, Pioneer brand 9591, Deltapine 415, Deltapine 105, Coker 485, FFR 561 and Essex. Using a three-year average for this maturity group (V), Coker 485, Coker 425, Essex, FFR 561, Pioneer brand 5482, and Deltapine 105 were the highest yielding varieties (Table 5).

Thirty-two late-maturing varieties (Maturity group VI & VII) were evaluated at four locations in 1986 (Tables 7 and 8). No yield data are reported for Spring Hill due to late harvest; results will be published in another report. The highest yielding varieties in this late group in 1986 were Coker 686, Coker 156, Asgrow A6520, Leflore, and Yield King 707. Jeff, Spartan, Yield King 707, Hartz 6383R and Yield King 757 had a tendency to lodge. The remaining varieties stood well in these studies in 1986. Using a two-year average (Tables 9 and 10), Asgrow A6242, Asgrow A6520, Leflore, Hartz 7126, and Shiloh yielded as well as or better than Centennial.

The early-maturing varieties of Maturity group IV or less were evaluated at five locations in 1986 (Tables 13 and 14). Yields at Springfield and Ames Plantation were reduced due to dry weather. RA 452, Pershing, and Bailey 469 produced the highest average yield for 1986.

Two strains tests were conducted at Jackson with 12 strains being evaluated in Maturity group V (Table 17) and 13 strains being evaluated in the late-maturity groups of VI & VII (Table 18). In Maturity group V at Jackson, TN 84-51 and TN 84-147 yielded as well as or better than Essex. In the late strain test, Hartz H81-9548 produced the highest average yield.

In 1986, Lawrence D. Young evaluated all varieties at Jackson in the greenhouse for susceptibility to soybean cyst nematodes (Tables 19 to 22). The susceptibility rating was based on a scale of 0, 1, 2, 3, and 4, with 4 being susceptible. A mean severity index was obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

Example 1: 8 plants with a rating of 4 = $32/8 = 4.0$ mean severity index.

Example 2: (3 plants x 2 rating = 6) + (2 plants x 1 rating = 2) +
(3 plants x 0 rating = 0) = $6 + 2 + 0 = 8$ divided by
8 total plants = 1.0 mean severity index.

A letter rating was also given with R being resistant, S being susceptible, MR being moderately resistant and Seg. being a variety segregating for nematode resistance. A "+" was given when a variety had a rating greater than the worst rating of 4.

Table 53. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations in 1986.

Variety	Avg.	1/ Greene- ville	2/ Knox- ville	3/ Spring- field	4/ Ames Plantation	5/ Milan	6/ Martin
		Bushels per acre					
Terra Vig 515	41	35	61	19	24	57	52
Pioneer brand 9591	41	39	60	17	26	59	46
Deltapine 415	41	42	58	19	26	57	42
Deltapine 105	41	41	53	24	26	54	45
Coker 485	40	41	55	16	22	60	50
FFR 561	40	37	51	18	29	56	49
Essex	40	42	52	16	25	56	47
Yield King 577	39	31	64	12	24	56	49
Coker 425	39	32	52	19	22	63	47
Hartz 5252	39	36	62	20	21	50	44
Hartz 5370	39	40	60	19	24	48	42
Pioneer brand 5482	39	38	57	18	25	50	46
TN 5-85	38	35	60	15	26	50	44
FFR 562	38	40	52	17	24	51	46
Pioneer brand 9581	38	38	56	14	24	51	45
Coker 355	37	39	52	23	23	41	45
Hartz 5171	37	37	58	17	19	50	43
Hartz X5164	37	38	51	14	22	54	53
Coker 80-R-49	37	37	57	14	22	50	42
Shenandoah	36	43	58	15	18	44	41
Forrest	36	32	62	18	20	43	41
Asgrow A5474	36	34	56	16	20	50	39
Asgrow A5980	36	36	54	19	18	49	39
Pioneer brand 9571	36	30	52	17	20	47	46
Terra Vig 553	36	33	54	15	22	47	42
FFR 560	36	35	52	14	23	45	43
Epps	35	38	49	16	26	42	41
Bedford	35	34	48	18	25	42	44
N.K. S59-19	35	34	47	10	26	51	40
Yield King 503	34	40	54	13	24	43	33
DeKalb-Pfizer EX655	34	32	52	10	19	45	48
Asgrow A5149	34	30	47	19	20	54	36
TN 83-26	34	32	50	13	19	47	42
Deltapine 675	34	34	57	18	19	44	32
RA 480	34	36	52	16	21	44	33
L.S.D. (.05)	3.5	7.3	7.5	5.9	4.2	6.5	9.2
C.V. %	13.5	14.4	9.8	25.5	13.3	9.2	15.1
Avg.	37.2	36.4	54.7	16.5	22.7	50.0	43.1

1/Waynesboro loam (2% to 5% slopes).

