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1991 Performance of Field Crop Varieties

University of Tennessee Agricultural Experiment Station

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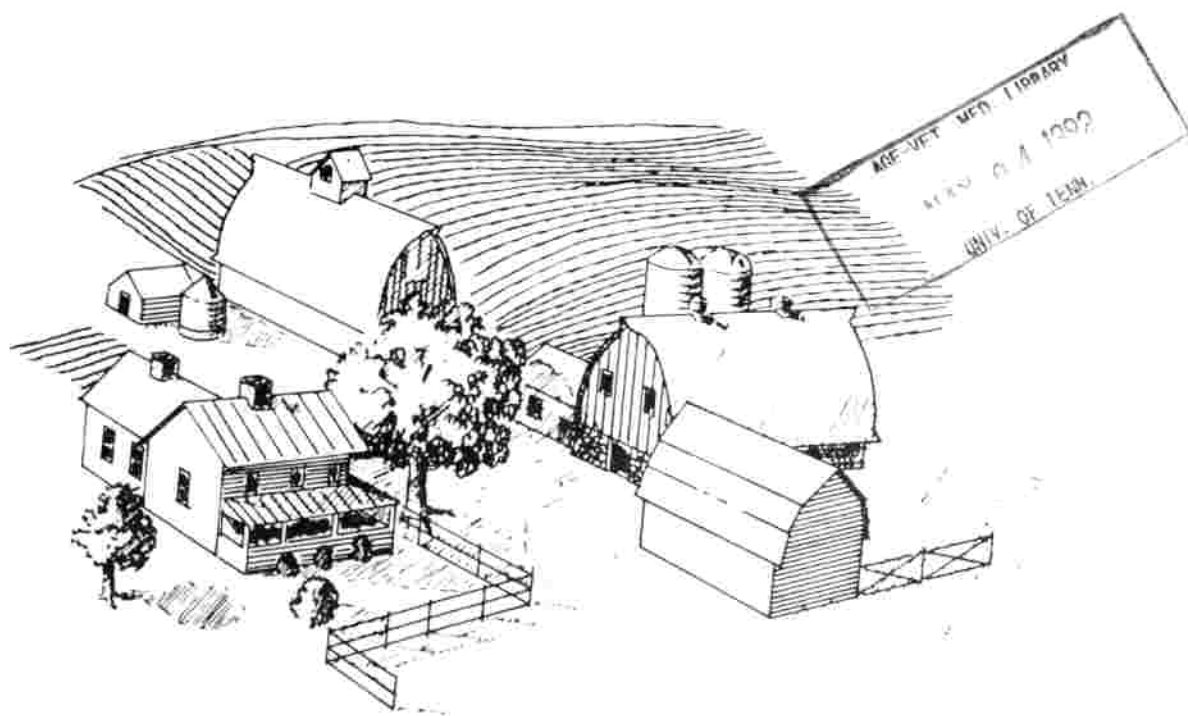
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The University of Tennessee
Agricultural Experiment Station
Knoxville, Tennessee
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1991

PERFORMANCE OF FIELD CROP VARIETIES

DATA FOR 1991

WITH SUMMARIES OF RESULTS FROM PREVIOUS YEARS

CORN - GRAIN SORGHUM - SUMMER ANNUALS - RYEGRASS - OATS

BARLEY - WHEAT - ALFALFA - SOYBEANS

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RECOMMENDED CROP VARIETIES

Listed Alphabetically

Corn Hybrids

See Figure 2.

Cotton

DES 119, Delcot 344, Deltapine 20, Deltapine 50, McNair 235¹, PD 3, Stoneville 506, Stoneville 453, Stoneville 112, Stoneville 825¹, Stoneville KC-311, and Terra C-40.

Oats

Fall: Southern States 76-30.

Spring: Don, Otee, Ogle, and Larry.

Wheat

Cardinal, FFR 525, Northrup King Coker 983¹, Northrup King Coker 916¹, Northrup King Coker 9323, Northrup King Coker 9766¹, Northrup King Coker 9733, Massey, Pioneer brand 2550¹, Pioneer brand 2551, Pioneer brand 2555, Pioneer brand 2548, and Saluda.

Barley

Anson, Volbar¹, and Wysor.

Alfalfa

Apollo, Apollo II, Armor, Cimarron, Dart, Liberty, Shenandoah, Vancor, Voris A77, and WL 320.

Red Clover

Kenstar, Redland II, Reddy, and Redman.

