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1982 Performance of Field Crop Varieties

University of Tennessee Agricultural Experiment Station

Charles R. Graves

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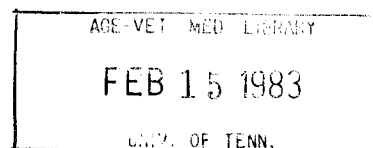
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1982 Performance of Field Crop Varieties

by Charles R. Graves



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

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1982
PERFORMANCE
OF FIELD CROP VARIETIES
DATA FOR 1982 WITH SUMMARIES
OF
RESULTS FROM PREVIOUS YEARS
CORN-GRAIN SORGHUM-SUMMER ANNUALS-OATS
BARLEY-WHEAT-ALFALFA-SOYBEANS-TOBACCO

by

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RECOMMENDED CROP VARIETIES

Listed alphabetically

Corn Hybrids

Yellow-Early-Season-FFR 71/C², FFR 744C, Funk G-4507A, O's Gold 3344,
and P.A.G. 333.

Yellow-Medium-Season-DeKalb XL72B², DeKalb XL72BB, DeKalb XL80¹,
McCurdy 84aa, McCurdy 7978, McCurdy 8150, N.K. PX79, O's Gold SX5509,
P.A.G. SX17A, Pioneer brand 3184, Pioneer brand 3320, Pioneer brand 3369A,
RA 1502, RA 1604, and Zimmerman Z-24Y.

White-Medium-Season-DeKalb XL390B.

Yellow-Full-Season-DeKalb XL394, FFR 955C, Funk G-4740, Funk G-4848-2¹,
Golden Harvest H-2775A, N.K. PX723¹, Pioneer brand 3147, and Pioneer brand
3160.

White-Full-Season-Asgrow RX962W, FFR 929W, Funk G-4741¹, Golden Harvest H-2660W,
Princeton SX910, RA 2602W, Zimmerman Z-11W, and Zimmerman Z-52W.

Cotton³

Coker 304, Deltapine 55¹, DES 56, Hancock¹, McNair 220, McNair 235, QS 137,
Stoneville 213, Stoneville 506, and Stoneville 825.

Oats

Fall-seeded-Coker 716, Cumberland.

Wheat

Abe¹, Caldwell, Coker 747, Coker 916, Pioneer brand S76, McNair 1003,

Hart and Southern Belle.

Barley

Henry, Surry and Volbar.

Alfalfa

Apollo, Arc¹, Cimarron, Classic, Gladiator, Hi-phy, Olympic, Saranac AR,

Vangard, Voris A77, Weevlchek, Williamsburg.

Red Clover

Kenstar, Redland, Redland II, and Redman.

Soybeans

<u>Variety</u>	<u>Resistant to</u>	<u>Matu,ity Groups</u>
	(Races)	medium
Asgrow A5474	1,3+4	V
Bedford	1,3+4	V
Nathan	1,3+4	V
Forrest	1+3	V
		late
Centennial	1+3	VI
RA 604	1+3	VI
		medium
Asgrow A5618	None	V
Bay	None	V
Essex	None	V
York	None	V
		early
Mitchell	None	IV

Grain Sorghum

Bird Resistant-Acco-Y93, DeKalb BR65⁺, McNair 656BR¹, Pioneer brand B815¹, Savanna 5.

Non-Bird Resistant-Acco R-1090¹, Acco R-1029A, Coker 7675, DeKalb DK-64, Funk G-522A, Funk G-522DR, GSA ML135¹, Helena 1330DR, Helena 1225DR¹, McCurdy M51Yg, Penngrain yE, T.E. Dinero.

Burley Tobacco

Burley 37, Burley 49, Burley 64, Ky 14, Ky 17, MS Bu. 21xKy 10, MS Ky 14X L8, and Va 509.

Dark-Fire Cured Tobacco

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

Dark-Air Cured Tobacco

Ky 160, OS 802.

Summer Annuals are recommended when allowed to grow 20-40 inches high before cutting or grazing.

Sorghum x Sudangrass crosses

Acco S99, Drip-O-Honey, FFR 66, FFR 74A, Funk G-83F, Graze-N-Bale, Mor Su II, Sudax SX-17⁺, Sudax ST-6⁺, Sunrise, Summergrazer, Sweet M, Sweet Sioux IV, and Wintergraze 3. Super Chowmaker 235F is recommended when it is allowed to grow to 3-5 feet in height up to the pre-boot stage of growth.

Millet

Gahi-1, Millex 23, RA Millhy 99.

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

²Recommended only under virus conditions.

³Cotton results will be given in a later publication.

The Recommended Corn Hybrids for 1983 are as Follows:

Maturity Group	Grain Color	Hybrid	Tolerance to Corn Virus Complex	Erect Plants %	Yield Bu/A
Early-Season	Yellow	O's Gold 3344	Med	93	126
		Funk G-4507A	Low	95	117
		FFR 744C	Low	96	113
		P.A.G. 333	Low	--	---
		FFR 717C ^{3/}	Med-High	96	112
Medium-Season	Yellow	Pioneer brand 3320	Low	99	128
		Pioneer brand 3184	Med-Low	100	127
		Pioneer brand 3369A	Low	100	125
		McCurdy 8150	Low	98	125
		McCurdy 7978	Med	98	123
		RA 1502	Low	97	123
		O's Gold SX5509	Low	98	122
		RA 1604	Low	96	122
		DeKalb XL72BB	Med-High	99	118
		DeKalb XL80 ^{2/}	Low	--	---
		DeKalb XL72B ^{3/}	High	--	---
		N.K. PX79	Med-Low	--	---
		P.A.G. SX17A	Med	--	---
		Zimmerman Z-24Y	Low	--	---
		McCurdy 84aa	Low	--	---
	White	DeKalb XL390B	Low	95	127
Full-Season	Yellow	Pioneer brand 3147	Med-High	97	140
		Funk G-4740	Med	99	139
		Pioneer brand 3160	Med-High	99	138
		Funk G-4848-2 ^{2/}	Med	--	---
		FFR 955C	Med-High	97	130
		Golden Harvest H-2775A	Low	95	127
		DeKalb XL394	High	99	126
		N.K. PX723 ^{2/}	Med-High	--	---
	White	Zimmerman Z-11W	Med-High	97	131
		Zimmerman Z-52W	Med-High	97	127
		Golden Harvest H-2660W	Med	97	127
		RA 2602W	Med	97	122
		FFR 929W	Med	97	122
		Princeton SX910	Med-High	97	121
		Asgrow RX962W	Low	--	---
		Funk G-4747-1 ^{2/}	Med	--	---

^{1/} Hybrids rated lower than medium-high are not recommended under heavy virus conditions.

^{2/} Present plans indicate that this hybrid will not be recommended after this year.

^{3/} Recommended only under virus conditions.

GRAIN SORGHUM

Bird-resistant varieties

Acco BR-Y93-A medium-tall variety with a medium to open type head. It is medium in maturity. Anthracnose resistance with a yellow endosperm.

DeKalb BR65⁺-A medium-tall variety with a medium to tight head. It is medium in maturity. Anthracnose, downy mildew and MDMV (maize dwarf mosaic virus) resistance with a brown pericarp and red endosperm.

McNair 656BR-This variety is medium-tall and medium in maturity. It has an open type head. Anthracnose resistance with MDMV tolerance. The grain color is reddish brown (pericarp) and yellow endosperm.

Pioneer brand B815-A variety which is tall with medium to open type heads. Resistant to downy mildew and anthracnose. Yellow endosperm.

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

Non-bird resistant varieties

Acco R-1090-A variety which is medium-tall with medium to open type heads. This variety is medium in maturity. Resistant to anthracnose. Red pericarp with yellow endosperm.

Acco R-1029A-A medium-tall variety which is medium in maturity. Resistant to anthracnose. Red pericarp with a yellow endosperm.

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.

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.

GSA ML135-Medium-tall with medium type head. Medium-late in maturity.

Helena 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.

Helena 1225DR-Medium-tall with medium to open type head. Medium to late in maturity. Brown pericarp with a yellow endosperm.

McNair 650-Medium-tall with a medium type head. Medium to late in maturity. Resistant to anthracnose. Red pericarp with a yellow endosperm.

McCurdy M51Yg-Medium tall variety with medium maturity. Yellow endosperm.

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

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

Asgrow A5618-Has purple flowers, grey pubescence and seed with a buff hila. Susceptible to soybean cyst nematodes and phytophthora rot. Has yielded well under soybean cyst nematode free conditions. Maturity Group V.

Bedford-First soybean variety with resistance to Race 4 soybean cyst nematode. Was released by the USDA and several cooperating states, including Tennessee. Resistant to Race 4, and to Races 1 and 3, and is moderately resistant to root-knot nematodes. Has white flowers, tawny pubescence, and yellow seed with black hila. Maturity Group V¹.

Centennial-Matures (Maturity Group VI) about the same time as Pickett 71. Tall plants with tawny pubescence and purple flowers. Medium size seeds with a yellow seed coat and black hila. Resistant to Races 1 and 3 of the soybean cyst nematodes, the root-knot nematode (*Meloidogyne incognita*), the reinform nematode, and phytophthora rot. Seems to be too late for the Cumberland Plateau.

Essex-An 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 heavy-textured soils. Similar to Dare in seed size, quality, and shatter resistance.

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 has performed poorly on some soils at a pH of 7 or above.

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.

Nathan-Resistant to Races 1, 3, and 4 of the soybean cyst nematode and to the root-knot nematode Meliodogyne incognita. Was developed specifically for areas where Race 4 soybean cyst nematode is a problem. Is a day or two later in maturity than Essex and approximately seven or eight days earlier than Bedford. Has white flowers, brown pubescence, and yellow seed with black hila.

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.

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.

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.

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.

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 more in plant height than Surry. Reported to be resistant to powdery mildew, leaf rust and scald.

Surry-An awnleted variety released from Virginia Agricultural Experiment Station in 1975. Heads about the same time as Volbar but matures about a week earlier. Has been an inch or two shorter than Henry in the State Variety Test. It is reported to be resistant to powdery mildew, intermediate in resistance to leaf rust, and has the Harrison resistance to 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

Abe-Similar in appearance to Arthur. May be distinguished from Arthur 71 and Arthur by its blue-green foliage when in the boot stage and by its longer awnlets. Has the same resistance to powdery mildew, loose smut, and soil-borne mosaic as Arthur. Very susceptible to leaf rust in 1982 at Jackson. Has resistance to 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.

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, moderately resistant to leaf rust, stem rust, and powdery mildew.

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.

Hart-An early awned variety released jointly by Missouri and Pennsylvania Agricultural Experiment Stations in 1976. Is similar to Stoddard in vegetative growth habit and winterhardiness. Straw is medium-short, stiff, and light in color. A primary identification character is its awn; most other soft red winter wheat varieties grown are awnless or awnletted. Is susceptible to powdery mildew and leaf rust and is not Hessian fly resistant.

McNair 1003-Medium in height with a dark green foliar color in its early growth stage with a blue cast at maturity. Has matured similar to Arthur. Has resistance to powdery mildew, soil-borne mosaic, and Race E of Hessian fly. Has produced high yields in the tests but has been a little more erratic than some other varieties in yield performance.

S76-An awned variety developed by Pioneer Hi-Bred International, Inc. Is a few days later in maturity than Arthur. Has been two or three inches shorter than Arthur and is susceptible to powdery mildew and Hessian fly.

Southern Belle-An early, white-chaffed, short variety with good resistance to lodging. Has some tolerance to leaf and stem rust and septoria and is susceptible to powdery mildew and Hessian fly.

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 soil (such as Henry) if the surface water is controlled. Alfalfa can't tolerate flooding for any period of time. Apollo has high resistance to bacterial wilt but this disease has not been a problem in Tennessee.

Arc-A vigorous-growing alfalfa variety with high resistance to anthracnose and pea aphid and with moderate resistance to the alfalfa weevil and bacterial wilt. Bacterial wilt has not been a problem in Tennessee. Weevil resistance is not enough to eliminate the need for weevil control measures by growers.

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 Arch 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, stemphylium 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.

Hi-phy-Has good resistance to fusarium wilt and bacterial wilt, moderate resistance to phytophthora root rot and low levels of resistance to the potato leafhopper.

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

Vanguard-Was evaluated in the past as Victor. Has high resistance to anthracnose and good resistance to bacterial wilt. Has some tolerance to leaf hopper yellowing and has performed well.

Voris A77-Has resistance to anthracnose, bacterial wilt, and fusarium wilt. Has moderate resistance to phytophthora root rot.

Weevlchek-Has some resistance to the alfalfa weevil, but this resistance is not great enough to eliminate the need for weevil control measures. Does not grow as vigorously as most of the other varieties evaluated.

Williamsburg-Was removed from the recommended list several years ago due to the lack of a seed source in Tennessee. Seed of this variety can once again be bought in Tennessee; therefore, it was placed back on the recommended list. Has performed well all across the state in the variety trials.

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 persisted for only one or two years.

Redland-Was evaluated as Illinois No. 2 for many years. Has performed better than Kenland certified, but slightly less than Kenstar.

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 37-An upright-leaf variety which has medium-high resistance to black shank, high resistance to wildfire, and low resistance to black root rot and fusarium wilt.

Burley 49-An upright-leaf variety which has medium-high resistance to black shank, high resistance to black root rot, wildfire and mosaic, and low resistance to fusarium wilt. Is recommended on farms where black shank and black root rot are causing problems.

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 low resistance to fusarium wilt. Is recommended on farms where black shank and black root rot are causing problems.

Ky 14-A high-yielded variety which has medium resistance to black root rot and fusarium wilt, and high resistance to 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 and wildfire, and medium resistance to 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 and 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 and medium resistance to black root rot and fusarium wilt. Not recommended where black shank is known to be present.

Va 509-An upright-leaf variety which has medium resistance to black shank, high resistance to wildfire, and low resistance to black root rot and 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-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. OS 802 is light green in color with an open growth habit and tends to have a smoother leaf surface than Ky 160.

1982
PERFORMANCE
OF FIELD CROP VARIETIES

Corn-Grain Sorghum-Summer Annuals-Oats
Barley-Wheat-Alfalfa-Soybeans-Tobacco
DATA FOR 1982 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 experiment 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 1982 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 1982, the soil types are reported at the end of the table.

Corn

The 1982 medium-season state corn hybrid tests were conducted at seven locations, and the full-season and early-maturing tests at four locations. No data are reported for the medium-season test at Milan due to damage from a severe flood just prior to harvest time. The tests at Ames Plantation, Jackson and Martin were harvested with a picker-sheller. All other tests were harvested by hand. Twenty-seven selected hybrids were evaluated in Humphreys County under corn virus conditions.

The growing season was good at most locations in 1982. Spring Hill and Greeneville yields were reduced due to dry weather during the growing season. All tests were over-planted and most thinned to 19,000 plants per acre except for the tests at Knoxville which were thinned to 22,000 plants per acre. The tests were fertilized with 150 pounds or more of nitrogen. At Knoxville 1,000 lbs. of 6-12-12 per acre were broadcast prior to planting and 300 lbs. of ammonium nitrate per acre were sidedressed after the corn had been thinned. The tests at Crossville were also sidedressed with 300 lbs. of ammonium nitrate after the corn was thinned. All other tests received the nitrogen prior to planting.

Phosphorus and potassium were applied according to soil test recommendations. The plot size for hand harvested plots was two rows 11 feet long and the plot size for the mechanically harvested plots was two rows 25 to 30 feet in length replicated four or five times.

The leading hybrids in 1982 in the medium-season tests were Pioneer brand 3147 (a full-season hybrid included as a check), Pioneer brand 3320, DeKalb 28012 (an experimental), Pioneer brand 3184, DeKalb EX7979 (an experimental), and McCurdy 8150.

The leading hybrids at Crossville in the medium-season test in 1982 were RA 1604, DeKalb EX7979, O's Gold 5509, Golden Harvest H-2686, and Golden Harvest H-2680.

The leading hybrids in the full-season test were Pioneer brand 3165, Pioneer brand 3160, DeKalb 29014 (an experimental), Pioneer brand 3147, McCurdy 80-72, and Funk G-4740.

The highest yielding hybrids in the early-maturing test were McCurdy 81-82, McCurdy 84aa, Pioneer brand 3358, Pioneer brand 3389, DeKalb 28035 (an experimental) and FFR 955C

The grain of hybrids grown at Knoxville are being analyzed for crude protein by the UT forage testing lab in Nashville. These data will be reported in a later publication.

Pioneer brand 3160, Pioneer brand 3147, DeKalb XL72BB, FFR 848C, DeKalb 28012 and FFR 955C produced the highest yields in Humphreys County under corn virus conditions. The virus was light in 1982 and yields of most hybrids evaluated were higher than expected under virus conditions. In addition to the yield test under virus conditions, several selected hybrids from all maturity groups were rated for virus tolerance by D. R. West and H. C. Kincer of the Tennessee Agricultural Experiment Station, Knoxville.