2/Sequatchie silt loam (2% to 5% slopes).

3/Dickson silt loam (2% to 5% slopes).

4/Loring silt loam (2% to 5% slopes).

5/Collins silt loam (2% to 5% slopes).

6/Collins silt loam (2% to 5% slopes).

Table 54. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations in 1986.

Variety	Avg. Yield Bu/A	Moisture at Harvest %	Date Full Bloom	Date Mature	Plant Height In.	Lodging %
Terra Vig 515	41	15.8	7-15	10-12	34.3	8.6
Pioneer brand 9591	41	14.4	7-12	10-12	28.4	0.0
Deltapine 415	41	14.8	7-12	9-30	34.8	3.9
Deltapine 105	41	14.7	7-16	10-6	38.4	18.4
Coker 485	40	15.1	7-15	10-15	33.9	15.4
FFR 561	40	15.0	7-14	10-7	34.1	0.4
Essex	40	14.7	7-7	9-28	38.4	18.4
Yield King 577	39	14.0	7-14	10-1	37.7	30.8
Coker 425	39	14.0	7-6	9-28	25.5	0.0
Hartz 5252	39	14.1	7-14	10-1	37.4	4.6
Hartz 5370	39	14.6	7-14	10-6	37.6	2.7
Pioneer brand 5482	39	14.0	7-10	10-6	38.7	9.1
TN 5-85	38	14.5	7-9	9-29	36.4	7.0
FFR 562	38	14.7	7-17	10-9	41.4	3.1
Pioneer brand 9581	38	13.7	7-10	9-30	36.7	9.1
Coker 355	37	14.0	7-13	10-4	37.1	5.5
Hartz 5171	37	15.1	7-14	10-8	39.6	13.2
Hartz X5164	37	14.7	7-14	10-12	36.8	4.2
Coker 80-R-49	37	14.0	7-9	9-27	30.1	3.2
Shenandoah	36	14.5	7-13	10-2	36.9	10.4
Forrest	36	14.3	7-10	9-29	36.4	3.6
Asgrow A5474	36	14.3	7-12	9-27	36.4	3.6
Asgrow A5980	36	15.0	7-15	10-5	39.4	24.8
Pioneer brand 9571	36	13.9	7-13	10-2	39.2	11.6
Terra Vig 553	36	14.1	7-15	10-4	35.8	5.4
FFR 560	36	14.1	7-18	10-5	42.1	23.4
Epps	35	15.2	7-12	9-29	36.0	19.4
Bedford	35	14.4	7-19	10-2	40.8	22.9
N.K. 859-19	35	14.0	7-14	9-26	31.0	3.4
Yield King 503	34	13.3	7-10	9-27	39.4	10.2
DeKalb-Pfizer EX655	34	13.8	7-16	10-7	34.2	1.0
Asgrow A5149	34	14.2	7-9	10-2	31.1	0.0
TN 83-26	34	13.5	7-9	9-26	40.4	0.9
Deltapine 675	34	14.5	7-17	10-4	39.0	5.0
RA 480	34	13.6	7-10	9-27	41.2	14.5
L.S.D. (.05)	3.5					
C.V. %	13.5					
Avg.	37.2					

Table 55. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations for two years (1985-86).

Variety	Avg.	Greene- ville	Knox- ville	Spring- field	Ames Plantation	Milan	Martin
Bushels per acre							
Coker 485	45	38	53	26	38	62	50
Terra Vig 515	45	35	56	26	42	58	50
Deltapine 105	44	44	52	28	41	47	47
Essex	44	44	48	27	43	54	48
FFR 561	44	42	46	27	45	54	48
TN 5-85	43	36	53	25	42	56	46
Pioneer brand 5482	43	41	50	26	41	52	48
Coker 425	43	39	50	28	38	57	46
Hartz 5252	43	38	54	27	39	53	46
Asgrow A5980	42	38	53	27	36	52	45
FFR 562	42	42	50	23	42	51	45
Asgrow A5474	42	39	50	25	38	53	47
Hartz 5370	42	36	52	27	39	52	44
Coker 355	42	37	52	30	37	48	46
Hartz 5171	42	36	51	26	38	52	45
Forrest	42	35	56	28	38	49	43
Pioneer brand 9571	42	35	49	26	37	52	49
Bedford	41	36	47	24	40	51	50
Terra Vig 553	41	36	50	25	40	52	42
FFR 560	41	36	51	24	37	51	44
Epps	40	38	48	23	38	48	45
Asgrow A5149	40	36	49	29	36	50	38
Yield King 503	39	40	52	23	40	40	36
RA 480	37	36	49	25	37	37	34