Grain Sorghum

Non-Bird Resistant: Asgrow/GS 712, Chaparral, FFR 321DR, Deltapine G-1711, Deltapine G-522DR, HyPerformer 1330DR, Penngrain yE, Pioneer brand 8230, N.K. S9740y, Topaz, Northrup King RA 787, Northrup King 2660, Northrup King KS780, Northrup King KS 787.

Burley Tobacco

Clay 501, Co-op 313, Co-op 543, MS Bu. 21xKy 10, Ms Ky 14xL8, R7-11, TN 86, TN 90, R 610, and Va. 509

Dark-Fire Cured Tobacco

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

Dark-Air Cured Tobacco

Ky 160 and OS 802.

¹Present plans indicate that this variety will not be recommended after 1991.

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

Sorghum x Sudangrass crosses

DeKalb SX-17, Deltapine FP4, Haygrazer II, Summergrazer III, and Sordan 79.

Sudangrass

Trudan 8.

Pearlmillet

Millex 24, Tifleaf I, and Millhy 99.

Table A

Recommended Soybean Varieties for 1992

| Brand | Variety | Resistance | | Brand | Variety | Resistance | |
|--|---------|-----------------|-----------------------------|--|---------------------|-----------------|-----------------------------|
| | | Yield Bu/A | to Stem Canker ¹ | | | Yield Bu/A | to Stem Canker ¹ |
| -----Maturity Group V----- | | | | | | | |
| Resistant to Races 3 and 4 of cyst nematode ² | | | | Not resistance to cyst nematode | | | |
| Asgrow | A5979 | 43 | MR | Va. | Hutcheson | 41 | HR |
| Asgrow | A5403 | 40 | MR | Pioneer | 9591 | 40 | HR |
| FFR | 565 | 37 | HS | Northup King Coker | 425 | 39 | MS |
| AgraTech | AT550 | 39 | MR | Deltapine | 105 | 39 | MS |
| Pioneer | 9581 | -- ³ | HS | FFR | 561 | 39 | HR |
| Mo. | Avery | -- ³ | -- ³ | Va. | Essex | 38 | MS |
| | | | | AgraTech | 575 | 38 | HR |
| | | | | FFR | 562 | 38 | HR |
| Resistant to Race 3 of Cyst nematode | | | | Va. | Bay | -- ³ | HR |
| Deltapine | 415 | 41 | MR | N.K. | RA 452 | -- ² | MS |
| N. K. Coker | 485 | 40 | MS | Riverside | 499 | -- ² | -- ³ |
| Terra Vig | 515 | 39 | MR | Mo. | Pershing | -- ² | MS |
| N. K. Coker | 6955 | 39 | HS | | | | |
| Tn. | Tn 5-85 | 38 | MR | | | | |
| Riverside | 577 | 37 | -- ³ | | | | |
| Hartz | 5370 | -- ³ | MS | -----Maturity Group IV----- | | | |
| | | | | Resistant to Races 3 and 4 Cyst nematode | | | |
| | | | | Tn. | Tn 4-86 | 46 | MR |
| | | | | No resistant to cyst nematode | | | |
| | | | | Pioneer | 9461 | 47 | -- ³ |
| | | | | Pioneer | 9442 | 44 | -- ³ |
| | | | | DeKalb | CX 458 | 44 | -- ³ |
| | | | | HyPerformer | HY 401 | 43 | -- ³ |
| | | | | DeKalb | CX 415 ⁴ | 39 | -- ³ |
| -----Late and Very Late Maturity Group VI and VII----- | | | | | | | |
| Resistant to Races 3 and 4 cyst nematode | | | | Not resistance to cyst nematode | | | |
| Asgrow | A 6297 | 48 | HS | Asgrow | 6785 | 45 | MR |
| USDA | Leflore | -- ³ | MS | Riverside | 699 | 42 | -- ³ |
| Hartz | 6130 | -- ³ | HS | Riverside | 677 | 40 | -- ³ |
| | | | | Deltapine | 566 | -- ³ | MS |
| -----Resistant to race 3 cyst nematode----- | | | | | | | |
| HyPerformer | HSC B2J | 45 | -- ³ | Riverside | 696 | 40 | -- ³ |
| N.K. | RA 606 | 42 | -- ³ | HyPerformer | Shiloh | -- ³ | HR |
| Pioneer | 9691 | 41 | -- ³ | Deltapine | 726 | -- ³ | MS |
| Riverside | Cajun | 41 | MS | Hartz | 6200 | -- ³ | MS |

¹HR=highly resistant; MR=moderately resistant; MS=moderately susceptible; S=susceptible; HS=highly susceptible. Ratings compiled by Melvin A Newman with the help of Albert Chambers and Lawrence Young, all located at the West Tn. Exp. Station, Jackson, Tn.