Several new or late arriving hybrids were evaluated at Knoxville in 1982. Beck's 85XA and DeKalb 29027 (an experimental) produced high yields. These two hybrids were followed by T161 x MP339 (an experimental), AgriGold A6955W and Pioneer brand 3147.

Table 1. Corn: Yield of 40 medium-season hybrids evaluated at five locations in 1982.

Color	Cross	Hybrid	Avg.	Greene- ^{1/} ville	Knox- ^{2/} ville	Spring- ^{3/} field	Spring- ^{4/} Hill	Martin- ^{5/}
Bushels per acre								
y	2X	Pioneer brand 3147	135	94	171	161	104	146
y	2X	Pioneer brand 3320	132	103	166	154	102	134
y	2X	DeKalb 28012 ^{6/}	126	83	154	150	98	143
y	2X	Pioneer brand 3184	125	94	161	150	98	123
y	2X	DeKalb EX7979	124	81	170	158	90	123
y	2X	McCurdy 8150	124	86	159	140	95	141
y	2X	Coker 21	123	81	156	162	89	129
y	2X	Stauffer S8500	123	97	151	133	98	136
y	2X	DeKalb XL71	122	93	138	134	88	159
y	M2X	Funk G-4733	122	83	159	147	95	126
y	2X	USS 1515	122	92	134	141	98	144
w	3X	O's Gold 2680W	122	60	163	171	92	123
y	2X	DeKalb 28010 ^{7/}	121	80	159	140	99	126
y	M2X	Funk EX29092	121	88	164	133	95	123
y	2X	McCurdy 7978	120	91	147	143	99	120
y	2X	N.K. PX79	120	84	143	143	101	128
y	2X	FFR 848C	120	73	147	151	95	132
y	2X	RA 1502	120	89	142	124	84	159
y	2X	O's Gold 5509	119	92	157	154	78	114
y	2X	Pioneer brand 3369A	118	84	133	140	88	147
y	2X	RA 1604	118	82	161	134	89	122
w	3X	DeKalb XL390B	117	68	158	147	85	127
y	2X	Zimmerman Z-24Y	117	89	157	122	91	124
y	M2X	Pioneer brand 3187 ^{8/}	116	78	148	142	83	128
y	2X	T.E. 6995	114	79	117	145	88	140
y	2X	Golden Harvest H-2630	114	87	147	142	83	109
y	2X	O's Gold 5291	114	85	136	134	85	129
y	2X	Golden Harvest H-2680	113	80	153	137	69	126
y	2X	Trojan TXS115A	113	79	133	134	87	132
y	2X	Asgrow RX777	112	78	143	130	81	129
w	M3X	Funk G-4779W	111	73	158	132	89	104
y	3X	DeKalb XL72BB	111	73	153	114	83	131
y	2X	Golden Harvest H-2686	110	64	157	134	76	120
y	M2X	USS 1516	109	80	140	135	73	117
y	M2X	Coker 19A	108	87	126	136	77	113
y	2X	Funk G-4525A	106	73	131	128	76	122
y	2X	N.K. PX74	104	81	123	129	79	110
y	M2X	Pioneer brand 3328	104	84	119	110	88	120
y	M2X	Funk G-4606	100	66	125	117	68	125
y	2X	T.E. 6945	100	57	134	119	78	110
L.S.D. (.05)			9.6	16.4	13.3	25.6	17.1	N.S.
C.V. %			13.2	14.4	6.5	15.8	13.9	17.0
Avg.			116.7	81.6	147.2	138.8	87.9	127.9

^{1/} Hermitage and Lindside silt loam (2% to 5% slopes). ^{8/} Tested in previous years as X7509.^{2/} Sequatchie loam (2% to 5% slopes).^{3/} Huntington silt loam local alluvium (2% to 5% slopes).^{4/} Maury silt loam (2% to 5% slopes).^{5/} Falaya silt loam (2% to 5% slopes).^{6/} Tested in previous years as 18029.^{7/} Tested in previous years as 18030.

Table 2. Corn: Yield and other characteristics of 40 medium-season hybrids evaluated at six locations in 1982.

Color	Cross	Hybrid	Yield Bu/A	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest %
y	2X	Pioneer brand 3147	135	98	3.5	3.8	56	23.4
y	2X	Pioneer brand 3320	132	99	2.2	3.4	49	20.2
y	2X	DeKalb 28012	126	99	3.5	3.9	55	21.8
y	2X	Pioneer brand 3184	125	100	3.5	4.6	51	22.8
y	2X	DeKalb EX7979	124	100	3.8	3.1	55	20.9
y	2X	McCurdy 8150	124	97	3.4	2.9	57	23.0
y	2X	Coker 21	123	98	3.9	3.2	54	23.3
y	2X	Stauffer S8500	123	96	3.1	4.0	51	21.0
y	2X	DeKalb XL71	122	98	4.1	4.1	51	20.4
y	M2X	Funk G-4733	122	99	3.0	3.4	53	22.8
y	2X	USS 1515	122	98	3.8	3.9	49	21.2
w	3X	O's Gold 2680W	122	98	3.6	2.9	62	22.0
y	2X	DeKalb 28010	121	98	4.0	3.5	54	21.7
y	M2X	Funk EX29092	121	100	3.2	3.2	54	22.6
y	2X	McCurdy 7978	120	98	2.9	3.5	55	21.2
y	2X	N.K. PX79	120	100	4.5	3.5	52	19.4
y	2X	FFR 848C	120	98	3.0	3.1	58	20.3
y	2X	RA 1502	120	97	3.6	4.0	50	20.7
y	2X	O's Gold 5509	119	97	3.9	3.6	53	22.7
y	2X	Pioneer brand 3369A	118	100	3.6	4.2	48	19.8
y	2X	RA 1604	118	94	3.6	3.2	52	22.2
w	3X	DeKalb XL390B	117	94	4.2	2.9	56	22.1
y	2X	Zimmerman Z-24Y	117	97	2.9	3.5	47	19.6
y	M2X	Pioneer brand 3187	116	99	3.8	3.0	53	20.1
y	2X	T.E. 6995	114	100	4.6	4.1	49	19.6
y	2X	Golden Harvest H-2630	114	99	4.2	3.7	56	20.4
y	2X	O's Gold 5291	114	94	4.3	3.3	46	21.4
y	2X	Golden Harvest H-2680	113	95	4.0	3.4	51	22.6
y	2X	Trojan TXS115A	113	96	4.5	3.9	47	18.9
y	2X	Asgrow RX777	112	96	3.2	3.5	49	19.5
w	M3X	Funk G-4779W	111	98	3.5	2.7	58	22.5
y	3X	DeKalb XL72BB	111	100	3.8	4.3	51	23.1
y	2X	Golden Harvest H-2686	110	94	3.9	3.9	53	23.5
y	M2X	USS 1516	109	94	4.5	3.8	50	20.0
y	M2X	Coker 19A	108	100	4.1	3.3	52	21.1
y	2X	Funk G-4525A	106	94	3.6	3.2	49	17.6
y	2X	N.K. PX74	104	98	4.5	3.6	50	19.2
y	M2X	Pioneer brand 3328	104	99	3.9	3.5	52	20.6
y	M2X	Funk G-4606	100	98	4.6	3.7	48	20.0
y	2X	T.E. 6945	100	97	4.0	3.8	48	18.7
L.S.D. (.05)			9.6	-	-	-	-	-
C.V. %			13.2	-	-	-	-	-
Avg.			116.7	-	-	-	-	-

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

Table 3. Corn: Yield and other characteristics of 40 medium-season hybrids evaluated at Crossville in 1982^{1/}.

Color	Cross	Hybrid	Yield Bu/A	Erect plants %	Grain quality Rating ^{2/}	Husk cover Rating ^{2/}	Ear ht. in.	Grain moisture at harvest %
y	2X	RA 1604	193	100	3.0	3.5	54	24.9
y	2X	DeKalb EX7979	189	93	3.0	3.5	54	25.0
y	2X	O's Gold 5509	182	98	3.0	3.0	50	25.0
y	2X	Golden Harvest H-2686	182	96	2.5	4.0	58	29.8
y	2X	Golden Harvest H-2680	180	96	3.0	3.5	52	26.3
y	2X	Coker 21	179	95	3.5	3.5	54	25.1
w	3X	DeKalb XL390B	179	96	3.5	2.5	54	24.2
y	2X	DeKalb 28010	177	100	3.0	4.5	56	24.1
y	2X	Pioneer brand 3147	175	91	3.5	3.5	55	25.4
y	2X	RA 1502	175	100	3.5	2.5	51	23.4
y	2X	Pioneer brand 3320	174	100	2.0	3.5	51	22.5
w	3X	O's Gold 2680W	174	96	3.0	3.0	56	25.4
y	2X	DeKalb XL71	174	100	2.5	3.5	50	25.3
y	2X	Zimmerman Z-24Y	172	100	2.0	3.5	50	23.8
y	M2X	Funk's EX29092	172	98	3.0	3.0	54	26.0
y	2X	Pioneer brand 3184	169	98	3.0	4.5	52	23.8
y	2X	Pioneer brand 3369A	168	98	3.0	3.5	44	22.8
y	M2X	Funk G-4733	164	100	3.0	3.0	56	24.2
y	2X	McCurdy 8150	164	93	3.0	3.0	58	27.9
y	M2X	Coker 19A	164	100	3.0	4.0	52	23.3
y	M2X	Pioneer brand 3187	160	100	2.5	2.5	56	24.8
y	2X	O's Gold 5291	160	100	4.0	3.5	48	24.5
y	2X	Golden Harvest H-2630	157	98	4.0	4.0	54	23.2
w	M3X	Funk G-4779W	157	91	3.0	3.0	58	27.6
y	2X	DeKalb 28012	154	91	3.0	4.0	47	26.7
y	2X	USS 1515	153	98	4.0	3.0	49	23.0
y	M2X	USS 1516	153	93	3.5	3.0	50	25.0
y	2X	Stauffer S8500	151	89	3.5	4.5	52	24.0
y	2X	McCurdy 7978	150	100	3.0	4.5	54	23.0
y	M2X	Funk G-4606	149	96	3.5	3.0	48	23.6
y	2X	Asgrow RX777	148	71	3.0	4.0	50	21.8
y	2X	N.K. PX79	147	98	3.0	4.5	48	21.8
y	3X	DeKalb XL72BB	146	98	4.0	4.5	56	26.2
y	2X	Trojan TXS115A	145	93	3.5	3.5	46	21.8
y	2X	FFR 848C	146	84	2.5	3.0	56	23.8
y	M2X	Pioneer brand 3328	144	100	2.5	3.0	51	25.5
y	2X	T.E. 6945	143	93	3.5	5.0	50	23.9
y	2X	N.K. PX74	141	93	3.5	3.0	50	21.0
y	2X	Funk G-4525A	140	100	3.5	3.0	50	21.0
y	2X	T.E. 6995	139	89	3.5	3.5	48	22.4
L.S.D. (.05)			15.8					
C.V. %			7.0					
Avg.			162.2					

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

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

Table 4. Corn: Yield of 24 medium-season hybrids evaluated at five locations for 2 years (1981-82).

Color	Cross	Hybrid	1981-82 Avg.	Greene- ville	Knox- ville	Spring- field	Spring Hill	Martin
Bushels per acre								
y	2X	Pioneer brand 3147	145	145	168	164	115	133
y	2X	Pioneer brand 3184	135	130	159	152	114	121
y	2X	DeKalb EX7979	132	126	154	166	105	110
w	3X	DeKalb XL390B	132	128	160	153	99	119
y	2X	Pioneer brand 3320	132	135	147	146	110	120
y	M2X	Funk G-4733	129	119	148	149	107	124
y	2X	Coker 21	129	116	148	158	99	124
y	2X	Pioneer brand 3369A	129	126	140	142	110	126
y	2X	McCurdy 8150	129	120	147	143	110	124
y	2X	Zimmerman Z-24Y	128	128	154	135	110	116
w	3X	O's Gold 2680W	128	110	156	167	102	105
y	2X	McCurdy 7978	128	125	145	141	113	114
y	2X	RA 1502	127	120	136	134	100	144
y	2X	O's Gold SX5509	127	126	147	159	100	103
y	2X	RA 1604	126	125	149	141	102	112
y	M2X	Pioneer brand 3187	126	121	145	142	105	114
y	2X	Golden Harvest H-2686	125	112	148	152	94	117
y	2X	Golden Harvest H-2680	125	113	148	142	95	125
y	M2X	Coker 19A	123	118	133	137	103	125
y	3X	DeKalb XL72BB	121	117	143	128	102	117
y	2X	T.E. 6995	117	108	119	136	105	118
y	M2X	Funk G-4606	114	107	126	132	91	116
y	2X	Funk G-4525A	114	105	136	133	91	107
y	M2X	Pioneer brand 3328	111	109	123	116	102	106

Table 5. Corn: Yield and other characteristics of 24 medium-season hybrids evaluated at five locations for 2 years (1981-82).

Color	Cross	Hybrid	1981-82 Avg.	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest %
y	2X	Pioneer brand 3147	145	98	4.2	4.1	57	21.4
y	2X	Pioneer brand 3184	135	100	3.6	4.6	50	21.2
y	2X	DeKalb EX7979	132	99	4.2	3.1	55	19.6
w	3X	DeKalb XL390B	132	96	4.2	3.0	58	20.6
y	2X	Pioneer brand 3320	132	98	2.4	3.4	50	19.2
y	M2X	Funk G-4733	129	99	2.8	3.4	54	19.6
y	2X	Coker 21	129	99	3.9	3.4	53	21.4
y	2X	Pioneer brand 3369A	129	100	3.1	4.4	50	18.4
y	2X	McCurdy 8150	129	98	3.5	3.0	58	21.2
y	2X	Zimmerman Z-24Y	128	97	2.8	3.8	50	18.5
w	3X	O's Gold 2680W	128	99	3.0	2.9	63	21.2
y	2X	McCurdy 7978	128	97	3.0	3.7	56	19.4
y	2X	RA 1502	127	98	3.9	4.0	51	19.5
y	2X	O's Gold SX5509	127	98	3.8	3.4	54	21.1
y	2X	RA 1604	126	96	4.0	3.4	52	21.0
y	M2X	Pioneer brand 3187	126	98	3.2	3.4	55	19.2
y	2X	Golden Harvest H-2686	125	97	3.8	4.2	55	21.6
y	2X	Golden Harvest H-2680	125	96	4.0	3.4	51	21.2
y	M2X	Coker 19A	123	100	4.1	3.5	53	21.1
y	3X	DeKalb XL72BB	121	99	3.9	4.6	53	20.7
y	2X	T.E. 6995	117	98	4.7	4.4	51	18.0
y	M2X	Funk G-4606	114	99	4.4	3.9	50	18.5
y	2X	Funk G-4525A	114	95	3.4	3.0	50	17.5
y	M2X	Pioneer brand 3328	111	98	3.9	3.6	52	20.6

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

Table 6. Corn: Yield of 14 medium-season hybrids evaluated at four locations for 3 years (1980-82).

Color	Cross	Hybrid	1980-82 Avg.	Greene- ville	Knox- ville	Spring- field	Martin
Bushels per acre							
y	2X	Pioneer brand 3147	142	127	152	161	128
y	2X	Pioneer brand 3320	128	118	139	141	116
y	2X	Pioneer brand 3184	127	113	140	143	114
w	3X	DeKalb XL390B	127	104	141	153	109
y	2X	Pioneer brand 3369A	125	110	131	139	120
y	2X	McCurdy 8150	125	107	134	140	118
y	2X	McCurdy 7978	123	110	132	138	113
y	2X	RA 1502	123	105	126	130	130
y	2X	O's Gold SX5509	122	107	133	148	101
y	2X	RA 1604	122	111	134	132	112
y	3X	DeKalb XL72BB	118	105	133	125	110
y	2X	T.E. 6995	114	96	114	132	116
y	M2X	Funk G-4606	112	95	116	129	107
y	2X	Funk G-4525A	110	95	124	123	98

Table 7. Corn: Yield and other characteristics of 14 medium-season hybrids evaluated at four locations for 3 years (1980-82).

Color	Cross	Hybrid	1980-82 Avg. Yield Bu/A	Erect plants %	Quality Rating ^{1/}	Husk Cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest %
y	2X	Pioneer brand 3147	142	97	4.1	4.0	56	20.4
y	2X	Pioneer brand 3320	128	99	2.5	3.2	48	18.9
y	2X	Pioneer brand 3184	127	100	3.3	4.0	48	20.4
w	3X	DeKalb XL390B	127	95	4.4	2.8	57	20.0
y	2X	Pioneer brand 3369A	125	100	3.0	4.2	49	17.7
y	2X	McCurdy 8150	125	98	3.3	2.6	56	20.5
y	2X	McCurdy 7978	123	98	3.0	3.4	54	19.0
y	2X	RA 1502	123	97	3.7	3.6	49	19.1
y	2X	O's Gold SX5509	122	98	4.1	3.2	51	20.5
y	2X	RA 1604	122	96	4.2	3.3	50	20.4
y	3X	DeKalb XL72BB	118	99	3.9	4.3	51	20.2
y	2X	T.E. 6995	114	97	4.6	4.2	49	17.2
y	M2X	Funk G-4606	112	97	4.5	4.0	48	17.7
y	2X	Funk G-4525A	110	96	3.5	3.0	47	16.6

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

Table 8. Corn: Yield of 42 full-season hybrids evaluated at four locations in 1982.