Table 56. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations for two years (1985-86).

Variety	Avg. Yield Bu/A	Moisture at Harvest %	Date Full Bloom	Date Mature	Plant Height In.	Lodging %
Coker 485	45	14.6	7-13	10-12	34	18.0
Terra Vig 515	45	15.0	7-15	10-9	34	11.0
Deltapine 105	44	14.7	7-14	10-5	38	20.0
Essex	44	14.4	7-5	9-27	28	4.0
FFR 561	44	14.7	7-9	10-3	34	3.0
TN 5-85	43	14.1	7-8	9-29	36	13.0
Pioneer brand 5482	43	13.9	7-9	10-6	39	12.0
Coker 425	43	14.0	7-5	9-27	26	2.0
Hartz 5252	43	14.2	7-11	10-1	36	13.0
Asgrow A5980	42	14.8	7-12	10-4	41	28.0
FFR 562	42	14.5	7-14	10-6	40	7.0
Asgrow A5474	42	14.2	7-10	9-27	36	7.0
Hartz 5370	42	14.6	7-12	10-5	38	13.0
Coker 355	42	14.0	7-11	10-4	37	14.0
Hartz 5171	42	14.6	7-12	10-5	39	19.0
Forrest	42	14.0	7-9	9-29	37	8.0
Pioneer brand 9571	42	14.0	7-11	10-4	38	20.0
Bedford	41	14.3	7-19	10-3	43	30.0
Terra Vig 553	41	14.2	7-12	10-2	36	12.0
FFR 560	41	14.1	7-15	10-4	43	30.0
Epps	40	14.6	7-10	9-30	36	37.0
Asgrow A5149	40	14.1	7-7	9-30	30	0.4
Yield King 503	39	13.2	7-7	9-27	40	14.0
RA 480	37	13.8	7-9	9-27	41	22.7

Table 57. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations for three years (1984-86).

Variety	Avg.	Greene- ville	Knox- ville	Spring- field	Ames Plantation	Milan	Martin
Bushels per acre							
Coker 485	46	40	50	32	44	60	49
Coker 425	46	43	50	33	44	58	46
Essex	45	46	48	32	46	52	46
FFR 561	45	43	49	32	48	52	45
Pioneer brand 5482	45	42	50	32	46	51	46
Deltapine 105	45	44	49	32	47	50	46
Hartz 5252	44	41	50	40	43	51	45
TN 5-85	43	39	50	28	44	54	45
Asgrow A5980	43	42	47	31	40	52	46
Asgrow A5474	43	41	46	29	42	52	46
Hartz 5171	42	38	49	30	42	52	43
Hartz 5370	42	40	46	30	44	51	42
Pioneer brand 9571	42	39	44	29	42	51	48
FFR 562	42	43	47	26	44	48	44
Coker 355	42	39	46	32	42	48	45
Forrest	42	38	50	31	41	48	43
Bedford	41	37	45	27	41	50	46
FFR 560	41	37	46	26	39	51	44
Epps	40	38	44	27	41	47	43
Yield King 503	40	41	46	28	45	41	38
RA 480	37	39	44	28	40	38	36

Table 58. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations for three years (1984-86).

Variety	Yield Bu/A	Plant Height In.	Lodging %	Date Mature
Coker 485	46	35	20	10-10
Coker 425	46	27	2	9-28
Essex	45	33	11	9-27
FFR 561	45	34	4	10-3
Pioneer brand 5482	45	38	10	10-5
Deltapine 105	45	38	24	10-6
Hartz 5252	44	37	19	10-5
TN 5-85	43	37	16	9-29
Asgrow A5980	43	41	32	10-5
Asgrow A5474	43	37	7	9-30
Hartz 5171	42	40	23	10-6
Hartz 5370	42	39	20	10-6
Pioneer brand 9571	42	39	18	10-5
FFR 562	42	37	10	10-4
Coker 355	42	38	12	10-5
Forrest	42	38	12	10-1
Bedford	41	43	35	10-6
FFR 560	41	43	34	10-6
Epps	40	36	41	10-1
Yield King 503	40	39	22	10-3
RA 480	37	42	28	9-30

Table 59. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations in 1986.