²Evaluated with the early maturing varieties (Maturity Group IV).

³Variety was not submitted for testing; Variety will be removed from recommended list if it is not submitted for evaluation two consecutive years.

⁴Present plans indicate that this variety will not be recommended after 1992.

⁵Cordell recommended where Race 5 soybean cyst nematode is a problem.

Table B

The recommended Corn Hybrids for 1992 are as follows:

Two or Three Year Averages (1989-91)

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

| Brand | Hybrid | Yield | Grain Moisture | Virus Complex |
|---|---------------------|-----------------------------|----------------|---------------------|
| | | Bu/A | % | Rating ² |
| Early-----Yellow | | | | |
| Beck | 72X | 177 | 19.3 | Low |
| Pioneer | 3343 | 156 | 18.3 | Low |
| DeKalb | DK 649 | 155 | 19.3 | Med-Low |
| Deltapine | DP 4543 | 150 | 19.1 | Low |
| Oro | 180 | 149 | 19.5 | Low |
| Not included in 1991 trials | | | | |
| Oro | 151 | " " | " " | Med-Low |
| FFR | 747C | " " | " " | Low |
| Jacques | 7820 | " " | " " | Low |
| Deltapine | G-4522 ¹ | " " | " " | Low |
| DeKalb | DK 636 ¹ | " " | " " | Low |
| Pioneer | 3389 | " " | " " | Low |
| Pioneer | 3378 ¹ | " " | " " | Low |
| Early-----White | | | | |
| Zimmerman | Z-17W | 165 | 20.7 | -- |
| Medium-season ----500 ³ ----- Yellow | | | | |
| Asgrow | RX 919 | 194 | 20.2 | Med-High |
| McCurdy | 7777 | 189 | 20.4 | Low |
| Zimmerman | Z-27Y | 186 | 18.8 | Low |
| DeKalb | DK 689 | 186 | 20.0 | Med-High |
| Garst | 8315 | 183 | 19.2 | Low |
| Pioneer | 3295 | 181 | 18.9 | Med-Low |
| DeKalb | DK 677 | 180 | 19.4 | - |
| Northrup King | S 8505 | 180 | 19.3 | - |
| Deltapine | G-4666 | 177 | 19.7 | Low |
| Deltapine | DP 5750 | 177 | 19.5 | - |
| Northrup King | S 7759 ¹ | 170 | 19.0 | Med-Low |
| AgraTech | 888 ¹ | 170 | 19.7 | Med-Low |
| AgraTech | 825 ¹ | 169 | 20.1 | Low |
| Deltapine | RA 1502 | Not included in 1991 trials | | Low |
| DeKalb | DK 711 | " " | " " | Med |
| Pioneer | 3320 | " " | " " | Low |
| Beck | 83X ¹ | " " | " " | Low |
| Jacques | 8250 ¹ | " " | " " | Med |
| McCurdy | 7800 ¹ | " " | " " | Low |
| McCurdy | 7700 ¹ | " " | " " | Low |
| Medium Season--500--White | | | | |
| Deltapine | G-4644W | 169 | 21.0 | -- |

Corn Hybrids for 1992 continued:

| Medium-season--600 ³ --Yellow | | | | |
|--|----------------------|-----------------------------|------|-----|
| Asgrow | RX 908 | 172 | 18.5 | Low |
| Jacques | 8210 | 168 | 18.6 | - |
| Terra | TR 1180 | 166 | 18.6 | Low |
| Terra | TR 1190 | 161 | 19.0 | Low |
| Terra | TR 1170 | 157 | 18.7 | Low |
| HyPerformer | HS 97 | 157 | 19.1 | Low |
| FFR | 844 ¹ | 146 | 20.1 | Low |
| Cargill | 8527 ¹ | Not included in 1991 trials | | Low |
| Zimmerman | Z-38 ¹ | " | " | Low |
| Northrup King | PX 9581 ¹ | " | " | Low |
| Deltapine | G-4733 ¹ | " | " | Med |

| Medium-season--600--white | | | | |
|---------------------------|---------|-----|------|---------|
| Asgrow | RX 956W | 167 | 20.2 | Med-Low |
| HyPerformer | HS 175W | 165 | 20.0 | - |