Color	Cross	Hybrid	Avg.	Knox ^{1/}	Spring ^{2/}	Jackson ^{3/}	Ames ^{4/}
				ville	Hill	Plantation	
Bushels per acre							
y	2X	Pioneer brand 3165	148	181	127	143	142
y	M2X	Pioneer brand 3160	138	175	109	149	125
y	2X	DeKalb 29014 <u>5/</u>	134	169	100	151	114
y	M2X	Pioneer brand 3147	133	157	105	140	125
y	2X	McCurdy 80-72	132	164	96	148	123
y	M2X	Funk G-4740	131	157	107	136	123
y	2X	DeKalb EX8989 <u>6/</u>	130	163	103	146	113
w	2X	DeKalb 24301 <u>7/</u>	128	161	92	153	106
w	2X	Zimmerman Z-11W	127	164	100	146	98
w	M2X	Stauffer S8820W	124	168	102	137	100
w	2X	Asgrow RX962W	124	171	90	125	106
y	3X	N.K. PX715	124	147	100	140	103
w	2X	Zimmerman Z-52W	122	161	99	131	97
w	2X	Golden Harvest H-2660W	122	157	90	133	106
y	3X	DeKalb XL394	121	155	92	138	103
y	2X	N.K. PX95	121	167	94	139	84
y	2X	Golden Harvest H-2775A	120	152	85	132	113
y	2X	Super Crost 6762	121	150	96	130	103
w	M2X	RA X9609W	120	155	94	126	103
y	2X	USS 2020	120	153	85	141	99
w	3X	RA 3605W	119	154	98	127	94
w	3X	FFR 929W	119	160	88	135	94
y	M2X	FFR 955C	119	162	95	132	96
y	M2X	Super Crost 7795	119	144	95	136	110
w	2X	Pioneer brand 519	119	147	96	138	98
w	SP2X	Princeton SP936	118	156	94	132	92
y	3X	Golden Harvest H-2695	118	154	96	123	93
y	2X	AgriGold A-6910	117	142	90	131	108
w		TR 2051	117	164	84	124	96
y	2X	McCurdy 8230	117	155	96	119	104
y	2X	FFR 905C	116	159	83	125	98
w	2X	Princeton SX910	116	158	84	130	99
w	M2X	RA 2602W	116	159	91	130	90
y	2X	Gold Kist 925	116	145	96	126	97
y	2X	Super Crost 7801	116	154	84	131	97
y	2X	Trojan T1230	114	169	75	133	85
y	2X	Cargill 951	114	130	81	143	99
y	2X	Princeton SX870	113	153	84	126	94
y	3X	N.K. PX707	113	142	90	128	96
y	2X	Coker 22	110	151	72	127	92
y	2X	Princeton SX860	107	132	74	118	103
y	2X	T.E. 6995A	107	130	98	112	84
L.S.D. (.05)			9.3	15.2	17.4	N.S.	19.5
C.V. %			11.1	7.0	13.4	13.3	13.6
Avg.			121.0	155.8	93.1	133.6	102.5

^{1/} Sequatchie loam (2% to 5% slopes).^{4/} Loring silt loam (2% to 5% slopes).^{2/} Maury silt loam (2% to 5% slopes).^{5/} Tested in previous years as 19030.^{3/} Memphis silt loam (2% to 5% slopes).^{6/} Tested in previous years as 19010.^{7/} Tested in previous years as 18317.

Table 9. Corn: Yield and other characteristics of 42 full-season hybrids evaluated at four locations in 1982.

Color	Cross	Hybrid	Yield Bu/A	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest
								%
y	2X	Pioneer brand 3165	148	99	2.2	3.6	55	23.7
y	M2X	Pioneer brand 3160	138	100	2.0	3.2	52	22.7
y	2X	DeKalb 29014 ^{1/}	134	99	4.0	4.2	60	26.2
y	M2X	Pioneer brand 3147	133	98	4.2	3.6	54	26.3
y	2X	McCurdy 80-72	132	99	2.8	3.6	58	25.6
y	M2X	Funk G-4740	131	99	3.0	4.2	47	23.2
y	2X	DeKalb EX8989	130	99	3.8	4.2	56	26.0
w	2X	DeKalb 24301	128	99	3.2	3.0	50	22.4
w	2X	Zimmerman Z-11W	127	97	3.0	2.4	59	23.9
w	M2X	Stauffer S8820W	124	97	3.5	2.6	57	25.4
w	2X	Asgrow RX962W	124	99	3.2	3.0	55	24.8
y	3X	N.K. PX715	124	98	5.2	4.4	56	23.2
w	2X	Zimmerman Z-52W	122	98	3.5	3.0	59	24.6
w	2X	Golden Harvest H-2660W	122	97	3.0	3.0	56	25.0
y	3X	DeKalb XL394	121	98	2.8	3.0	60	27.1
y	2X	N.K. PX95	121	98	3.5	3.6	57	25.3
y	2X	Golden Harvest H-2775A	120	93	3.5	3.2	48	22.7
y	2X	Super Crost 6762	121	97	3.5	3.2	50	23.9
w	M2X	RA X9609W	120	96	3.2	3.2	52	26.4
y	2X	USS 2020	120	96	4.0	3.2	50	25.3
w	3X	RA 3605W	119	96	3.5	2.6	55	25.5
w	3X	FFR 929W	119	96	4.0	2.8	59	23.3
y	M2X	FFR 955C	119	99	2.2	4.0	56	24.3
y	M2X	Super Crost 7795	119	99	3.0	3.6	55	23.1
w	2X	Pioneer brand 519	119	99	2.8	1.8	57	21.0
w	SP2X	Princeton SP936	118	99	3.8	3.6	60	26.3
y	3X	Golden Harvest H-2695	118	96	3.8	3.4	50	23.9
y	2X	AgriGold A-6910	117	96	4.0	4.2	49	22.5
w		TR 2051	117	99	3.0	2.4	58	23.9
y	2X	McCurdy 8230	117	96	2.8	3.2	57	26.9
y	2X	FFR 905C	116	97	4.5	3.8	52	25.2
w	2X	Princeton SX910	116	96	3.0	2.6	54	25.1
w	M2X	RA 2602W	116	98	3.5	3.0	57	24.4
y	2X	Gold Kist 925	116	93	4.2	4.2	53	25.0
y	2X	Super Crost 7801	116	98	3.5	3.2	51	25.1
y	2X	Trojan T1230	114	96	4.2	3.6	52	25.2
y	2X	Cargill 951	114	99	4.2	4.2	51	19.7
y	2X	Princeton SX870	113	96	4.2	3.6	51	25.1
y	3X	N. K. PX707	113	96	4.0	4.2	54	23.2
y	2X	Coker 22	110	94	4.0	3.2	50	24.1
y	2X	Princeton SX860	107	97	4.2	5.0	50	21.2
y	2X	T.E. 6995A	107	100	5.2	4.2	49	19.8
		L.S.D. (.05)	9.3					
		C.V. %	11.1					
		Avg.	121.0					

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

Table 10. Corn: Yield of 28 full-season hybrids evaluated at four locations for 2 years (1981-82).

Color	Cross	Hybrid	1981-82	Knox-	Spring		Ames
			Avg.	ville	Hill	Jackson	Plantation
Bushels per acre							
y	2X	Pioneer brand 3147	140	164	119	143	133
y	M2X	Funk G-4740	139	154	118	142	138
y	M2X	Pioneer brand 3160	138	167	123	138	122
y	2X	DeKalb EX8989	137	159	114	139	136
y	2X	DeKalb 29014	134	156	115	142	124
w	2X	Zimmerman Z-11W	131	167	111	139	108
y	2X	Super Crost 6762	130	154	116	124	127
y	M2X	FFR 955C	130	165	103	131	120
y	M2X	Super Crost 7795	127	148	114	127	121
w	2X	Zimmerman Z-52W	127	158	101	134	115
y	2X	Golden Harvest H-2775A	127	156	102	128	122
w	2X	Golden Harvest H-2660W	127	159	104	134	111
y	3X	DeKalb XL394	126	148	110	134	111
w	SP2X	Princeton SP936	124	158	104	126	110
y	2X	McCurdy 8230	124	158	109	116	111
w	M2X	RA 2602W	122	161	104	128	95
w	3X	FFR 929W	122	151	103	128	105
w	3X	RA 3605W	122	151	107	126	104
y	2X	FFR 905C	122	151	94	124	117
w	2X	Princeton SX910	121	158	97	132	99
w	2X	Pioneer brand 519	121	139	104	127	112
y	2X	Gold Kist 925	120	153	98	127	104
y	2X	USS 2020	120	150	93	134	105
y	2X	Princeton SX870	120	153	96	127	106
y	2X	Trojan T1230	119	162	88	126	101
y	2X	Super Crost 9801	119	147	97	122	109
y	2X	T.E. 6995A	118	136	110	118	109
y	2X	Coker 22	113	145	86	121	101

Table 11. Corn: Yield and other characteristics of 28 full-season hybrids evaluated at four locations for 2 years (1981-82).

Color	Cross	Hybrid	1981-82	Erect plants %	Quality Rating ^{1/}	Husk cover Rating ^{1/}	Plant ht. in.	Grain moisture at harvest
			avg. yield Bu/A					%
y	2X	Pioneer brand 3147	140	97	4.1	3.9	49	21.8
y	M2X	Funk G-4740	139	99	3.2	4.6	48	20.2
y	M2X	Pioneer brand 3160	138	99	2.0	3.0	54	20.2
y	2X	DeKalb EX8989	137	98	3.9	4.2	55	22.3
y	2X	DeKalb 29014	134	99	4.2	4.2	61	22.2
w	2X	Zimmerman Z-11W	131	97	2.9	2.6	61	21.0
y	2X	Super Crost 6762	130	97	3.4	3.0	51	20.4
y	M2X	FFR 955C	130	97	2.4	3.8	57	20.7
y	M2X	Super Crost 7795	127	98	3.0	3.2	54	19.4
w	2X	Zimmerman Z-52W	127	97	3.2	3.1	59	21.4
y	2X	Golden Harvest H-2775A	127	95	3.2	3.2	50	20.0
w	2X	Golden Harvest H-2660W	127	97	3.1	2.8	59	21.9
y	3X	DeKalb XL394	126	99	2.8	2.9	62	22.8
w	SP2X	Princeton SP936	124	99	3.6	3.2	60	22.2
y	2X	McCurdy 8230	124	97	2.8	2.8	56	23.2
w	M2X	RA 2602W	122	97	3.2	2.8	58	21.6
w	3X	FFR 929W	122	97	3.6	2.8	58	20.8
w	3X	RA 3605W	122	96	2.8	2.8	58	22.0
y	2X	FFR 905C	122	97	4.4	3.6	53	21.3
w	2X	Princeton SX910	121	97	3.0	2.4	57	22.0
w	2X	Pioneer brand 519	121	98	2.9	1.9	59	19.0
y	2X	Gold Kist 925	120	96	4.4	3.8	54	21.2
y	2X	USS 2020	120	97	4.0	3.0	52	21.4
y	2X	Princeton SX870	120	97	4.1	3.6	52	21.4
y	2X	Trojan T1230	119	97	4.2	3.6	52	21.4
y	2X	Super Crost 9801	119	98	4.0	3.0	53	21.1
y	2X	T.E. 6995A	118	99	5.4	4.2	51	17.6
y	2X	Coker 22	113	96	4.0	3.2	52	20.4

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

Table 12. Corn: Yield of 25 early maturing hybrids evaluated at four locations in 1982.

Color	Cross	Hybrid	Avg.	Knox- ^{1/} ville	Cross- ^{2/} ville	Martin ^{3/}	Ames ^{4/} Plantation
Bushels per acre							
y	2X	McCurdy 81-82	161	168	186	179	112
y	2X	McCurdy 84aa	156	153	187	169	114
y	2X	Pioneer brand 3358	156	157	186	165	116
y	2X	Pioneer brand 3389	156	166	176	166	115
y	2X	DeKalb 28035 ^{5/}	153	176	167	159	108
y	2X	O's Gold 2570	153	152	159	172	128
y	2X	DeKalb EX6060	150	154	182	165	99
y	2X	DeKalb 28016 ^{6/}	149	158	175	164	100
y	3X	FFR 726C	142	148	152	161	108
y	2X	McCurdy 81-34	142	145	154	165	104
y	2X	AgriGold A-6612	142	143	160	164	101
y	M2X	Funk G-4522	142	147	152	165	103
y	2X	O's Gold 3344	142	142	146	169	110
y	2X	O's Gold 6882	140	142	158	158	102
y	2X	FFR 788C	138	135	163	155	99
y	2X	Funk G-4507A	138	141	141	155	114
y	3X	FFR 799C	137	134	153	151	110
y	2X	Jacques JX180	136	140	138	161	104
y	M2X	FFR 717C	136	155	156	137	95
y	2X	Cargill 921	136	129	154	159	99
y	2X	Coker 19	135	138	128	159	115
y	2X	RA 1501	134	126	139	158	115
w	2X	O's Gold 2560W	134	140	163	134	97
y	2X	Gold Kist 695	131	130	154	150	91
y	2X	FFR 744C	128	126	144	150	94
L.S.D. (.05)			7.3	12.9	14.9	16.1	15.1
C.V. %			7.3	6.2	6.6	7.3	10.1
Avg.			142.6	145.9	158.9	159.7	106.1

- ^{1/} Sequatchie loam (2% to 5% slopes).
^{2/} Hartsells loam (2% to 5% slopes).
^{3/} Falaya silt loam (2% to 5% slopes).
^{4/} Loring silt loam (2% to 5% slopes).
^{5/} Tested in previous years as 18114.
^{6/} Tested in previous years as 19018.

Table 13. Corn: Yield and other characteristics of 25 early maturing hybrids evaluated at four locations in 1982.

Color	Cross	Hybrid	Yield Bu/A	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Plant ht. in.	Grain moisture at harvest %
y	2X	McCurdy 81-82	161	99	2.8	4.0	53	29.0
y	2X	McCurdy 84aa	156	98	4.0	3.5	53	30.6
y	2X	Pioneer brand 3358	156	100	3.5	5.0	53	26.4
y	2X	Pioneer brand 3389	156	100	3.0	5.5	54	25.1
y	2X	DeKalb 28035	153	96	3.0	4.7	52	27.0
y	2X	O's Gold 2570	153	96	3.0	3.7	47	29.8
y	2X	DeKalb EX6060	150	96	5.0	5.2	51	23.7
y	2X	DeKalb 28016	149	99	3.8	4.5	55	25.8
y	3X	FFR 726C	142	98	5.5	5.5	48	26.2
y	2X	McCurdy 81-34	142	99	2.8	5.3	49	27.3
y	2X	AgriGold A-6612	142	98	2.5	2.8	46	25.5
y	M2X	Funk G-4522	142	99	3.5	4.0	47	26.9
y	2X	O's Gold 3344	142	94	4.0	4.3	50	25.4
y	2X	O's Gold 6882	140	98	4.2	5.2	46	24.8
y	2X	FFR 788C	138	97	4.5	4.7	50	26.6
y	2X	Funk G-4507A	138	94	5.0	4.2	51	26.0
y	3X	FFR 799C	137	98	4.2	4.7	50	26.6
y	2X	Jacques JX180	136	96	4.2	4.5	50	26.0
y	M2X	FFR 717C	136	98	3.5	3.5	54	23.8
y	2X	Cargill 921	136	94	5.5	4.8	46	22.2
y	2X	Coker 19	135	97	4.8	4.2	51	25.0
y	2X	RA 1501	134	92	4.5	4.0	49	26.3
w	2X	O's Gold 2560W	134	93	5.0	4.2	57	28.6
y	2X	Gold Kist 695	131	98	4.5	5.3	43	24.1
y	2X	FFR 744C	128	95	4.8	4.8	50	25.6
L.S.D. (.05)			7.3					
C.V. %			7.3					
Avg.			142.6					

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

Table 14. Corn: Yield of 11 early maturing hybrids evaluated for 2 years (1981-82) at four locations.