Variety	Avg.	Knoxville	Ames	Milan
			Plantation Bushels per acre	
Coker 686	48	60	26	58
Coker 156	46	59	26	53
Asgrow A6520	46	58	24	55
Leflore	46	56	28	52
Yield King 757	45	57	29	50
Asgrow A6242	44	58	25	50
Sampson	44	56	30	46
FFR 668	44	57	28	47
Centennial	43	52	27	51
Asgrow A6787	43	59	18	52
Hartz 7126	43	55	28	47
Deltapine 566	43	55	26	47
Hartz X6385	43	57	24	48
N.K. S69-96	42	56	23	48
Hartz 6383R	42	56	26	44
Yield King 696	42	57	25	44
Yield King 707	42	52	28	45
Shiloh	42	53	22	50
Yield King 593	41	61	20	42
Funk G-1409	41	51	23	48
Yield King 613	40	55	20	47
RA 606	40	50	23	46
Deltapine 497	40	48	24	47
Hartz 7110	40	54	25	39
Coker 6716	39	53	21	43
Funk G-Exp 3305	39	54	18	44
Terra Vig 616	39	53	21	42
Deltapine 417	38	46	25	44
Spartan	38	46	23	45
Jeff	38	52	26	35
Sanalona	36	49	20	39
McNair 500	36	51	14	43
L.S.D. (.05)	3.6			
C.V. %	11.4			
Avg.	41.6			

Table 60. Soybeans: Yield and other characteristics of varieties (Maturity Group VI & VII) evaluated at three locations in 1986.

Variety	Avg. Yield Bu/A	Moisture at Harvest %	Date Full Bloom	Date Mature	Plant Height In.	Lodging %
Coker 686	48	16.7	7-27	10-26	36	3
Coker 156	46	16.8	7-26	10-24	36	2
Asgrow A6520	46	17.3	7-26	10-19	34	8
Leflore	46	17.3	7-26	10-24	38	10
Yield King 757	45	17.4	7-29	10-29	42	24
Asgrow A6242	44	16.6	7-24	10-20	35	8
Sampson	44	16.4	7-28	10-28	34	8
FFR 668	44	17.6	7-29	10-26	38	2
Centennial	43	17.0	7-28	10-24	40	3
Asgrow A6787	43	16.4	7-29	10-25	36	7
Hartz 7126	43	17.4	7-26	10-28	41	5
Deltapine 566	43	16.4	7-27	10-26	36	2
Hartz X6385	43	17.4	7-28	10-23	36	4
N.K. S69-96	42	16.8	7-29	10-27	36	8
Hartz 6383R	42	16.9	7-27	10-27	39	22
Yield King 696	42	16.6	7-27	10-22	35	4
Yield King 707	42	16.8	8-3	10-28	49	28
Shiloh	42	15.8	7-26	10-12	33	2
Yield King 593	41	16.2	7-25	10-19	39	4
Funk G-1409	41	16.8	7-26	10-20	37	2
Yield King 613	40	16.0	7-28	10-22	40	7
RA 606	40	16.7	7-26	10-28	41	9
Deltapine 497	40	17.4	8-2	10-27	47	6
Hartz 7110	40	17.8	7-28	10-23	40	11
Coker 6716	39	16.2	7-25	10-16	36	2
Funk G-Exp 3305	39	16.3	7-26	10-17	34	3
Terra Vig 616	39	16.7	7-26	10-25	42	10
Deltapine 417	38	18.9	7-27	10-28	49	10
Spartan	38	18.9	7-28	10-28	39	31
Jeff	38	17.0	7-25	10-24	36	32
Sanalona	36	16.6	7-29	10-18	35	8
McNair 500	36	16.5	7-24	10-12	32	2
L.S.D. (.05)	3.6					
C.V. %	11.4					
Avg.	41.6					

Table 61. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations for two years (1985-86).