| Full-Season-----Yellow | | | | |
|------------------------|-------------------|-----------------------------|------|----------|
| Pioneer | 3165 | 156 | 21.1 | Low |
| Jacques | 9220 | 151 | 20.3 | - |
| Pioneer | 3140 | 148 | 18.7 | Low |
| Deltapine | 4820 | 145 | 22.4 | - |
| Northrup King | S8645 | 140 | 19.0 | Low |
| Asgrow | Rx 947 | 140 | 20.1 | - |
| AgraTech | GK 900 | 138 | 20.4 | Med-High |
| Deltapine | G-4868 | 135 | 22.4 | Med-Low |
| Northrup King | N8727 | 133 | 20.5 | Low |
| Pioneer | 3147 | 129 | 20.1 | Med-High |
| DeKalb | DK 789 | Not included in 1991 Trials | | Med-High |
| Jacques | 8400 | " | " | Med |
| Super Crost | 7195 ¹ | " | " | Med-Low |

| Full-season-----White | | | | |
|-----------------------|---------------------|-----------------------------|------|---------|
| Zimmerman | Z-54W | 143 | 20.1 | Med-low |
| Pioneer | 3144W | 142 | 19.6 | Med-Low |
| Zimmerman | Z-16W | 137 | 21.4 | Low |
| Zimmerman | Z-14W ¹ | 129 | 21.0 | Med |
| Super Crost | 700W ¹ | Not included in 1991 Trials | | Low |
| Northrup King | S8645W ¹ | " | " | Low |
| FFR | 925W | " | " | Low |

¹Present plans indicate that this hybrid will not be recommended after 1992.

²Hybrids rated lower than medium-high are not recommended under heavy virus conditions.

³For the medium-season hybrids, 500 and 600 refers to the entry numbers used in the two tests. Yields should be compared within each entry group only.

GRAIN SORGHUM

Non-bird resistant varieties

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

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

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

Deltapine RA 787: A non-bird resistant variety with hetero-yellow and red pericarp. Reported to have resistance to MDMV, head smut, and downy mildew.

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

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

HyPerformer 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.

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

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

Northrup King KS 737: A non-bird resistant variety with hetero-yellow endosperm with bronze pericarp and grain color.

Northrup King KS 780: A non-bird resistant variety with hetero-yellow endosperm and bronze pericarp. Reported to be resistant to MDMV and head smut.

Northrup King 2660: A non-bird resistant variety with yellow endosperm and red pericarp. Reported to have MDMV disease resistance.

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

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

SOYBEANS

Asgrow A5403: Has purple flowers, grey pubescence, and seed with an imperfect black hila. Has resistance to Race 3 soybean cyst nematodes and moderate resistance to Race 4. Has shown moderate resistance to stem canker. (maturity group V).

Asgrow A5979: Has white flowers, grey pubescence, and seed with buff hila. Has resistance to race 3 soybean cyst nematode and moderate resistance to race 4. Maturity Group IV.

Asgrow A6785: Has white flowers, grey pubescence with moderate resistance to Incognita. Has no resistance to soybean cyst nematode Maturity Group VI. Plant height similar to Asgrow A6242.

Asgrow A6297: Has white flowers, grey pubescence, and seed with a buff hila. Has resistance to race 3 soybean cyst nematode and moderate resistance to race 4. Maturity Group VI.

AgraTech AT 575: Has white flowers, grey pubescence, and seed with buff hila. Has no resistance to soybean cyst nematode. Highly resistant to stem canker and moderate resistant to frog eye.

AgraTech AT 550: Has purple flowers, tawny pubescence, and seed with black hila. Has resistance to race 3 and 4 of soybean cyst nematodes. It is rated moderately resistant to stem canker. Maturity Group V.

Avery: Has white flowers, tawny pubescence, and seed with a black hila. Resistance to Races 3 and 4 soybean cyst nematodes. Highly resistant to SDS. Maturity Group V.

Bay: Has purple flowers, grey pubescence, and seed with buff hila. Resistant to bacterial pustule. Maturity Group V. Has shown resistance to stem canker.

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

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

Northrup King Coker RA 452: Has white flowers, grey pubescence, and seed with buff hila. Has some resistance to stem canker with no resistance to soybean cyst nematodes. Maturity Group IV.

Northrup King Coker 606: Has white flowers, grey pubescence and seed with buff hila. Resistance to race 3 of the soybean cyst nematode. Maturity Group VI.