			1981-82	Knox-	Cross-		Ames
Color	Cross	Hybrid	Avg.	ville	ville	Martin	Plantation
Bushels per acre							
y	2X	McCurdy 84aa	147	161	170	142	114
y	2X	O's Gold 3344	138	157	140	139	117
y	M2X	Funk G-4522	137	146	146	149	108
y	2X	FFR 788C	135	139	150	143	109
y	2X	O's Gold 6882	135	145	151	141	102
y	3X	FFR 799C	135	137	149	139	113
y	2X	Coker 19	134	143	133	140	120
y	2X	Funk G-4507A	133	140	146	136	108
y	2X	RA 1501	129	135	134	136	112
y	2X	FFR 744C	129	133	142	138	103
y	M2X	FFR 717C	125	147	146	113	96

Table 15. Corn: Yield and other characteristics of 11 early maturing hybrids evaluated for 2 years (1981-82) at four locations.

Color	Cross	Hybrid	1981-82	Erect plants %	Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest
			avg. yield Bu/A					%
y	2X	McCurdy 84aa	147	96	3.6	3.4	54	25.4
y	2X	O's Gold 3344	138	92	4.0	3.8	52	21.2
y	M2X	Funk G-4522	137	98	3.5	3.8	51	22.6
y	2X	FFR 788C	135	98	4.4	4.1	52	22.2
y	2X	O's Gold 6882	135	97	4.5	5.2	46	21.2
y	3X	FFR 799C	135	98	3.8	4.8	50	22.6
y	2X	Coker 19	134	97	4.5	4.2	51	21.3
y	2X	Funk G-4507A	133	95	4.6	4.0	52	21.8
y	2X	RA 1501	129	93	4.2	3.9	51	22.0
y	2X	FFR 744C	129	96	4.8	4.6	51	21.8
y	M2X	FFR 717C	125	96	3.6	3.6	52	20.4

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

Table 16. Corn: Yield and other characteristics of 7 early maturing hybrids evaluated for 3 years (1980-82) at four locations.

Color	Cross	Hybrid	1980-82		Grain quality Rating ^{1/}	Husk cover Rating ^{1/}	Ear ht. in.	Grain moisture at harvest %
			Avg. yield Bu/A	Erect plants %				
y	2X	McCurdy 84aa	131	95	4.1	3.2	52	23.5
y	2X	O's Gold 3344	126	93	4.2	3.8	50	19.9
y	2X	Funk G-4507A	117	95	4.9	4.2	50	20.7
y	2X	FFR 788C	115	95	4.4	4.1	49	21.1
y	2X	RA 1501	115	94	5.1	3.6	49	20.5
y	2X	FFR 744C	113	96	5.2	4.9	50	20.4
y	M2X	FFR 717C	112	96	3.9	3.4	50	19.2

Table 17. Corn: Yield and other characteristics of 10 hybrids evaluated at Knoxville in 1982.^{1/}

Hybrid	Yield Bu/A	Grain quality Rating ^{2/}	Husk cover Rating ^{2/}	Ear ht. in.	Grain moisture at harvest %
Paymaster 9902	173	4.0	4.0	65	23.8
Pioneer brand 3179	170	3.0	4.0	64	23.4
Pioneer brand 3147	167	4.0	3.5	60	25.8
Zimmerman Z-14W	167	2.0	3.5	56	23.8
Paymaster 8990	162	2.0	3.5	54	23.8
Funk Exp. 8006X	155	3.0	3.0	62	23.5
Paymaster 497	150	3.0	4.0	54	22.8
USS 2315	147	3.5	4.0	60	21.6
MFA 6707	138	6.5	5.0	56	21.8
FFR Exp. 14172	133	6.0	4.0	54	23.4
MFA 6708	128	6.5	5.0	52	21.6
L.S.D. (.05)	12.3				
C.V. %	5.6				

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

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

Table 18. Corn: Yield and other characteristics of 3 hybrids evaluated at Springfield in 1982.^{1/}

Hybrid	Yield Bu/A	Grain quality Rating	Husk cover Rating	Plant ht. in.	Grain moisture at harvest %
Pioneer brand 3147	173	3	4.2	63	23.2
USS 2020	167	3	4.5	55	22.2
USS 2315	163	2	4.0	63	20.1
L.S.D. (.05)	N.S.				
C.V. %	5.9				

^{1/} Huntington silt loam, local alluvium (2% to 5% slopes).

Table 19. Corn: Yield and mean virus reaction of selected hybrids grown in Humphreys County, under virus conditions in 1982^{1/}

Hybrid	Yield Bu/A	Grain quality Rating ^{2/}	Diseased plants %	Virus sev. index	Virus mean sev. index
Pioneer brand 3160	128	3.5	54.0	3.5	2.3
Pioneer brand 3147	124	4.0	39.0	3.6	2.0
DeKalb XL72BB	124	4.0	51.0	3.8	2.6
FFR 848C	123	2.5	50.8	3.4	2.2
DeKalb 28012	121	3.5	49.6	3.9	2.3
FFR 955C	121	3.0	38.9	4.0	2.1
Pioneer brand 3187	118	3.0	43.1	3.8	2.1
DeKalb XL394	117	3.5	37.2	4.3	2.1
DeKalb EX8989	116	3.5	43.3	3.4	2.0
McCurdy 81-34	114	3.0	24.2	3.3	1.5
Funk G-4740	114	4.0	54.7	3.6	2.6
McCurdy 7978	114	3.5	40.6	3.7	2.1
DeKalb XL390B	109	3.5	67.1	3.8	2.8
FFR 929W	109	3.0	51.3	4.0	2.6
Pioneer brand 3369A	107	3.5	66.9	4.0	3.0
FFR 717C	107	4.0	58.3	3.6	2.5
Funk G-4733	105	3.0	65.8	4.4	3.2
Golden Harvest H-2660W	105	3.5	71.5	4.1	3.0
DeKalb XL72B	103	4.0	57.0	3.8	2.6
TR 2051W	102	3.0	63.3	3.7	2.8
Pioneer brand 3368A	101	3.0	68.4	4.3	3.3
Princeton SX910	101	3.5	69.4	4.3	3.3
RA 2602W	97	4.0	71.3	4.0	3.1
Funk G-4525A	97	4.0	62.7	3.8	2.8
Cargill 951	95	4.0	33.0	3.8	1.9
Pioneer brand 3328	93	4.5	58.3	4.1	2.8
Pioneer brand 519	90	3.0	62.0	4.6	2.9
L.S.D. (.05)	14.9	-	17.6	0.6	0.6
C.V. %	9.7	-	23.5	10.6	18.4
Avg.	109.4	-	53.1	3.8	2.5

^{1/} Data obtained in cooperation with D. R. West and H. C. Kincer.

Table 20. Virus ratings of selected medium season hybrids evaluated in Humphreys County, under virus conditions in 1982.

Hybrid	No. of plants	Virus severity	Virus index	Diseased plants %
Stauffer S8500	49	4.3	2.8	55.1
Funk EX29092	62	4.0	2.9	62.9
N.K. PX79	55	3.9	3.1	70.9
RA 1604	50	4.3	3.3	70.0
O's Gold 5291	57	4.8	3.3	61.4
Pioneer brand 3147	57	4.2	3.4	75.4
T.E. 6945	63	4.4	3.4	71.4
Pioneer brand 3320	63	3.9	3.5	87.3
O's Gold 2680W	55	4.6	3.5	70.9
USS 1516	56	4.9	3.5	64.3
USS 1515	45	5.2	3.6	62.2
Asgrow RX777	58	4.8	3.6	69.0
Funk G-4779W	53	4.6	3.7	75.5
Pioneer brand 3184	51	4.3	3.7	82.3
Golden Harvest H-2680	52	4.8	3.8	73.1
McCurdy 8150	50	4.7	3.8	76.0
Zimmerman Z-24Y	55	4.5	3.9	83.6
N.K. PX74	54	5.6	4.2	68.5
Coker 21	56	5.6	4.2	69.6
Golden Harvest H-2630	57	5.7	4.6	75.4
T.E. 6995	45	5.3	4.7	86.7
Funk G-4606	43	5.0	4.7	93.0
Golden Harvest H-2686	48	6.3	5.7	89.6
L.S.D. (.05)		0.9	1.5	28.6
C.V. %		9.0	19.3	18.6
Avg.		4.7	3.8	74.0

Table 21. Virus ratings of selected full-season hybrids
evaluated in Humphreys County, under virus
conditions in 1982.

Hybrid	No. of plants	Virus severity	Virus index	Diseased plants %
Super Crost 7795	55	4.1	1.9	30.9
Pioneer brand 3147	46	4.1	2.3	41.3
N.K. PX95	51	4.1	2.7	54.9
Princeton SP936	53	3.8	2.9	66.0
Zimmerman Z-11W	54	3.9	3.1	72.2
DeKalb 29014	53	4.1	3.1	69.8
Pioneer brand 3165	54	4.3	3.1	63.0
Golden Harvest H-2695	52	4.5	3.2	63.5
Asgrow RX962W	49	3.9	3.2	77.5
RA 3605W	49	4.5	3.3	65.3
McCurdy 8230	47	4.2	3.3	72.3
Stauffer S880W	51	4.1	3.3	72.5
Zimmerman Z-52W	48	4.3	3.4	72.9
Super Crost 6762	57	4.5	3.4	70.2
FFR 905C	55	4.4	3.4	69.1
T.E. 6995A	51	4.1	3.5	80.4
N.K. PX715	49	4.4	3.6	75.5
Gold Kist 925	47	5.2	3.6	61.7
RAX 9609W	47	4.3	3.6	78.7
Coker 22	48	4.8	3.8	72.9
N.K. PX707	52	4.5	3.9	80.8
USS 2020	60	4.8	3.9	76.7
McCurdy 80-72	50	4.9	4.0	76.0
Super Crost 7801	43	5.1	4.2	79.1
Trojan T1230	49	5.2	4.3	77.6
Agri Gold A-6910	50	4.9	4.3	86.0
Princeton SX860	48	5.6	4.6	77.1
DeKalb 24301	50	5.3	4.6	84.0
L.S.D. (.05)		1.0	1.5	29.1
C.V. %		11.1	21.5	20.2
Avg.		4.5	3.5	70.2

Table 22. Virus ratings of selected early maturing hybrids evaluated in Humphreys County, under virus conditions in 1982.

Hybrid	No. of plants	Virus severity	Virus index	Diseased plants %
DeKalb 28035	59	4.2	3.0	64.4
DeKalb 28016	54	4.2	3.3	68.5
O's Gold 3344	60	4.0	3.6	86.7
O's Gold 2560W	55	4.3	3.6	78.2
FFR 726C	70	4.9	3.8	70.0
Agri Gold A-6612	49	5.1	3.8	67.3
Pioneer brand 3358	58	4.3	3.9	86.2
Pioneer brand 3389	57	4.4	4.0	86.0
McCurdy 81-82	47	5.1	4.1	74.5
O's Gold 2570	57	4.8	4.3	84.2
Cargill 921	48	4.6	4.6	100.0
Gold Kist 695	46	5.0	4.8	93.5
DeKalb EX6060	45	5.4	5.1	91.1
O's Gold 6882	49	5.4	5.1	95.9
Jacques JX180	59	5.8	5.2	86.4
L.S.D. (.05)		0.9	1.2	25.7
C.V. %		9.0	13.1	14.6
Avg.		4.8	4.1	81.9

Table 23. Virus ratings of preliminary hybrids evaluated in
Humphreys County, under virus conditions in 1982.

Hybrid	No. of plants	Virus severity	Virus index	Diseased plants %
Pioneer brand 3147	53	4.0	2.3	41.5
Gold Kist 875	55	3.6	2.3	52.7
McCurdy 81-35	55	3.8	2.4	50.9
T161 x MP339	54	3.5	2.6	64.8
Agri Gold A-6950W	48	4.4	2.8	52.1
Agri Gold A-830	50	3.8	3.1	74.0
Funk Exp 8006X	56	4.0	3.2	71.4
Jacques JX277	48	4.5	3.5	72.9
Agri Gold A-6810	51	4.4	3.5	72.5
DeKalb 29027	60	4.6	3.6	73.3
T.E. 6995A	57	4.4	3.8	82.5
Gutwein 2875	45	4.6	3.8	77.8
Jacques 8220	48	4.7	3.9	79.2
Beck's 90X	49	4.8	3.9	75.5
Agri Gold A-6955W	50	4.5	4.0	86.0
Beck's 85XA	60	4.3	4.0	91.7
Asgrow RX864	56	4.8	4.1	82.1
Stauffer S8818	52	5.1	4.1	76.9
Agri Gold A-6611	48	5.1	4.2	77.1
Beck's 89X	54	5.0	4.3	83.3
Gutwein 86	51	4.5	4.5	100.0
Gutwein 2910	52	5.3	4.5	82.7
Gold Kist 868	56	5.0	4.6	91.1
Jacques JX247	52	5.3	4.6	84.6
Zimmerman Z-25Y	46	5.2	4.6	87.0
N.K. PX9609	50	5.9	4.8	78.0
T.E. 6998	43	5.7	4.8	81.4
N.K. PX9581	46	5.5	5.2	93.5
Cargill 967	53	5.6	5.2	90.6
L.S.D. (.05)		0.9	1.1	26.3
C.V. %		9.2	14.3	16.7
Avg.		4.7	3.9	76.8

Table 24. Corn: Yield and other characteristics of 29 extra hybrids evaluated at Knoxville in 1982.^{1/}

Color	Cross	Hybrid	Yield Bu/A	Grain quality Rating ^{2/}	Husk cover Rating ^{2/}	Ear ht. in.	Grain moisture at harvest %
y	2X	Beck's 85XA	194	3.0	2.0	57	23.4
y	2X	DeKalb 29027	181	5.5	4.0	72	24.7
w	2X	T161 XMP339	178	3.0	2.5	66	28.8
w	2X	AgriGold A6955W	177	3.5	2.5	61	24.3
y	2X	Pioneer brand 3147	172	5.0	4.0	62	25.6
y	2X	Jacques 247	167	5.0	4.0	57	25.6
w	2X	AgriGold A-6950W	165	3.5	3.5	68	22.7
y	2X	Beck's 90X	165	3.0	5.0	55	23.5
y	2X	Gutwein 2910	159	4.5	4.0	59	25.7
y	2X	McCurdy 81-35	158	3.0	3.5	54	22.8
y	2X	Stauffer S8818	158	5.0	4.0	57	24.0
y	M3X	Funk Exp. 8006X	153	3.0	4.0	63	23.7
y	2X	AgriGold A-6810	153	3.0	5.0	57	23.1
y	2X	N.K. PX9581	153	5.0	3.0	53	23.0
y	2X	Jacques 227	152	6.0	4.5	57	22.6
y	M2X	Gold Kist 875	152	3.5	3.5	58	21.4
y	2X	T.E. 6995A	149	7.5	4.5	59	21.0
y	3X	Asgrow RX864	147	4.0	3.0	54	21.7
y	2X	Gutwein 86	144	6.0	3.0	56	22.4
y	2X	Jacques 8220	144	4.5	3.0	49	23.4
y	2X	Beck's 89X	144	4.0	4.0	60	22.6
y	M2X	Gutwein 2875	143	3.5	3.5	55	23.4
y	2X	T.E. 6998	142	5.5	5.0	60	24.8
y	2X	AgriGold A-830	142	4.0	4.5	59	20.6
y	2X	Zimmerman Z-25Y	142	3.5	3.5	56	23.9
y	3X	Gold Kist 868	141	4.5	3.5	57	23.7
y	2X	N.K. PX9609	138	6.0	4.5	59	23.2
y	2X	AgriGold A-6611	129	5.0	4.5	58	21.3
y	2X	Cargill 967	123	7.5	5.0	60	21.0
L.S.D. (.05)			16.7				
C.V. %			7.7				

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

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

Wheat

Twenty-five soft red winter wheat varieties were evaluated at eight locations in 1982. The leading varieties in yield were Fillmore, Hunter, Coker 916, McNair 1003 and Caldwell. Yields of many varieties were reduced by the late spring freeze when the wheat was in the boot stage or early heading. Mildew reduced yields of susceptible varieties at Springfield, Jackson and Milan. Some mildew was observed at the other locations but to a lesser extent than at these three locations. Leaf rust was severe at Jackson and some leaf rust was observed at Milan. Wheat varieties at the other locations were not affected by this disease.

Southern Belle, Coker 762, HW-3005, Doublecrop and HW-3006 seemed to be affected the most by the late spring freeze. Southern Belle did not perform as well in 1982 as it had the two previous years due to the late freeze. Abe, Hart, Tyler and McNair 1003 had high ratings for leaf rust at Jackson. The varieties that showed the highest mildew ratings at several locations were Rosen, Roy, Pike, HW-3005, Doublecrop and HW-3006. Varieties that showed tolerance to mildew were Fillmore, Hunter, McNair 1003, Stacy, Tyler and Coker 762. The varieties that showed the most tolerance to leaf rust were Fillmore, Hunter, Coker 916, Caldwell, Pioneer brand 2550, Coker 762, Auburn, Rosen, HW-3005, Doublecrop and HW-3006.

The varieties that showed tolerance to both mildew and rust were Fillmore, Hunter and Coker 762.