Variety	Avg.	Knoxville	Ames	Milan
			Plantation Bushels per acre	
Asgrow A6242	47	54	38	50
Asgrow A6520	46	52	35	52
Leflore	46	48	38	52
Hartz 7126	45	49	36	49
Shiloh	45	49	36	49
Centennial	45	49	37	48
Yield King 593	44	55	33	43
Deltapine 566	43	49	34	47
Hartz 6383R	43	49	34	46
Hartz 7110	42	49	32	46
Yield King 613	40	46	31	45
RA 606	40	45	31	44
Terra Vig 616	40	47	31	42
FFR 668	40	49	30	40
Deltapine 417	39	45	29	42

Table 62. Soybeans: Yield and other characteristics of varieties (Maturity Group VI & VII) evaluated at three locations for two years (1985-86).

Variety	Avg.	Moisture	Date	Date	Plant	Lodging
	Yield Bu/A	at Harvest %	Full Bloom	Mature	Height In.	
Asgrow A6242	47	16.0	7-18	10-14	37	4.0
Asgrow A6520	46	16.5	7-30	10-15	35	4.0
Leflore	46	16.2	7-20	10-19	41	5.0
Hartz 7126	45	16.4	7-22	10-21	42	3.0
Shiloh	45	15.4	7-19	10-10	36	0.7
Centennial	45	16.2	7-22	10-19	40	2.0
Yield King 593	44	15.6	7-19	10-15	42	3.0
Deltapine 566	43	15.8	7-21	10-20	38	1.0
Hartz 6383R	43	16.4	7-21	10-22	40	9.0
Hartz 7110	42	16.8	7-24	10-21	42	5.0
Yield King 613	40	15.7	7-26	10-16	46	5.0
RA 606	40	16.2	7-22	10-22	41	4.0
Terra Vig 616	40	16.3	7-22	10-22	44	6.0
FFR 668	40	16.4	7-24	10-21	39	1.0
Deltapine 417	39	17.4	7-25	10-27	49	6.0

Table 63. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations for three years (1984-86).

Variety	Avg.	Knoxville	Ames	Milan
			Plantation Bushels per acre	
Asgrow A6242	45	45	42	48
Asgrow A6520	45	45	39	50
Hartz 7126	44	42	41	50
Centennial	43	44	40	45
Yield King 593	43	46	39	43
Hartz 6383R	43	45	38	45
Deltapine 566	42	41	37	48
Yield King 613	40	40	36	44
FFR 668	39	42	34	42
RA 606	39	39	35	43
Deltapine 417	39	39	35	42

Table 64. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated at three locations for three years (1984-86).

Variety	Yield	Plant Height	Lodging	Date Mature
	Bu/A	In.	%	
Asgrow A6242	45	38	13	10-14
Asgrow A6520	45	37	14	10-16
Hartz 7126	44	42	16	10-22
Centennial	43	41	13	10-20
Yield King 593	43	43	17	10-17
Hartz 6383R	43	40	26	10-21
Deltapine 566	42	40	11	10-22
Yield King 613	40	45	20	10-17
FFR 668	39	41	8	10-21
RA 606	39	41	13	10-21
Deltapine 417	39	49	19	10-26

Table 65. Soybeans: Yield of varieties (Maturity Group IV) evaluated at five locations in 1986.

Variety	Avg.	1/ Knox- ville	2/ Cross- ville	3/ Spring- field	4/ Milan	5/ Ames Plantation
Bushels per acre						
RA 452	40	44	41	22	61	31
Pershing	39	39	38	26	64	28
Bailey 469	36	39	35	17	57	29
TN 83-7	35	38	31	22	58	28
RA 451	34	31	32	18	59	34
Pioneer brand 9471	34	34	29	17	59	30
Stevens	32	34	31	16	51	26
DeKalb-Pfizer CX415	30	31	30	20	50	22
Coker 393	30	36	30	18	48	17
DeKalb-Pfizer CX380	28	24	28	16	55	18
L.S.D. (.05)	2.8	7.4	4.5	4.7	6.9	7.0
C.V. %	13.7	14.6	9.6	17.0	8.5	18.6
Avg.	33.7	35.0	32.4	19.2	56.2	25.8

1/Sequatchie silt loam (2% to 5% slopes).

2/Hartsells loam (2% to 5% slopes).

3/Dickson silt loam (2% to 5% slopes).

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

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

Table 66. Soybeans: Yield and other characteristics of varieties (Maturity Group IV) evaluated at five locations in 1986.

Variety	Avg. Yield Bu/A	Moisture at Harvest %	Date First Flower	Date Mature	Plant Ht. In.	Flower Color	Pubes- cence Color	Date Last Flower
RA 452	40	14.6	6-14	9-18	38	W	G	7-23
Pershing	39	15.4	6-14	9-22	28	W	G	7-20
Bailey 469	36	16.6	6-12	9-15	36	P & W	G	7-23
TN 83-7	35	16.7	6-12	9-13	38	P	T	7-19
RA 451	34	16.8	6-13	9-24	40	P	T	7-24
Pioneer brand 9471	34	15.6	6-12	9-11	35	P	T	7-22
Stevens	32	16.4	6-13	9-15	39	P	G	7-22
DeKalb-Pfizer CX415	30	15.8	6-11	9-3	32	W	T	7-18
Coker 393	30	15.7	6-11	9-3	28	P	T	7-15
DeKalb-Pfizer CX380	28	18.0	6-8	8-31	30	W	T	7-15
L.S.D. (.05)	2.8							
C.V. %	13.7							
Avg.	33.7							

Table 67. Soybeans: Yield of varieties (Maturity Group IV) evaluated at five locations for two years (1985-86).

Variety	Avg.	1/ Knox- ville	2/ Cross- ville	3/ Spring- field	4/ Milan	5/ Ames Plantation
		Bushels per acre				
Pershing	44	48	41	39	58	34
RA 452	44	49	44	39	47	38
Pioneer brand 9471	41	44	34	37	56	35
RA 451	41	42	38	35	55	34
TN 83-7	40	47	32	36	58	29
Stevens	38	40	34	34	52	31

Table 68. Soybeans: Yield and other characteristics of varieties (Maturity Group IV) evaluated at five locations for two years (1985-86).

Variety	Avg.	Moisture	Date	Date	Plant	Date
	Yield	at	First	Mature	Ht.	Last
	Bu/A	Harvest	Flower		In.	Flower
		%				
Pershing	44	15.1	6-21	9-22	29	7-21
RA 452	44	15.4	6-20	9-20	39	7-26
Pioneer brand 9471	41	14.8	6-12	9-11	37	7-22
RA 451	41	16.4	6-15	9-25	41	7-23
TN 83-7	40	16.4	6-13	9-14	41	7-19
Stevens	38	16.1	6-14	9-13	42	7-21

Table 69. Soybeans: Yield and other characteristics of strains (Maturity Group V) evaluated at Jackson in 1986.

Strain	Avg. Yield Bu/A	Moisture at Harvest %	Date		Plant Ht. In.	Flower Color	Pubes- cence Color
			First Flower	Date Mature			
TN 84-51	36	12.1	7-15	9-14	28	P	T
TN 84-147	34	13.0	7-15	9-22	32	P	G
Essex	33	12.6	7-16	9-22	26	P	G
M82-570127	32	12.7	7-19	9-28	35	P	T
TN 82-94	32	12.8	7-15	9-22	28	P	G
FFR 565	32	12.8	7-16	9-22	32	W	T
M82-572403	30	12.6	7-19	9-22	32	W	G
M82-540103	29	13.6	7-15	9-22	29	W	G
M82-572509	29	13.6	7-16	9-22	29	P	G
DeKalb EX 655	29	17.8	7-20	10-8	31	W	T
TN 84-147	29	13.3	7-18	9-23	40	P	G
82-824 ^{1/}	28	13.1	7-18	9-23	32	W	T
Forrest	28	12.1	7-18	9-22	32	W	T
TN 84-147	27	12.4	7-15	9-13	28	P	G
L.S.D. (.05)	5.2						
C.V. %	11.8						
Avg.	30.5						

^{1/}Coker/Rohm and Haas Co.

Table 70. Soybeans: Yield and other characteristics of strains (Maturity groups VI and VII) evaluated at Jackson in 1986.