Fillmore yielded well and showed disease resistance but it is late maturing. Hunter, Coker 916, McNair 1003 and Caldwell yielded well at most locations. Auburn, Roland and Titan were among the latest maturing varieties.

The recommended varieties for 1982-83 are Abe, Caldwell, Coker 747, Coker 916, Pioneer brand S76, McNair 1003, Hart and Southern Belle.

Table 25. Wheat: Grain yield of soft red winter wheat varieties evaluated in 1982 at eight locations.

Variety	Avg.	Greene- ^{1/} ville	Knox- ^{2/} ville	Cross- ^{3/} ville	Spring- ^{4/} field	Spring ^{5/} Hill	Jackson ^{6/}	Martin ^{7/}	Milan ^{8/}
Bushels per acre									
Fillmore ^{9/}	49	54	52	32	42	52	50	56	55
Hunter ^{10/}	46	28	40	25	35	48	70	65	54
Coker 916 ^{11/}	45	38	42	25	35	42	66	49	59
McNair 1003	44	44	47	22	37	40	52	59	51
Caldwell	44	46	43	25	29	39	49	62	56
Stacy	43	37	38	24	37	39	78	49	44
Pioneer brand 2550	43	54	45	26	33	34	46	52	55
Tyler	42	40	48	30	42	37	40	54	49
Pioneer brand S76	42	43	46	27	32	42	42	50	52
Coker 747	40	47	41	32	29	34	46	39	55
Wheeler	40	40	41	32	26	40	39	48	54
Coker 762	39	32	36	31	24	36	71	41	37
Auburn	38	51	50	27	25	31	35	46	44
Rosen	37	42	35	24	27	27	36	51	52
Roland	36	44	37	26	30	28	30	46	46
Titan	36	45	43	33	23	31	26	43	42
Hart	35	40	35	25	28	31	32	44	43
Abe	34	40	38	21	23	31	37	38	44
Arthur	34	35	31	23	22	32	34	45	48
Roy	33	41	36	27	18	25	35	45	40
Pike	33	30	33	19	20	33	39	44	44
Southern Belle	31	30	24	21	16	27	48	45	36
HW-3005	29	27	25	22	18	25	33	43	40
Doublecrop	29	30	29	24	20	33	20	40	37
HW-3006	28	27	26	18	14	20	33	44	46
L.S.D. (.05)	-	5.8	5.2	5.1	5.5	6.4	11.6	8.1	8.1
C.V. %	-	10.5	9.7	14.2	14.3	13.1	18.9	12.0	12.1
Avg.	-	39.4	38.4	25.5	27.4	34.4	43.5	47.9	47.3

- ^{1/} Waynesboro loam (2% to 5% slopes).
^{2/} Decatur silt loam (2% to 5% slopes).
^{3/} Hartsells loam (2% to 5% slopes).
^{4/} Dickson silt loam (2% to 5% slopes).
^{5/} Maury silt loam (2% to 5% slopes).
^{6/} Grenada and Calloway silt loam (0% to 2% slopes).
^{7/} Collins silt loam (2% to 5% slopes).
^{8/} Collins silt loam (2% to 5% slopes).
^{9/} Tested in 1982 as experimental Al-9-7.
^{10/} Tested in 1982 as experimental NAPB 81014.
^{11/} Tested in 1982 as experimental Coker 79-16.

Table 26. Yield and other characteristics of soft red winter wheat varieties evaluated at eight locations in 1982.

Variety	Yield Bu/A	Date headed	Date mature	Plant height In.	Lodging %	Mildew ^{1/} rating (0-5) ^{3/}	Rust ^{2/} rating (0-5)
Fillmore	49	5-17	6-10	42	15	0.4	0.0
Hunter	46	4-29	6-7	30	2	0.4	0.1
Coker 916	45	4-29	6-5	34	41	1.0	0.1
McNair 1003	44	5-2	6-8	36	24	0.2	4.0
Caldwell	44	5-3	6-8	35	27	1.1	0.2
Stacy	43	5-2	6-6	37	62	0.1	1.1
Pioneer brand 2550	43	5-3	6-7	36	29	1.2	0.4
Tyler	42	5-4	6-9	40	38	0.1	4.0
Pioneer brand S76	42	5-5	6-7	37	2	2.6	2.2
Coker 747	40	5-3	6-8	34	53	1.9	1.8
Wheeler	40	5-5	6-9	39	28	2.2	2.4
Coker 762	39	5-5	6-9	30	67	0.1	0.0
Auburn	38	5-8	6-11	39	21	1.9	0.0
Rosen	37	5-2	6-5	34	18	4.3	0.6
Roland	36	5-8	6-11	35	13	2.3	1.6
Titan	36	5-10	6-13	40	32	2.4	1.0
Hart	35	5-3	6-7	37	18	3.3	4.7
Abe	34	5-2	6-5	36	46	3.0	4.4
Arthur	34	5-2	6-6	38	33	3.0	2.9
Roy	33	5-2	6-9	36	38	4.2	0.7
Pike	33	5-3	6-9	37	24	3.8	3.0
Southern Belle	31	4-28	6-7	30	2	3.1	1.8
HW-3005	29	5-1	6-5	37	12	3.9	0.6
Doublecrop	29	4-27	6-4	36	8	3.9	0.4
HW-3006	28	5-3	6-9	37	34	4.7	0.3

^{1/} Average of six locations.

^{2/} Average of Milan and Jackson.

^{3/} 0 is no disease and 5 is severe.

Table 27. Wheat: Cold injury (tip damage) of wheat varieties evaluated at Knoxville and Greeneville.

Variety	Avg.	Location	
		Knoxville	Greeneville
		Rating (0-10) ^{1/}	
Auburn	0.5	0.0	1.0
Fillmore (Al-9-7)	0.6	0.1	1.0
Pioneer brand S76	0.9	0.1	1.8
Caldwell	1.0	0.2	1.8
Titan	1.0	0.4	1.5
Pioneer brand 2550	1.2	0.2	2.2
Hart	1.5	1.0	2.0
Rosen	1.8	0.4	3.2
Abe	2.0	0.9	3.2
Tyler	2.3	0.6	4.0
Roland	2.5	1.0	4.0
Roy	2.6	1.1	4.2
Coker 747	3.0	2.0	4.0
McNair 1003	3.2	0.6	5.8
Coker 916	3.6	1.3	5.8
Arthur	3.8	2.5	5.0
Pike	4.1	2.0	6.2
Stacy	4.6	2.0	7.2
Hunter (NAPB 81014)	5.8	2.2	9.5
Wheeler	6.0	4.5	7.5
Doublecrop	6.2	5.5	6.8
Coker 762	6.4	4.8	8.0
HW-3006	6.6	4.2	9.0
HW-3005	6.9	5.0	8.8
Southern Belle	9.3	8.8	9.8

^{1/} 0=no injury, 10=severe injury.

Table 28. Wheat: Yield and other characteristics of five varieties evaluated at Milan in 1982.^{1/}

Variety	Yield	Date headed	Date mature	Plant height	Lodging
	Bu/A			In.	%
McNair 1003	53	4-24	6-6	40	0
RAX 48 ^{2/}	52	4-26	6-6	45	0
Coker 747	48	4-26	6-6	38	85
RAX 54 ^{2/}	46	4-24	6-6	40	60
Southern Belle	36	4-24	6-2	32	20
L.S.D. (.05)	10.3	-	-	-	-
C.V. %	14.3	-	-	-	-
Avg.	46.9	-	-	-	-

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

^{2/} Ring Around Experimentals.

Table 29. Wheat: Yield and other characteristics of three varieties evaluated at Knoxville in 1982.^{1/}

Variety	Yield	Date headed	Date mature	Plant ht.	Lodging	Leaf ^{2/} rust rating
	Bu/A			In.	%	(0-5)
RAX 48 ^{3/}	48	5-10	6-11	37	36	4.1
RAX 54 ^{3/}	40	5-12	6-12	39	10	3.5
Arthur	38	5-6	6-10	34	12	2.8
L.S.D. (.05)	2.4	-	-	-	-	-
C.V. %	3.3	-	-	-	-	-
Avg.	42.1	-	-	-	-	-

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

^{2/} Rating based on a scale of 0 to 5 with 0 having no rust and 5 very severe.

^{3/} Ring Around Experimentals.

Table 30. Wheat: Yield and other characteristics of four varieties evaluated at Knoxville in 1982.^{1/}

Variety	Yield	Date headed	Date mature	Plant ht.	Lodging
	Bu/A			In.	%
Massey	40	5-10	6-11	34	48
Arthur (Purdue) ^{2/}	34	5-6	6-9	35	18
Arthur (Tenn.) ^{3/}	30	5-6	6-8	36	32
Severn	20	5-14	6-13	33	8
L.S.D. (.05)	4.6	-	-	-	-
C.V. %	9.2	-	-	-	-
Avg.	30.8	-	-	-	-

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

^{2/} Purdue seed source.

^{3/} Tennessee seed source.

Table 31. Wheat: Yield of soft red winter wheat varieties evaluated at eight locations for two years (1981 and 82).

Variety	Avg.	Knox- ville	Spring- field	Jackson	Greene- ville	Spring Hill	Martin	Milan	Cross- ville
Bushels per acre									
Coker 916	55	52	61	55	57	57	54	65	37
McNair 1003	54	57	62	46	56	54	63	60	32
Caldwell	49	46	46	42	59	51	57	60	32
Coker 747	48	42	50	39	57	49	47	58	40
Coker 762	47	43	50	54	48	50	42	51	37
Southern Belle	46	42	48	44	50	50	54	46	39
Pioneer brand S76	46	47	46	40	51	50	50	53	28
Roland	45	44	47	32	56	47	48	55	34
Hart	44	40	47	37	50	47	47	51	31
Rosen	44	39	43	32	55	43	51	60	27
Auburn	43	50	46	29	54	42	47	47	31
Roy	43	45	38	33	52	42	48	51	32
Titan	42	46	43	28	53	46	39	48	35
Abe	41	43	39	33	47	45	40	51	32
Arthur	41	37	38	33	49	46	40	55	30
Doublecrop	39	37	38	28	42	48	42	44	30

Table 32. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated for two years (1981-82).

Variety	Yield Bu/A	Date headed	Date mature	Plant ht. In.	Lodging %
Coker 916	55	4-28	6-6	35	40
McNair 1003	54	5-1	6-9	38	31
Caldwell	49	5-2	6-8	37	33
Coker 747	48	5-2	6-9	36	49
Coker 762	47	5-4	6-10	33	67
Southern Belle	46	4-28	6-8	33	15
Pioneer brand S76	46	5-4	6-8	38	10
Roland	45	5-2	6-8	37	23
Hart	44	5-2	6-7	39	16
Rosen	44	5-1	6-6	36	19
Auburn	43	5-7	6-12	40	25
Roy	43	5-2	6-9	39	35
Titan	42	5-8	6-13	41	28
Abe	41	5-1	6-6	37	48
Arthur	41	5-2	6-6	40	42
Doublecrop	39	4-26	6-5	38	19

Table 33. Wheat: Yield of soft red winter wheat varieties evaluated at eight locations for three years (1980-82).

Variety	Avg.	Knox- ville	Spring- field	Jackson	Greene- ville	Spring Hill	Martin	Milan	Cross- ville
Bushels per acre									
McNair 1003	54	59	59	47	52	52	69	58	36
Coker 747	51	48	52	42	52	50	55	60	46
Southern Belle	50	50	48	46	49	49	58	50	42
Rosen	47	46	45	34	52	46	59	61	34
Roy	47	52	43	40	52	45	53	51	39
Hart	46	46	48	42	51	48	51	50	35
Pioneer brand S76	46	50	44	43	47	49	55	50	34
Abe	43	45	40	38	43	46	46	52	35
Arthur	43	40	41	38	47	45	46	53	33
Doublecrop	40	40	42	28	39	45	45	46	34

Table 34. Wheat: Yield and other characteristics of soft red winter wheat varieties evaluated for three years (1980-82).

Variety	Yield Bu/A	Date headed	Date mature	Plant ht. In.	Lodging %
McNair 1003	54	5-3	6-10	39	21
Coker 747	51	5-4	6-10	37	36
Southern Belle	50	4-30	6-8	34	10
Rosen	47	5-3	6-8	37	14
Roy	47	5-4	6-10	39	24
Hart	46	5-4	6-9	40	12
Pioneer brand S76	46	5-6	6-9	38	8
Abe	43	5-3	6-7	38	38
Arthur	43	5-3	6-8	41	34
Doublecrop	40	4-29	6-6	40	17

Table 35. Wheat: Yield and other characteristics of varieties evaluated at Ames Plantation in 1982.

Variety	Yield	Date headed	Date mature	Plant height
	Bu/A			In.
Caldwell	49	5-5	6-18	31
Delta Queen	44	5-5	6-12	34
Tyler	39	5-5	6-18	34
McNair 1003	39	5-5	6-10	34
Wheeler	38	5-5	6-18	33
Roland	36	5-7	6-18	28
Coker 747	35	5-5	6-18	28
Arthur	35	5-5	6-12	32
Abe	34	5-5	6-18	30
Doublecrop	24	5-1	6-18	30
L.S.D. (.05)	7.6			
C.V. %	14.1			
Avg.	37.2			

Table 36. Wheat: Yield and other characteristics of hard red winter varieties evaluated at Springfield in 1982.^{1/}

Variety	Yield	Date headed	Plant height	Lodging
	Bu/A		In.	%
Vona	18	5-7	34	74
Centurk 78	15	5-10	39	78
Agate	12	5-20	42	40
Parker 76	12	5-10	39	75
Larned	12	5-15	42	61
Sage	12	5-15	41	58
L.S.D. (.05)	3.5	-	-	-
C.V. %	17.4	-	-	-
Avg.	13.6	-	-	-

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

Barley

The leading varieties in yield for 1982 were Volbar, Maury and Henry. Maury performed better in 1981 and 1982 than it had in previous years. All varieties showed some lodging but Redhill lodged the least. The recommended barley varieties for 1982-83 are Volbar, Henry and Surry.

Table 37. Barley: Grain yield of varieties evaluated in 1982 at six locations.

Variety	Avg.	Greene- ^{1/} ville	Knox- ^{2/} ville	Cross- ^{3/} ville	Spring- ^{4/} Hill	Spring- ^{5/} field	Jackson ^{6/}
Bushels per acre							
Volbar	72	50	70	57	74	99	80
Maury	61	39	65	52	60	89	61
Henry	61	35	62	42	62	90	72
Surry	56	26	51	45	59	80	75
Red Hill	52	33	30	34	70	69	74
L.S.D. (.05)	-	7.1	7.8	13.1	70.3	5.4	N.S.
C.V. %	-	12.6	9.1	18.5	11.8	4.1	14.6
Avg.	-	36.6	55.6	46.2	65.0	85.5	52.6

- ^{1/} Waynesboro loam (2% to 5% slopes).
^{2/} Decatur silt loam (2% to 5% slopes).
^{3/} Hartsells loam (2% to 5% slopes).
^{4/} Dickson silt loam (2% to 5% slopes).
^{5/} Maury silt loam (2% to 5% slopes).
^{6/} Grenada silt loam (0% to 2% slopes).

Table 38. Barley: Grain yield and other characteristics of varieties evaluated in 1982 at six locations.

Variety	Yield	Date headed	Date mature	Plant height	Lodging
	Bu/A			In.	%
Volbar	72	4-29	6-5	38	44
Maury	61	5-1	6-3	36	54
Henry	61	4-29	6-3	35	42
Surry	56	4-28	6-2	34	61
Red Hill	52	4-29	6-4	35	28

Table 39. Barley: Yield of varieties evaluated at six locations for three years (1980-82).

Variety	Avg.	Greene- ville	Knox- ville	Cross- ville	Spring Hill	Spring- field	Jackson
Bushels per acre							
Volbar	74	63	73	72	75	88	75
Mauray	64	62	68	67	61	73	54
Henry	64	60	67	65	62	70	59
Surry	63	61	60	65	61	71	63

Table 40. Barley: Yield and other characteristics of varieties evaluated at six locations for three years (1980-82).

Variety	Avg.	Date headed	Date mature	Plant height	Lodging
	Bu/A			In.	%
Volbar	74	4-28	6-6	42	64
Mauray	64	4-30	6-2	37	61
Henry	64	4-27	6-1	37	51
Surry	63	4-26	6-1	36	70

Fall Seeded Oats

Five oat varieties were evaluated in 1982. Southern States 76-30 and Coker 716 produced the highest average yield. All varieties winter killed at Greeneville. Cumberland, Norris 81-29, and Brooks winter killed at Crossville. The recommended fall-seeded oat varieties for 1982-83 are Coker 716 and Cumberland.