Strain	Yield Bu/A	Moisture at Harvest %	Date		Plant Ht. In.	Lodging %	Flower Color	Pubes- cence Color
			Full Bloom	Date Mature				
^{1/}								
H81-9548	44	17.4	7-28	10-30	44	20	Purple	Tawny
Centennial	37	18.0	7-29	10-30	46	10	Purple	Tawny
H81-2173	36	12.9	7-18	9-22	34	14	White	Tawny
Deltapine 726	36	19.9	8-3	11-5	46	18	Purple	Tawny
M82-571206	36	18.9	7-28	11-5	41	2	Purple	Tawny
H81-1587	34	19.2	8-4	11-8	44	19	White	Grey
M82-581908	32	20.4	7-28	11-2	35	1	Purple	Tawny
M82-722611	32	20.0	8-1	11-5	40	2	White	Grey
HB-15578-E4-6	31	19.6	7-28	10-31	47	8	Purple	Tawny
H79-17006	31	13.2	7-18	9-29	38	4	White	Tawny
Leflore	30	20.2	7-28	11-3	47	14	Purple	Tawny
H81-851	29	19.5	7-18	10-31	41	8	White	Tawny
HB-2J-E4-6	27	14.9	7-19	10-12	42	7	Purple	Tawny
CO82M-128	27	19.1	7-28	10-23	46	21	Purple	Grey
H81-860	26	20.7	7-31	11-1	43	7	White	Tawny
L.S.D. (.05)	8.4							
C.V. %	18.2							
Avg.	32.4							

^{1/} H = Hartz; M = Funk G; CO = C/R Seed Co.; and HB = Hy-Performer.

Table 71. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on Maturity Group V varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode		Resistance Rating	
	Race 3	Race 4	Race 3	Race 4
	Mean Severity Index ^{1/}		(R or S) ^{2/}	
Forrest	0.8	3.7	R	S
Essex	4.0	4.0	S	S
Bedford	0.0	1.0	R	R
Epps	0.8	2.1	R	R
Asgrow A5474	0.4	1.2	R	R
Asgrow A5980	1.2	2.8	R	S
Asgrow A5149	3.7	3.9	S	S
Deltapine 415	1.3	4.0	R	S
Deltapine 675	3.2	3.4	S	S
Deltapine 105	3.9	3.8	S	S
Pioneer brand 5482	2.6	1.5	?	R
Pioneer brand 9571	0.6	2.0	R	Seg.
Pioneer brand 9581	1.2	2.2	R	R
Pioneer brand 9591	3.7	4.0	S	S
FFR 560	0.6	1.0	R	R
FFR 561	4.0	4.5	S	S
FFR 562	4.0	3.8	S	S
Hartz 5171	0.6	3.4	R	S
Hartz 5370	0.1	4.0	R	S
Hartz 5252	0.2	4.0	R	S
Hartz X5164	1.8	2.2	R	R
TN 5-85	0.6	3.7	R	S
TN 83-26	2.8	3.2	Seg.	MR
Coker 355	0.0	1.2	R	R
Coker 485	0.0	3.9	R	S
Coker 425	4.0	3.9	S	S
Coker 80R-419 (check)	1.1	4.0	R	S+
RA 480	2.7	3.7	?	S
Y.K. 577	0.2	4.0	R	S
Y.K. 503	3.8	3.4	S	S
Terra Vig 515	0.0	4.0	R	S
Terra Vig 553	1.2	4.0	R	S
Shenandoah	3.8	4.0	S	S
N.K. S59-19	0.5	2.0	R	S
DeKalb-Pfizer EX655	2.0	3.0	Seg.	MR

^{1/}The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale of 0 through 4 with 4 being the most susceptible.

^{2/}R = resistant and S = susceptible.

Table 72. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on Maturity Groups VI & VII varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode		Resistance Rating	
	Race 3	Race 4	Race 3	Race 4
	Mean Severity Index ^{1/}		(R or S) ^{2/}	
Deltapine 417	4.0	4.0	S	S
Deltapine 566	4.0	4.0	S	S
Deltapine 497	4.0	4.0	S	S
Y.K. 696	0.1	4.0	R	S
Y.K. 593	0.4	4.0	R	S
Y.K. 707	0.2	3.8	R	MR
Y.K. 613	0.3	4.0	R	S
Y.K. 757	0.5	2.8	R	MR
Hartz X6385	0.2	4.0	R	S
Hartz 6383R	0.3	4.0	R	S
Hartz 7126	0.2	4.0	R	S
Hartz H 79-21046	0.0	4.0+	R	S+
N.K. S69-96	4.0	4.0	S	S
Terra Vig 616	3.5	4.0	S	S
Leflore	0.8	1.7	R	R
Centennial	0.7	4.0	R	S
Coker 6716	0.2	4.0	R	S
Coker 156	4.0	4.0	S	S
Coker 686	0.0	4.0	R	S
Jeff	0.7	3.2	R	MR
RA 606	1.1	4.0	R	S
Asgrow A6785	3.8	3.9	S	S
Asgrow A6520	0.4	2.9	R	MR
Asgrow A6242	0.6	2.4	R	R or Seg.
FFR 668	4.0	4.0	S	S
Shiloh	1.8	2.3	Seg.	R
Sanalona	4.0	3.8	S	S
Sampson	4.0+	4.0	S	S
Funk G-Exp. 3305	4.0+	4.0	S	S
Funk G-1409	4.0	4.0	S	S
Spartan	4.0	4.0	S	S
McNair 500	4.0	3.8	S	S

^{1/}The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

^{2/}R = resistant and S = susceptible.

Table 73. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on early-maturing varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode		Resistance Rating	
	Race 3	Race 4	Race 3	Race 4
	Mean Severity Index ^{1/}		(R or S)	
Essex ^{2/}	3.8	-	S	-
RA 452	3.4	3.8	S	S
TN 83-7	0.3	1.2	R	R
Stevens	4.0	3.9	S	S
RA 451	4.0	4.0	S	S
Pershing	4.0	4.0	S	S
Pioneer brand 9471	4.0	4.0	S	S
Coker 393	3.7	4.0	S	S
DeKalb-Pfizer CX380	3.8	3.5	S	S
DeKalb-Pfizer CX415	3.0	3.8	S	S
Bailey 467	4.0	3.0	S	S
Bedford ^{3/}	-	1.0	-	R

^{1/}The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

^{2/}Essex used as a check in race 3 infested soil.

^{3/}Bedford used as a check in race 4 infested soil.

Table 74. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on experimental strains grown in the greenhouse at Jackson in 1986.

Strain	Soybean Cyst Nematode		Resistance Rating	
	Race 3	Race 4	Race 3	Race 4
	Mean Severity Index ^{1/}		(R or S)	
Essex (check)	4.0+	-	S	-
M 540103	4.0	3.0	S	S
M 572509	4.0	3.8	S	S
M 572403	1.2	3.3	R	S
CO 82-824	0.3	3.0	R	S
Exp 655	2.7	2.9	S	S
FFR 565	2.0	3.4	R	S
TN 82-94	4.0	4.0	S	S
TN 84-51	4.0	3.8	S	S
TN 84-129	1.8	4.0	Seg.	S
TN 84-146	1.4	3.8	Seg.	S
TN 84-147	0.5	4.0	R	S
H 81-860	0.3	3.5	R	S
Bedford (check)	-	2.6	-	R
H 81-9448	0.7	2.0	R	R
H 79-17006	0.5	3.7	R	S
H 81-851	0.1	3.9	R	S
H 81-1587	0.4	3.4	R	S
M 82-1571206	4.0	3.5	S	S
M 82-722611	3.8	3.8	S	S
CO 82M-128	0.5	1.8	R	R
HB-2J-E4-6	0.3	3.7	R	S
Deltapine 726	0.3	3.7	R	S

^{1/}The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

^{2/}Essex used as a check in race 3 infested soil.

^{3/}Bedford used as a check in race 4 infested soil.

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O. Clinton Shelby, Director of Business Affairs
Michael Keel, Director of Services
William L. Sanders, Statistician

Department Heads

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D. H. Luttrell, Agricultural Engineering
D. O. Richardson, Animal Science
Greer Litton Fox, Child and Family Studies
Bonnie P. Riechert, Communications
Carroll J. Southards, Entomology and Plant Pathology
Hugh O. Jaynes, Food Technology and Science
George T. Weaver, Forestry, Wildlife and Fisheries
Betty R. Carruth, Nutrition and Food Sciences
G. D. Crater, Ornamental Horticulture and Landscape Design
John E. Foss, Plant and Soil Science
Jacqueline O. DeJonge, Textiles, Merchandising and Design

BRANCH STATIONS

Ames Plantation, Grand Junction, James M. Anderson, Superintendent
Dairy Experiment Station, Lewisburg, J. R. Owen, Superintendent
Forestry Experiment Station: Locations at Oak Ridge, Tullahoma,
and Wartburg, Richard M. Evans, Superintendent
Highland Rim Experiment Station, Springfield, D. O. Onks, Superintendent
Knoxville Experiment Station, Knoxville, John Hodges III, Superintendent
Martin Experiment Station, Martin, H. A. Henderson, Superintendent
Middle Tennessee Experiment Station, Spring Hill, J. W. High, Jr., Superintendent
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