Table 41. Fall seeded oats: Yield of varieties evaluated at six locations in 1982.^{1/}

Variety	Avg.	Knox- ^{2/} ville	Cross- ^{3/} ville	Spring- ^{4/} field	Spring ^{5/} Hill	Jackson ^{6/}
Bushels per acre						
Southern States 76-30	88	86	65	107	94	87
Coker 716	78	61	61	103	90	77
Cumberland	53	26	-- ^{7/}	82	44	112
Norris 81-29	46	39	-- ^{7/}	42	77	75
Brooks	32	28	-- ^{7/}	16	48	70
L.S.D. (.05)	--	21.7	--	18.0	15.5	N.S.
C.V. %	--	29.4	--	16.7	14.3	34.6
Avg.	--	47.9	--	70.0	70.5	84.2

^{1/} All varieties winter killed at Greeneville in 1982.

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

^{3/} Hartsells loam (2% to 5% slopes).

^{4/} Dickson silt loam (2% to 5% slopes).

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

^{6/} Loring silt loam (0% to 2% slopes).

^{7/} Winter killed.

Table 42. Fall seed oats: Yield and other characteristics of varieties evaluated at six locations in 1982.

Variety	Yield	Date headed	Date mature	Plant height	Lodging
	Bu/A			In.	%
Southern States 76-30	88	5-10	6-14	41	58
Coker 716	78	5-13	6-15	39	47
Cumberland	53	5-17	6-16	40	29
Norris 81-29	46	5-13	6-16	39	17
Brooks	32	5-15	6-16	39	10

Table 43. Fall seeded oats: Yield of varieties evaluated at six locations for two years (1981-82).

Variety	Avg.	Greene- ville	Knox- ville	Cross- ville	Spring- field	Spring Hill	Jackson
Bushels per acre							
Southern States 76-30	82	48	86	79	122	88	70
Coker 716	77	46	72	87	112	84	61
Cumberland	67	35	51	59	106	70	83
Brooks	61	52	57	57	74	70	58

Table 44. Fall seeded oats: Yield and other characteristics of varieties evaluated at six locations for two years (1981-82).

Variety	Yield Bu/A	Date headed	Date mature	Plant height In.	Lodging %
Southern States 76-30	82	5-6	6-12	42	69
Coker 716	77	5-9	6-14	40	62
Cumberland	67	5-14	6-14	41	63
Brooks	61	5-10	6-13	40	54

Spring Oats

Eleven spring oat varieties were evaluated for grain and forage at Knoxville in 1982. Bates produced the highest grain yield whereas Dal and Larry produced the highest forage yields.

Table 45. Spring oats: Yield and other characteristics of varieties evaluated at Knoxville in 1982.^{1/}

Variety	Yield		Date headed	Date mature	Plant ht. In.	Lodging %	Test weight lb./bu.
	Bu/A	T/A ^{2/}					
Bates	71	1.90	5-25	7-8	36	18	33.9
Ogle	59	1.80	5-26	7-8	37	12	35.2
Dal	55	2.08	5-31	7-12	39	21	35.2
Larry	54	2.02	5-24	7-3	32	26	36.2
Grundy	51	1.76	5-24	7-3	37	35	34.0
Otee	47	1.69	5-25	7-3	38	32	34.8
Lodi	44	1.78	6-4	7-12	44	55	31.0
Marathon	41	1.55	6-5	7-8	46	68	30.5
Noble	41	1.69	5-26	7-8	35	9	34.2
Clintford	40	1.88	5-24	7-7	33	2	35.9
Holden	34	1.76	5-28	7-5	39	31	34.3
L.S.D. (.05)	9.4	0.29	-	-	-	-	-
C.V. %	13.4	11.0	-	-	-	-	-
Avg.	48.9	1.81	-	-	-	-	-

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

^{2/} Yield based on oven dry weights and harvested in the boot stage.

Rye

Six rye varieties were evaluated at Knoxville in 1982. Wintergrazer 80 produced the highest grain yield and Wintergrazer 70 produced the highest forage yields.

For forage evaluation, varieties were harvested at heading and forage yields reported as oven dry forage. Most varieties lodged but Forager and Vita Graze had the least amount of lodging.

Table 46. Rye: Yield and other characteristics of varieties evaluated at Knoxville in 1982. ^{1/}

Variety	Yield		Date headed	Date mature	Plant height In.	Lodging %
	Bu/A	T/A ^{2/}				
Wintergrazer 80	34	4.78	4-22	6-25	61	75
Winter King	32	4.54	4-21	6-25	61	62
Wintergrazer 70	32	4.81	4-23	6-25	62	75
Wintergrazer 70-B	31	4.68	4-22	6-25	62	68
Forager	27	4.63	4-18	6-25	62	18
Vita Graze	21	4.77	4-17	6-25	58	20
L.S.D. (.05)	5.1	N.S.	-	-	-	-
C.V. %	11.6	6.6	-	-	-	-
Avg.	29.4	4.7	-	-	-	-

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

^{2/} Yield based on oven dry weights.

Grain Sorghum

The grain sorghum tests were conducted at Knoxville, Spring Hill, Springfield, Milan, Martin and Ames Plantation. Thirty-two non-bird resistant varieties were evaluated at Martin and Ames Plantation. Ten of these thirty-two non-bird resistant varieties were also evaluated at Milan and Springrield. Sixteen new non-bird resistant varieties were evaluated at Spring Hill in addition to the thirty-two non-bird resistant varieties tested at Martin and Ames Plantation. Five bird resistant varieties were evaluated at Knoxville, Springfield and Spring Hill in 1982. Little interest has been shown in bird resistant varieties due to the high tannin content of the seed which seems to reduce its feeding value for use as grain or silage.

The two leading non-bird resistant varieties at Martin were Helena 1330DR (Wilstar 1330DR) and Coker 7723. Helena 1330DR also performed well at Ames Plantation. Coker 7723 performed better at Martin than it did at Ames Plantation. These two varieties were followed by DeKalb DK-64, Funk G-522A, Stauffer 535GR, Penngrain Y-E, HT-126DR and McCurdy M57Yg.

Using a two year average, the leading varieties at Springfield and Milan were DeKalb DK-64, Funk G522A, Helena 1330DR and Funk G-522DR. The highest yielding bird resistant variety was Savanna 5. Many of these non-bird resistant varieties are classified as having yellow endosperm or hetero yellow. It is very difficult to look at the seed and determine if the seed has a yellow endosperm.

Table 47. Grain Sorghum: Yield and other characteristics of non-bird resistant varieties at Martin and Ames Plantation in 1982.

Variety	Avg.	Yield		Date ^{3/} headed	Plant ^{4/} ht. in.	Date ^{5/} ready for harvest
		Ames Plantation ^{1/}	Martin ^{2/}			
		Bu/A				
Helena 1330 DR	126	116	135	8-1	62	8-28
Coker 7723	118	96	140	8-2	62	8-30
DeKalb DK-64	109	104	114	7-29	58	8-24
Funk G-522A	109	103	115	7-30	51	8-22
Stauffer 535GR	108	88	128	7-28	55	8-24
Penngrain y-E	108	94	122	8-2	52	8-24
HT-126DR ^{6/}	108	95	121	8-1	54	8-24
McCurdy M57yg	107	94	119	8-2	57	8-22
Acco 1029A	106	104	108	7-31	54	8-22
Funk G-550	106	90	121	8-1	54	8-24
Asgrow Topaz	104	98	110	8-1	56	8-24
T.E. Dinero	102	97	108	8-1	53	8-22
N.K. 2670	101	89	113	8-2	60	8-24
McCurdy M5lyg	100	91	108	7-30	52	8-22
N.K. 2660	100	83	116	8-2	52	8-28
Pioneer brand 8311	99	92	107	7-31	50	8-22
Asgrow Mustang	99	94	105	7-30	50	8-22
Funk G-522DR	99	91	106	8-1	52	8-22
Coker 7675	98	87	109	8-2	52	8-22
DeKalb DK59	98	84	112	8-3	54	8-24
P.A.G. 6662	98	87	109	8-2	56	8-20
BC 162	97	94	99	7-30	47	8-22
P.A.G. 5514	97	81	112	8-1	52	8-22
T.E. y-101-G	96	91	100	7-29	50	8-24
HT-128GDR	96	81	110	8-2	55	8-24
Stauffer 734GR	95	86	104	7-29	47	8-28
DeKalb DK-57	93	77	109	7-30	53	8-22
Helena 1225DR	93	78	108	8-2	52	8-22
P.A.G. 5550	90	72	107	8-2	52	8-20
HT-45G (McNair 550G)	87	79	95	8-2	51	8-22
BC 142	87	81	94	7-29	50	8-22
DeKalb DK-42	87	71	103	7-27	49	8-22
L.S.D. (.05)	-	11.0	17.1			
C.V. %	-	8.8	10.9			
Avg.	-	89.7	111.5			

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

^{2/} Collins silt loam (0% to 2% slopes).

^{3/} Ames Plantation data only.

^{4/} Average of Ames and Martin.

^{5/} Martin data only.

^{6/} HT=Hunt-Terra Seed Company

Table 48. Grain Sorghum: Yield and other characteristics of non-bird resistant varieties evaluated at Milan and Springfield for two years (1981-82).

Variety	Avg.	Milan		Springfield		Date headed	Plant ht. in.	Moisture
		1982 ^{1/}	1981 ^{2/}	1982 ^{3/}	1981 ^{3/}			at harvest %
Bushels per acre								
DeKalb DK-64	116	133	107	81	142	7-10	63	16.5
Funk G-522A	116	131	112	85	133	7-7	59	15.4
Helena 1330DR	113	130	107	87	128	7-8	65	15.9
Funk G-522DR	113	128	111	80	134	7-8	56	15.3
Funk G-550	105	122	96	75	128	7-8	56	15.5
DeKalb DK-59	103	113	101	74	123	7-10	55	15.7
DeKalb DK-57	102	121	95	74	118	7-12	64	16.9
DeKalb DK-42	100	110	102	63	126	7-6	58	14.7
HT-45G (McNair 550G)	98	107	105	76	101	7-10	57	15.4
Acco 1029A	-	114	-	86	-	-	-	-
GSA 130A	-	-	110	-	118	-	-	-
L.S.D. (.05)		17.3	N.S.	8.5	13.7			
C.V. %		9.9	10.4	7.5	7.5			
Avg.		120.8	104.6	78.3	125.2			

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

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

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

Table 49. Grain Sorghum: Yield of bird resistant varieties evaluated at three locations in 1982.

Variety	Avg.	Knox- ^{1/} ville	Spring- ^{2/} field	Spring ^{3/} Hill
Bushels per acre				
Savanna 5	116	149	63	136
DeKalb BR65 ⁺	99	120	70	107
DeKalb BR64	95	116	64	104
BC 156BR	91	111	54	108
HT 656BR	87	102	59	100
L.S.D. (.05)		9.0	7.5	7.5
C.V. %		4.8	7.9	4.4
Avg.		119.7	61.7	110.9

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

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

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

Table 50. Grain Sorghum: Yield of non-bird resistant varieties evaluated at Spring Hill in 1982.^{1/}

Variety	Yield Bu/A	Maturity Rating ^{2/}	Plant height In.	Head type Rating ^{3/} (1-3)
Asgrow Colt	112	L	45	1.8
Pioneer brand 8303	108	M-E	39	2.0
Coker 7638	105	M	36	2.0
McCurdy 737	104	M	33	2.2
Pioneer brand 8515	103	M-E	32	2.3
P.A.G. 6658	101	M-L	37	1.7
Acco A1029A	99	M-E	38	2.3
T.E. Y-77	96	M-L	40	1.0
Wilstar 1330	96	M	43	2.2
Acco 1090	96	M-L	42	2.3
Stauffer 530	96	E	33	1.8
Coker 7623	92	E	39	1.8
N.K. 2244	92	E	32	1.8
Coker 7605	92	E	32	2.2
Asgrow Carral	81	E	33	2.0
N.K. 2300	81	M	35	1.0
L.S.D. (.05)	16.2	-	-	-
C.V. %	11.7	-	-	-
Avg.	97.0	-	-	-

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

^{2/} E=Early, M=Medium and L=Late in Maturing.

^{3/} A rating of 1 to 3 with 1 being tight and 3 open.

Table 51. Grain Sorghum: Yield and other characteristics of bird resistant varieties evaluated in 1982.

Variety	Yield Bu/A	Date ^{1/} headed	Head type (1-3) ^{2/}	Plant ht. in.	Moisture at harvest ^{3/} %
Savanna 5	116	7-18	1	66	14.5
DeKalb BR65+	99	7-24	1	60	15.2
DeKalb BR64	95	7-18	2.5	61	16.7
BC 156BR	91	7-18	2.5	56	15.4
HT 656BR	87	7-22	1.5	57	15.0

^{1/} Knoxville data only.

^{2/} 1=tight, 2= medium and 3=open type head.

^{3/} Spring Hill data only.

Alfalfa and Red Clover

Alfalfa results are from tests seeded in the fall of 1978, 1980 and 1981. The five leading varieties at Springfield (1979-82) were C/W 27 (an experimental), Vanguard, Apollo, Voris A77 and Saranac AR. At Knoxville the leading varieties using a four year average (1979-82) were Olympic, Liberty, Cimarron, Voris A-77, and Hi-phy.

Four tests were seeded in 1981 and the varieties with the highest average yields were Voris A77, Apollo, Vanguard, Saranac AR, and Olympic. The tests at Knoxville and Greeneville will be replaced with a new seeding in the spring of 1983.

The leading red clover varieties in yield for 1982 were Redland, Kenstar, Redland II and Redman. All yields were expressed as tons per acre of oven dry forage.

Table 52. Alfalfa: Yield of varieties seeded in the fall of 1978 at Springfield.^{1/}

Variety	Avg.	1982	1981	1980	1979
Tons per acre					
C/W 27 ^{2/}	4.41	3.90	3.86	4.31	5.56
Vanguard	4.41	4.04	3.88	4.39	5.33
Apollo	4.28	3.95	3.72	4.36	5.08
Voris A77 ^{3/}	4.28	3.89	3.82	4.14	5.26
Saranac AR	4.27	3.44	3.77	4.48	5.40
Olympic	4.26	3.83	3.72	4.25	5.24
Cimarron	4.13	3.87	3.66	3.87	5.12
Liberty	4.12	3.75	3.70	4.05	4.99
Gladiator	4.08	3.62	3.71	3.89	5.08
C/W 9 ^{2/}	4.07	3.70	3.55	3.99	5.05
Arc	4.06	3.45	3.59	4.16	5.04
Pioneer brand 520	4.04	3.78	3.58	3.96	4.86
Williamsburg	4.02	3.64	3.62	3.99	4.83
Buffalo	4.00	3.81	3.66	3.86	4.69
Weevlchek	3.98	3.58	3.55	4.00	4.80
Pioneer brand 531	3.98	3.85	3.52	3.82	4.74
C/W 2 ^{2/}	3.92	2.53	3.54	4.49	5.12
Tempo	3.88	3.32	3.48	3.81	4.90
L.S.D. (.05)	-	0.39	0.23	0.48	0.41
C.V. %	-	7.5	4.4	8.3	5.6

- ^{1/} Dickson silt loam (2% to 5% slopes).
^{2/} Cal-West experimentals.
^{3/} Evaluated in previous years as Fame.

Table 53. Alfalfa: Yield of varieties seeded in the spring of 1979 at Knoxville.^{1/}

Variety	Avg. 1979-82	1982	1981	1980	1979
	Tons per acre				
Olympic	3.61	4.07	4.11	3.09	3.17
Liberty	3.60	4.18	4.13	3.12	2.96
Cimarron	3.58	4.10	3.96	3.01	3.23
Voris A77	3.58	3.97	4.06	3.19	3.12
Hi-phy	3.57	3.86	4.11	3.09	3.23
Vanguard	3.54	4.08	4.06	3.00	3.04
Apollo	3.53	3.89	4.04	3.24	2.94
Pioneer brand 524	3.52	3.86	4.00	3.18	3.05
DeKalb 130	3.50	4.00	4.16	2.89	2.94
Classic	3.41	4.00	3.84	2.92	2.88
Arc	3.38	3.78	3.92	2.90	2.90
Weevlchek	3.34	3.79	3.80	2.84	2.95
Pioneer brand 521	3.32	3.84	3.81	3.01	2.62
Tempo	3.29	3.22	3.79	2.93	3.22
Williamsburg	3.28	3.74	3.65	2.80	2.95
Gladiator	3.26	3.64	3.76	2.80	2.82
Buffalo	3.19	3.68	3.51	2.84	2.74
Saranac AR	3.16	3.53	3.66	2.72	2.71
L.S.D. (.05)	-	0.42	0.33	N.S.	N.S.
C.V. %	-	7.7	6.0	8.2	9.2

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

Table 54. Alfalfa: Yields of varieties seeded
in the fall of 1980 at Greeneville.^{1/}

Variety	Avg.	1981	1982
Tons per acre			
Saranac AR	4.08	3.99	4.17
Voris A77	4.03	3.96	4.10
Liberty	3.98	3.77	4.20
Vanguard	3.93	4.15	3.71
Pioneer brand 524	3.88	3.78	3.98
Weevlchek	3.87	3.68	4.06
Cimarron	3.86	3.75	3.97
Williamsburg	3.82	3.89	3.74
Gladiator	3.82	3.65	3.98
DeKalb 130	3.80	3.72	3.88
Arc	3.68	3.95	3.42
Apollo	3.61	3.72	3.50
Classic	3.61	3.44	3.78
Olympic	3.54	3.52	3.56
Hi-phy	3.42	3.42	3.41
Tempo	3.34	3.43	3.24
L.S.D. (.05)		N.S.	0.56
C.V. %		10.5	10.4

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

Table 55. Alfalfa: Yields of varieties seeded in the fall of 1981 at four locations.

Variety	Avg.	Cross- ^{1/} ville	Spring ^{2/} Hill	Martin ^{3/}	Jackson ^{4/}
		Tons per acre			
Voris A77	4.42	2.56	4.46	3.98	6.66
Apollo	4.27	2.34	4.65	3.72	6.38
Vanguard	4.20	2.09	4.69	3.91	6.12
Saranac AR	4.19	2.44	4.71	3.66	5.94
Olympic	4.18	2.65	4.38	3.60	6.08
DeKalb 130	4.17	2.42	4.66	3.83	5.78
Classic	4.14	2.37	4.13	3.50	6.57
Gladiator	4.12	2.75	4.19	3.62	5.90
Pioneer brand 524	4.06	2.36	4.30	3.59	6.00
Cimarron	4.04	2.06	4.62	3.57	5.90
Liberty	4.04	2.70	4.13	3.54	5.81
Weevlchek	4.03	2.46	4.32	3.24	6.09
Arc	4.00	2.26	4.46	3.52	5.78
Tempo	3.98	2.18	4.36	3.64	5.76
Hi-phy	3.92	2.52	3.85	3.46	5.86
Pioneer brand 532	3.82	2.96	3.51	3.28	5.55
Agate	3.72	2.28	3.73	3.32	5.53
Spredor II	3.72	3.22	2.84	3.12	5.69
L.S.D. (.05)		0.48	0.85	N.S.	0.55
C.V. %		13.6	14.2	10.5	6.4
Avg.		2.48	4.22	3.56	5.97

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

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

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

^{4/} Grenada silt loam (2% to 5% slopes).

Table 56. Red Clover: Yield of varieties evaluated at three locations in 1982.

Variety	Avg.	Knoxville ^{1/}	Spring ^{2/} Hill	Jackson ^{3/}
Tons per acre				
Redland	4.11	3.30	2.85	6.19
Kenstar	4.00	3.52	3.18	5.31
Redland II	3.86	3.21	2.72	5.64
Redman	3.80	3.36	2.36	5.69
Florie	3.77	3.28	2.29	5.73
Mega	3.47	2.96	2.60	4.86
Kenland	3.37	2.59	2.50	5.03
L.S.D. (.05)	-	0.18	0.31	N.S.
C.V. %	-	3.9	8.0	14.8
Avg.	-	3.18	2.64	5.49

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

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

^{3/} Memphis silt loam (0% to 5% slopes).

PERFORMANCE OF SUMMER ANNUALS (Sorghum x Sudangrass Crosses, and Pearl Millets)

Thirteen summer annual cultivars were evaluated in 1982 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 leading sorghum x sudangrass cross using a three-year average yield at Knoxville were Sudax ST-6⁺, Sweet M, FFR-66 and Sudax SX-17⁺. The highest yielders using a three-year average at Spring Hill were Sudax SX-17⁺, ST-6⁺ and FFR-66. The test at Spring Hill was harvested with a forage chopper and the test at Knoxville was harvested by hand. All yields are reported as tons of oven dry forage per acre.

Table 57. Yield of summer annual varieties and hybrids evaluated at Spring Hill from 1980 through 1982.^{1/}

Company	Variety	1982	2 yr. Avg.	3 yr. Avg.
			1981-82	1980-82
Tons per acre				
DeKalb	Sudax SX-17 ⁺	4.69	4.60	5.08
DeKalb	Sudax ST-6 ⁺	4.31	4.20	4.76
Co-op	FFR-66	4.52	4.22	4.73
Pennington	Summergrazer 3	4.25	3.96	4.57
McCurdy	Sweet M	4.21	4.10	4.53
Co-op	FFR 74A	4.27	3.86	4.27
N. K. Co.	Sordan 79	4.44	-	-
Co-op	FFR 80	4.34	4.17	-
Taylor Evans	Haygrazer II	4.23	-	-
	Terra-Graze	3.98	-	-
Taylor Evans	Haygrazer T	3.96	3.69	-
N. K. Co.	Trudan 8 <u>2/</u>	3.62	-	-
N. K. Co.	Millex 24 <u>3/</u>	2.89	-	-
L.S.D. (.05)		0.91		
C.V. %		15.3		

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

^{2/} Sudangrass.

^{3/} Pearl millet.

Table 58. Yield of summer annual varieties and hybrids evaluated at Knoxville from 1980 through 1982.^{1/}

Company	Variety	1982	2 yr. Avg. 1981-82	3 yr. Avg. 1980-82
Sorghum x Sudangrass crosses			Tons per acre	
DeKalb	Sudax ST-6 ⁺	4.96	5.10	5.30
McCurdy	Sweet M	5.07	5.12	5.23
Co-op	FFR-66	4.85	4.89	4.88
DeKalb	Sudax SX17 ⁺	4.43	4.30	4.86
Pennington	Summergrazer 3	4.79	4.44	4.69
Co-op	FFR 74A	3.75	4.16	4.35
	Terra-Graze	5.02	-	-
Taylor Evans	Haygrazer-T	4.80	4.28	-
Taylor Evans	Haygrazer II	4.98	-	-
	Millex 24 <u>2/</u>	4.43	-	-
	Sordan 79	4.38	-	-
Co-op	FFR 80	4.36	4.73	-
	Trudan 8 <u>3/</u>	4.00	-	-
L.S.D. (.05)		0.40		
C.V. %		11.5		

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

^{2/} Pearl Millet.

^{3/} Sudangrass.

Soybeans

Soybean varieties in Maturity Group V were evaluated at six locations, in Maturity Groups VI and VII at four locations, and in Maturity Groups IV or less at four locations. Growing conditions were good at all locations except Spring Hill and Martin. No data are reported for Milan because of a flood which severely damaged the test just prior to harvest.

The leading varieties in Maturity Group V were Pioneer variety 5482, RA 502, Asgrow A5618, Asgrow A5474 and Essex. FFR 447 should have been evaluated with Maturity Group IV instead of Group V.

The leading varieties of Maturity Groups VI and VII in yield were S72-60 (an experimental), Asgrow XP6420, Jeff, Hartz 672 and RA 604. The test at Martin was damaged some by soybean cyst nematodes. Yields at Spring Hill were reduced by dry weather during the growing season.

The leading varieties in Maturity Group IV or less were Mitchell, RA 480, and GA 8490 (a variety from Taylor-Evans Seed Co.). The yields were high at Ames Plantation and low at Spring Hill due to dry weather. Three strains tests were conducted at Jackson and yields were good in all maturity groups. All tests were conducted under soybean cyst nematode free conditions.

Table 59. Soybeans: Yield of varieties (maturity group V) evaluated at six locations in 1982.

Variety	Avg.	Greene- ^{1/} ville	Knox- ^{2/} ville	Spring- ^{3/} field	Spring- ^{4/} Hill	Martin- ^{5/}	Ames- ^{6/} Plantation
Bushels per acre							
Pioneer variety 5482 ^{7/}	49	68	45	34	30	44	71
RA 502	46	66	42	62	25	46	57
Asgrow A5618	46	58	43	37	31	42	62
Asgrow A5474	45	56	35	35	36	52	58
Essex	45	56	51	31	28	44	58
Pioneer variety 9561 ^{7/}	44	59	34	41	25	46	62
Deltapine 105	44	54	38	40	28	41	64
York	44	61	34	41	26	40	63
Bay	44	59	35	41	27	38	62
Asgrow A5939	44	55	34	35	32	44	61
Forrest	43	48	37	41	26	50	58
FFR 560	42	49	35	35	28	52	54
FFR 559	42	60	41	32	23	34	59
Wilstar 550	42	49	37	37	26	40	59
Deltapine 345	41	54	34	39	27	38	57
Agripro AP55	41	58	32	39	29	39	52
Bedford	41	50	36	33	24	49	53
Terra-vig 505	39	45	33	37	25	40	55
Nathan	39	48	31	36	24	46	50
FFR 447	35	41	45	23	18	33	49
L.S.D. (.05)		8.6	6.7	4.9	4.5	7.1	5.8
C.V. %		11.1	12.5	9.5	11.7	11.6	7.0
Avg.		54.7	37.6	36.5	27.0	43.1	58.2

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

^{2/} Sequatchie loam (2% to 5% slopes).

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

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

^{5/} Falaya silt loam (0% to 2% slopes).

^{6/} Loring silt loam (2% to 5% slopes).

^{7/} Tested as Peterson in 1981.

Table 60. Soybeans: Yield and other characteristics of varieties (maturity group V) evaluated at six locations in 1982.

Variety	Yield Bu/A	Plant ht. in.	Lodging %	Date mature
Pioneer variety 5482	49	29	5	10-1
RA 502	46	34	32	10-6
Asgrow A5618	46	35	13	10-4
Asgrow A5474	45	33	16	10-4
Essex	45	27	5	9-27
Pioneer variety 9561	44	33	12	10-4
Deltapine 105	44	36	40	10-9
York	44	31	9	10-7
Bay	44	34	15	10-5
Asgrow A5939	44	35	32	10-4
Forrest	43	34	22	10-4
FFR 560	42	39	56	10-10
FFR 559	42	30	14	10-3
Wilstar 550	42	34	22	10-11
Deltapine 345	42	36	20	10-8
Agripro AP55	41	36	63	10-6
Bedford	41	37	48	10-4
Terra-vig 505	39	35	40	10-10
Nathan	39	40	76	9-28
FFR 447 ^{1/}	35	28	12	9-18

^{1/} Should have been evaluated with Maturity Group IV.

Table 61. Soybeans: Yield of varieties (maturity group V) evaluated at six locations for three years (1980-82).

Variety	Avg.	Greene- ville	Knox- ville	Spring Hill	Spring- field	Martin	Ames Plantation
Bushels per acre							
Essex	44	60	51	30	45	42	35
Asgrow A5474	44	58	43	32	40	45	--
Asgrow A5618	43	60	49	29	47	38	35
Bay	42	59	45	28	46	40	36
Forrest	42	51	46	27	47	45	36
Deltapine 345	39	52	40	25	45	38	36
Wilstar 550	39	53	44	25	42	36	36
Terra-vig 505	39	54	42	24	44	36	32
Nathan	38	52	36	26	44	39	32
Bedford	38	52	37	25	39	40	33

Table 62. Soybeans: Yield and other characteristics of varieties (maturity group V) evaluated for three years (1980-82).

Variety	3 year avg. yield Bu/A	Plant ht. in.	Lodging %	Date mature
Essex	44	28	5	10-1
Asgrow A5474	44	35	11	10-7
Asgrow A5618	43	36	7	10-7
Bay	42	35	10	10-6
Forrest	42	35	16	10-7
Deltapine 345	39	37	29	10-10
Wilstar 550	39	35	14	10-13
Terra-vig 505	39	37	43	10-11
Nathan	38	41	54	10-3
Bedford	38	40	42	10-9

Table 63. Soybeans: Characteristics of varieties (maturity group V) evaluated in 1982.

Variety	Flower color <u>1/</u>	Pubescence color <u>2/</u>	Hilum color	Phytophthora rot resistance <u>3/</u>	Soybean cyst nematode resistance Races
York	P	G	Buff	S	None
Forrest	W	Brown	Black	MR	1,3
Essex	P	G	Buff	S	None
Bedford	W	T	Black	-	1,3,4
Nathan	W	Brown	Black	-	1,3,4
Bay	P	G	Buff	-	None
Asgrow A5939	P	T	Black	R	1,3,4
Asgrow A5474	W	T	Black	R	1,3,4
Deltapine 345	P	T	Black	R	None
FFR 559	W	G	Buff	-	None
Wilstar 550	P	T	Buff	R	None
Terra-vig 505	P	T	Gray to Black	R	None
Deltapine 105	P	G	Imp. Black	R	None
Agripro AP55	P	T	Black	R	None
Asgrow A5618	P	G	Buff	S	None
RA 502	P	T	Black	T	1,3
Pioneer variety 5482	W	T	Black	S	None
Pioneer variety 9561	W	T	Black	S	1,3
FFR 560	P	Brown	Black	MR	1,3,4
FFR 447	W	G	Imp. Black	-	None

1/ P=Purple W=White

2/ G=Grey T=Tawny

3/ S=Susceptible R=Resistant MR=Moderately Resistant.

Table 64. Soybeans: Yield and other characteristics of strains (maturity group V) evaluated at Jackson in 1982. ^{1/}

Strain	Yield Bu/A	Date mature	Plant ht. in.	Lodging score (1-5) ^{2/}	Shattering score (1-5) ^{3/}
Hartz H-76-502	52	10-5	48	3	1
N.A.P.B. EX S-243-79	51	10-7	49	2.5	1
Hartz H-78-7817	51	10-13	52	2.5	1
Hartz H-78-766	50	10-7	49	4	1
Coker 80-764	48	10-6	45	2.5	1
Forrest	47	10-6	46	3	1
CEI 156 ^{4/}	46	10-4	42	3	1
N.A.P.B. EX S-27-79	46	10-7	48	3	1
Helena HB-S8120-5 (Shiloh)	46	10-8	51	3.5	1
Coker 355	45	10-5	46	3	1.5
Coker 79-5	45	9-27	35	1.5	2
TN 80-69	44	10-2	46	2.5	1.5
RAX-63	44	10-14	52	2.5	1
Hartz H-78-143	43	10-7	53	2.5	1
CEI 159	42	10-8	41	3	1
Funk M80-501003	42	10-10	47	3	1
RAX-73	42	10-5	64	3	1.5
Helena HB-466D1-5	42	10-5	53	3	2
TN 77-119	41	10-4	46	3	1
TN 77-111	41	10-4	51	3	1
N.A.P.B. EX S-159-79	41	10-7	49	2	1
RAX-65	39	10-25	55	3	2.5
CEI 155	38	9-18	38	1	2
CEI 154	38	9-17	38	1	2
CEI 153	38	9-12	53	2.5	2
CEI 157	37	10-7	47	2	1
N.K. Exp B501070	36	10-8	52	2	1
Exp 5103 (Agrigenetics)	36	10-4	47	3.5	1
CEI 158	34	9-14	51	1.5	2
L.S.D. (.05)	8.0				
C.V. %	13.2				
Avg.	43.0				

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

^{2/} 1=almost all plants erect and 5=all plants down.

^{3/} 1=no shattering and 5=over 20% shattered.

^{4/} Callahan Enterprises, Inc. Westfield, Indiana

Table 65. Soybeans: Yield of varieties (maturity groups VI & VII) evaluated at four locations in 1982.

Variety	Avg.	Knox- ^{1/} ville	Spring ^{2/} Hill	Ames ^{3/} Plantation	Martin ^{4/}
Bushels per acre					
S72-60(761214) ^{5/}	40	45	27	54	34
Asgrow XP6420	40	33	29	57	40
Jeff	38	38	22	54	39
Hartz 672	38	40	22	58	33
RA 604	38	41	22	57	32
Centennial	37	39	23	55	32
Asgrow A7372	37	42	23	52	32
S69-96(770414) ^{5/}	37	44	24	54	25
RA 606	36	40	23	54	29
RA 605	36	42	23	49	32
Hartz 587	36	36	20	55	35
Wilstar 790	36	42	20	56	26
S77-281 (mo) ^{6/}	36	34	24	50	36
Coker 80-931	36	41	23	55	24
Coker 156	36	31	27	54	29
Deltapine 506	35	39	21	50	31
NAPB 611	34	32	24	50	31
Terra-vig 606	34	35	25	51	25
Deltapine 417	34	37	19	52	26
Deltapine 246	34	35	24	52	23
Deltapine 497	33	36	18	51	27
McNair 600	32	37	19	51	20
Brysoy 9	26	24	16	40	26
L.S.D. (.05)		7.8	3.7	4.8	7.0
C.V. %		15.0	11.5	6.5	16.7
Avg.		36.9	22.6	52.7	29.9

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

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

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

^{4/} Grenada silt loam (2% to 5% slopes).

^{5/} N. K. and Co.

^{6/} Experimental from Mo.

Table 66 Soybeans: Yield and other characteristics of varieties (maturity groups VI & VII) evaluated at four locations in 1982.

Variety	Yield Bu/A	Date mature	Lodging %	Plant ht. in.
S72-60 (761214)	40	10-22	50	42
Asgrow XP6420	40	10-16	20	35
Jeff	38	10-18	42	39
Hartz 672	38	10-22	35	42
RA 604	38	10-16	32	38
Centennial	37	10-19	12	38
Asgrow A7372	37	10-25	25	38
S69-96 (770414)	37	10-23	35	38
RA 606	36	10-18	38	44
RA 605	36	10-19	49	40
Hartz 587	36	10-20	42	40
Wilstar 790	36	10-27	15	41
S77-281 (mo)	36	10-14	36	37
Coker 80-931	36	10-19	20	38
Coker 156	36	10-16	35	36
Deltapine 506	35	10-21	40	42
NAPB 611	34	10-21	25	39
Terra-vig 606	34	10-18	32	38
Deltapine 417	34	10-26	35	46
Deltapine 246	34	10-17	32	36
Deltapine 497	33	10-26	18	44
McNair 600	32	10-15	32	37
Brysoy 9	26	10-18	60	39

Table 67. Soybeans: Characteristics of varieties (maturity groups VI&VII) evaluated in 1982.

Variety	Flower color	Pubescence color	Hilum color	Phytophthora rot resistance	Soybean cyst nematode resistance
					Races
McNair 600	P	T	Black	S	None
Centennial	P	T	Black	R	1,3
Coker 156	W	G	Buff	R	None
Terra-vig 606	W	G	Buff	R	None
Deltapine 506	W	T	Black	R	None
RA 604	W&P	T	Black	R	1,3,4
Brysoy 9	P	T	Imp. Black	R	1,3
Deltapine 246	P	T	Black	R	None
Jeff	P	T	Brown	MR	1,3,4
RA 606	W	G	Buff	R	1,3,4
RA 605	P	T	Black	R	1,3,4
Wilstar 790	W	T	Black	R	None
Asgrow A7372	W	T	Black	S	None
Asgrow XP6420	P	T	Black	R	1,3,4
Deltapine 417	W	G	Buff	R	None
Deltapine 497	W	T	Black	R	None
Hartz 587	P	G	Imp. Black	R	1,3
Hartz 672	P	T	Black	S	1,3
NAPB 611	P	G	-	R	1,3
Coker 80-931 ^{1/}	W	G	Buff	R	None
S77-281 (mo) ^{3/}	W	T	-	-	1,3,4
S69-96 (770414)	P	G	Buff	R	None
S72-60 (761214)	P	T	Buff	R	None

^{1/} Same as Coker 156 and resistant to metribuzin.

^{2/} N.K. Co.

^{3/} New variety from Missouri.

Table 68. Soybeans: Yield and other characteristics of three soybean varieties (maturity groups VI and VII) evaluated for three years (1980-82).

Variety	Yield	Plant ht.	Lodging	Date mature
		Bu/A	in.	%
Centennial	41	41	16	10-24
Terra-vig 606	39	40	22	10-24
Deltapine 506	38	44	38	10-25

Table 69. Soybeans: Yield and other characteristics of strains (Maturity groups VI and VII) evaluated at Jackson in 1982. 1/

Variety	Yield Bu/A	Plant ht. in.	Maturity	Lodging score <u>2/</u> (1-5)
Funk M80-602003	54	44	10-17	2.2
TN 80-83	52	48	10-20	2.5
N.K. Exp. B500471	50	38	10-20	2.2
N.K. M75-1111	50	46	10-20	2.2
Funk M80-602001	49	46	10-20	2.8
N.A.P.B. S-319-79	46	48	10-20	3.0
Centennial	46	49	10-22	2.5
N.A.P.B. S-340-79	46	46	10-20	2.2
HB-S8109-6	44	53	10-19	3.2
HB-468 D1-6	44	50	10-24	3.0
N.A.P.B. S-357-79	42	48	10-21	2.2
Funk M80-602005	36	54	10-20	3.0
L.S.D. (.05)	7.7			
C.V. %	11.6			
Avg.	46.5			

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

2/ 1=no lodging and 5=severe lodging.

Table 70. Soybeans: Yield of varieties (Maturity group IV or less) evaluated at five locations in 1982.

Variety	Avg.	Knox- ^{1/} ville	Cross- ^{2/} ville	Spring- ^{3/} field	Martin ^{4/}	Ames ^{5/} Plantation
Bushels per acre						
Mitchell	42	41	39	27	45	60
RA 480	42	36	26	37	50	64
GA 8490 ^{6/}	42	41	37	30	45	59
Mitchell 450	41	39	40	28	42	57
GA 8450 ^{6/}	41	46	42	21	40	55
RA 403	40	36	35	25	43	59
FFR 446	40	38	37	26	44	53
Franklin	35	36	27	24	36	52
GA 8350 ^{6/}	31	30	30	21	35	40
Pixie	29	44	38	23	14	25
Sprite	22	32	27	18	13	18
L.S.D. (.05)		7.6	8.3	3.7	9.6	7.7
C.V. %		13.7	16.8	10.0	17.9	10.8
Avg.		38.1	34.3	25.6	37.0	49.3

- ^{1/} Sequatchie loam (2% to 5% slopes).
^{2/} Hartsells loam (2% to 5% slopes).
^{3/} Dickson silt loam (2% to 5% slopes).
^{4/} Falaya silt loam (2% to 5% slopes).
^{5/} Loring silt loam (2% to 5% slopes).
^{6/} Taylor Evans Seed Co.

Table 71. Soybeans: Yield and other characteristics of varieties (Maturity groups IV or less) evaluated at five locations in 1982.

Variety	Yield Bu/A	Lodging %	Plant ht. in.	Date mature
Mitchell	42	22	36	9-15
RA 480	42	34	42	9-26
GA 8490	42	46	39	9-18
Mitchell 450	41	20	40	9-24
GA 8450	41	32	32	9-12
RA 403	40	24	37	9-11
FFR 446	40	60	40	9-17
Franklin	35	36	35	9-12
GA 8350	31	41	31	9-5
Pixie	29	8	18	9-10
Sprite	22	4	18	9-10

Table 72. Soybeans: Characteristics of varieties (maturity group IV or less) evaluated in 1982.

Variety	Flower color	Pubescence color	Hilum color	Phytophthora rot resistance	Soybean cyst nematode resistance
					Races
Mitchell	P	T	Brown	S	None
RA 480	P	T	Black	R	1,3,4 ^{1/}
Franklin	P	G	-	-	1,3
Mitchell 450	P	T	Brown	R	None
Sprite	W	T	Black	S	None
Pixie	P	T	Black	S	None
RA 403	P	T	Black	MR	None
FFR 446	P	G	Imp. Black	-	1,3
GA 8490 ^{2/}	P	G	Buff	MR	None
GA 8350	P&W	T	Black	S	None
GA 8450	W	T	Brown	R	None

^{1/} Some tolerance.

^{2/} Taylor Evans Seed Co.

Table 73. Soybeans: Yield and other characteristics of strains (maturity group IV) evaluated at Jackson in 1982.^{1/}

Variety	Yield	Date mature	Plant ht.	Lodging score	Shattering score
	Bu/A		in.	(1-5) ^{2/}	(1-5) ^{3/}
Helena Brand 401	67	9-14	52	2.2	1
JMS 4987 (Schultz)	66	9-12	50	2	1.5
Helena Brand 301	63	8-29	42	2	2
Mitchell	63	9-11	50	1.8	1.5
CEI 142 ^{4/}	60	9-10	46	1.8	1.5
RAX-56	53	9-20	52	2	1
RAX-54	50	9-18	54	2.2	1
Stevens	47	9-10	53	2.5	1.2
RAX-60	47	9-26	53	1.5	1
CEI 152	51	9-15	52	2.0	1
L.S.D. (.05)	7.4				
C.V. %	9.0				
Avg.	56.7				

^{1/} Memphis silt loam (0% to 2% slopes).

^{2/} 1=almost all plants erect and 5=all plants down.

^{3/} 1=no shattering and 5=over 20% shattered.

^{4/} Callahan Enterprises, Inc., Westfield, Indiana.

Table 74. Soybeans: Yield of varieties evaluated on four soil types in Dyer County in 1982 ^{1/}.

Variety	Avg.	Alligator clay	Robinson- ville loam	Bosket silt loam	Sharkey clay
Bushels per acre					
Asgrow A5474	46	53	39	41	52
Jeff	44	49	38	34	52
Essex	43	49	39	34	49
Centennial	42	47	43	30	48
Bedford	42	46	41	31	51
Forrest	42	52	32	31	52
RA 604	42	49	36	31	50
York	42	48	38	32	48
Bay	41	49	34	35	46
Nathan	41	45	37	32	50
Shiloh	-	-	-	33	-
FFR 556	-	-	-	38	-
Tracy	-	47	-	-	48
L.S.D. (.05)		4.6	3.7	3.7	N.S.
C.V. %		6.5	6.8	7.7	7.5
Avg.		48.7	37.9	33.5	49.7

^{1/} Tests conducted on private farms in cooperation with Agricultural Extension Service and the Milan Experiment Station.

DARK TOBACCO

The dark fire-cured and dark air-cured tobaccos were evaluated at Springfield. The 1982 data are not available so the data included in this report are for 1981 and previous years.

The leading dark fire-cured varieties evaluated with the older varieties were Atkins Madole, Certified Madole, TR Madole and Little Crittenden. DF-911 and DF-516 were the leading varieties in yield of the newer varieties evaluated for a three year period (1979-81).

The leading air-cured tobacco varieties were Ky 160 and DF-300. No acre value was calculated for the 1981 air-cured tobacco varieties due to the NOG grades (no grade).

No price was reported for NOG in the Tobacco Market News on March 4, 1981. The 1981 season average market price was used to calculate the 1981 acre value for the dark fire-cured tobacco varieties.

Table 75. Dark fire-cured tobacco yield of old varieties grown at Springfield from 1979 through 1981.

Variety	Avg.	Yield		
		1981	1980	1979
		pounds per acre		
Atkins Madole	2145	2193	2021	2222
Certified Madole	2099	2105	1810	2382
Little Crittenden	1882	2000	1886	1761
TR Madole	1862	1924	1820	1842
Greenwood	1851	1904	1811	1838
Black Mammoth	1811	2074	1710	1648
Beltsville Madole	1772	1995	1720	1600
DT-100	1705	1815	1665	1635
L.S.D. (.05)	-	209.2	154.4	155.3
C.V. %	-	7.1	5.8	5.6

Table 76. Dark fire-cured tobacco acre value of old varieties grown at Springfield from 1979 through 1981.

Variety	Avg.	Acre value ^{1/}		
		1981	1980	1979
Dollars per acre				
Atkins Madole	2759	3062	2832	2383
Certified Madole	2749	3345	2347	2556
TR Madole	2470	2892	2524	1994
Little Crittenden	2442	2937	2498	1890
Black Mammoth	2392	3046	2302	1828
Greenwood	2379	2647	2488	2001
DT-100	2262	2684	2286	1815
Beltsville Madole	2230	2771	2170	1749
L.S.D. (.05)	-	337.6	292.2	171.5
C.V. %	-	7.9	8.2	5.8

^{1/} The 1980 and 1981 values were based on 1980 averages and 1979 values were based on 1973-1977 averages for the various grades on all type 22 markets.

Table 77 . Dark fire-cured tobacco yield of new varieties grown at Springfield from 1979 through 1981.

Variety	Avg.	Yield		
		1981	1980	1979
		pounds per acre		
DF-911	2046	2296	1655	2187
DF-516	1965	2026	1564	2306
Ky 171	1816	1925	1548	1975
DF-300	1730	1800	1686	1704
Ky 151	1703	1988	1482	1640
Va 310	1666	1805	1491	1702
Va 312	1577	1767	1460	1505
Va 331	1372	1309	1482	1325
L.S.D. (.05)		301.8	141.5	257.0
C.V. %		11.0	6.6	9.8

Table 78. Dark fire-cured tobacco acre value of new varieties grown at Springfield from 1979 through 1981.

Variety	Avg.	Acre value ^{1/}		
		1981	1980	1979
Dollars per acre				
DF-911	2558	3210	2190	2274
Ky 171	2349	2751	2076	2219
DF-516	2344	2760	1953	2318
DF-300	2217	2513	2324	1814
Ky 151	2198	2836	2029	1729
Va 310	2156	2630	1973	1865
Va 312	2047	2599	1913	1629
Va 331	1746	1933	1876	1429
L.S.D. (.05)		462.1	287.6	270.0
C.V. %		11.8	9.6	9.6

^{1/} The 1980 and 1981 values were based on 1980 averages and 1979 values were based on 1973-1977 averages for the various grades on all type 22 markets.

Table 79. Dark air-cured tobacco: Average yield of varieties grown at Springfield from 1978 through 1981.

Variety	Avg.	1981	1980	1979	1978
pounds per acre					
DF-300	2089	2239	1985	1485	2646
Ky 160	2085	2198	2138	1326	2679
Ky 165	1937	2030	1954	1216	2548
Ky 163	1796	1974	1893	1127	2188
L.S.D. (.05)		153	N.S.	275	176
C.V. %		4.5	14.3	13.3	4.4

Commercial burley tobacco variety trials were grown at the Tobacco Experiment Station (TES) and the Highland Rim Experiment Station (HRES) during 1982. The extremely high yields obtained at both locations were due in part to the cultural practices used in the production of the tobacco. At TES, all plots were treated with a contact sucker control agent when the first plants began to bloom, followed by an MH treatment 10 days later. The plots were button-topped every two days. At HRES, all plots were irrigated as needed.

The highest yielding varieties in 1982 were R7-11, MS Ky 14 x L8, MS Bu 21 x Ky 10, Ky 15, and Ky 14. R7-11 is a new variety with high yield potential but has no black shank resistance. MS Ky 14 x L8 does very well on some farms; however, no L8 hybrids should be grown on farms having a history of black shank. MS Bu 21 x Ky 10 also performs well in locations that are free of black shank and black root rot. The lowest yielding entries in 1982 were the black shank resistance varieties Bu 37, Bu 49, Bu 64, and Ky 17. Va 509 was the highest yielding black shank resistant variety in 1982. Va 509 has low resistance to black root rot and no resistance to tobacco mosaic virus.

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TABLE 80: Yields¹ of Burley Tobacco Varieties Grown at Highland Rim and Tobacco Experiment Stations (HRES and TES) in 1979-1982.

Variety	1979, 1980 and 1981 Means TES-HRES	1982 TES	1982 HRES	1982 Varietal Average
Bu 37	2164	3661	3131	3396
Bu 49	2199	3640	3480	3560
Bu 64	2402	3536	3635	3586
Va 509	2545	4039	4077	4058
Va 528	2059 ²	3928	4198	4063
Ky 10	2447	3889	4485	4187
Ky 14	2590	4134	4064	4099
Ky 15	2591	4134	4421	4278
Ky 17	2352	3366	3849	3608
N 77	2359 ²	3880	3968	3924
Clay 102	----	4115	----	----
Clay 501	2625 ³	3867	3899	3883
R7-11	3032 ³	4154	4488	4321
Coker 46	----	3429	----	----
<u>Hybrids</u>				
MS Bu 21 x Ky 10	2698	4131	4456	4294
MS Ky 14 x L8	2786	3879	4733	4306
MS Bu 21 x L8	2582	3767	4242	4005
MS Bu 37 x L8	2477	3857	4127	3992

¹ Yields in pounds per acre based on four replications of 50 plants in ea. test; yields are for two replications for HRES in 1979

² Yields are for 1979 & 1980 only.

³ Yields are for 1981 only.

TABLE 81. Plant Characteristics¹ of Burley Tobacco Varieties Grown
at the Tobacco Experiment Station in 1982.

Variety	Days to Flower	Plant Height	No. of Leaves	Leaf Internode	Largest Leaf	
					Length	Width
Burley 21	62	54.3	20.1	2.7	29.8	11.5
Burley 37	60	53.7	19.8	2.7	29.0	12.0
Burley 49	65	51.8	20.0	2.6	27.9	11.7
Burley 64	70	48.7	21.7	2.2	27.1	10.2
Ky 10	63	48.7	21.3	2.3	29.1	10.8
Ky 14	64	49.5	20.6	2.4	30.1	12.5
Ky 15	61	53.2	20.5	2.6	28.2	12.9
Ky 17	64	49.9	18.8	2.7	29.4	13.2
Va 509	65	52.9	20.5	2.6	32.7	12.7
Va 528	64	53.1	19.8	2.7	30.3	12.0
Ms Bu 21 x Ky 10	63	52.1	19.5	2.7	29.8	11.9
Ms Ky 14 x L8	60	48.5	18.4	2.6	30.5	12.2
Ms Bu 21 x L8	59	50.5	18.2	2.8	33.0	13.7
Ms Bu 37 x L8	60	49.6	18.4	2.7	31.0	13.5
N-77	66	51.5	20.3	2.5	31.4	13.2
R7-11	64	53.0	19.9	2.7	31.7	13.4
Clay's 102	65	50.9	19.8	2.6	30.1	11.2
Clay's 501	61	51.9	19.2	2.7	30.6	13.4
Coker 46	65	57.4	20.1	2.9	28.5	11.9

¹
All measurements are given in inches.

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