Northrup King Coker 6955: Has white flowers, tawny pubescence, and seed with a black hila. Has resistance to Race 3 soybean cyst nematode (maturity group V).

DeKalb CX415: Has white flowers, tawny pubescence, and seed with a black hila. Has no resistance to soybean cyst nematode. Early maturity group IV or late III.

DeKalb CS458: Has white flowers, tawny pubescence, and seed with a black hila. Has no resistance to soybean cyst nematode. Early Maturity IV or Late Maturity Group III.

Deltapine 566: Has purple flowers, tawny pubescence, and seed with black hila. Has shown some tolerance to stem canker. Maturity Group VI.

Deltapine 415: Has purple flowers, grey pubescence, and seed with imperfect black hila. Resistant to race 3 of soybean cyst nematode. Reported to be resistant to stem canker. Maturity Group V.

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

Deltapine 726: Has purple flowers, tawny pubescence, and seed with black hila. Resistance to race 3 of the soybean cyst nematode. Maturity Group VI.

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

FFR 561: Has white flower, grey pubescence, and seed with buff hila. Has no resistance to soybean cyst nematodes. Maturity Group V. Has shown resistance to stem canker.

FFR 562: Has purple flowers, grey pubescence, and seed with buff hila. Has no resistance to soybean cyst nematode. In trials at Jackson, it has shown good resistance to stem canker. Maturity Group V.

FFR 565: Has white flowers, brown pubescence, and seed with black hila. Has resistance to race 3 and 4 soybean cyst nematode. Maturity Group V.

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

Hartz 6130: Has purple flowers, tawny pubescence, and seed with black hila. Has resistance to race 3 and 4 of the soybean cyst nematode. Maturity Group VI.

Hartz 6200: Has white flowers, tawny pubescence, and seed with black hila. Resistance to race 3 of the soybean cyst nematode. Maturity Group VI.

Hutcheson: Has white flowers, grey pubescence, and seed with a buff hila. Has high resistance to stem canker and moderate resistance to frog eye disease, Maturity group V. Has no resistance to soybean cyst nematode.

Leflore: Has purple flowers, tawny pubescence, and seed with black hila. Resistant to race 3 and 4 of the soybean cyst nematode. Leflore is reported to have field resistance to stem canker and aerial blight similar to Centennial. Maturity Group VI.

Pershing: Has white flowers, grey pubescence, and seed with buff hila. This variety stands well but does not have any cyst nematode resistance. Maturity Group V.

Pioneer brand 9581: Has white flowers, tawny pubescence, and seed with black hila. Resistant to race 3 and 4 of the soybean cyst nematode. Maturity Group V.

Pioneer brand 9442: Has purple flowers, tawny pubescence, and seed with black hila. Has no soybean cyst nematode resistance. Maturity Group IV.

Pioneer brand 9461: Has white flowers, tawny pubescence, and seed with black hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

Pioneer brand 9591: Has purple flowers, grey pubescence and seed with buff hila. Has no resistance to soybean cyst nematode. Maturity Group V.

Pioneer brand 9691: Has white flowers, tawny pubescence, and seed with a black hila. Has resistance to Race 3 soybean cyst nematode (maturity group VI).

Riverside 499: has purple flowers, grey pubescence, and seed with a black hila. Has no resistance to soybean cyst nematode. Maturity Group V.

Riverside 577: Has white flowers, grey pubescence, and seed with black hila. Resistant to race 3 of soybean cyst nematode. Is reported to have resistance to root rot nematodes. Maturity Group V.

Riverside 677: Has white flowers, tawny pubescence, and seed with a buff hila (maturity group VI).

Riverside 696: Has purple flowers, and tawny pubescence. Resistant to race 3 soybean cyst nematode. Maturity Group VI.

Riverside 699: Has white flowers, grey pubescence, and seed with buff hila. Has no resistance to soybean cyst nematode. Maturity Group VI.

Riverside Cajun: Has white flowers, tawny pubescence, and seed with black hila. Has resistance to Race 3 soybean cyst nematode. Has moderate resistance to frog eye leaf disease (maturity group VI).

Shiloh (HyPerformer): Has white flowers, tawny pubescence, and seed with black hila. Resistant to race 3 of the soybean cyst nematode. Has very good resistance to stem canker. Maturity Group VI.

HSC B2J (HyPerformer): Has purple flowers, tawny pubescence, and seed with a black hila. Resistant to Race 3 soybean cyst nematode (maturity group VI).

HyPerformer HSC 401: Has purple flowers, grey pubescence and seed with buff hila. Has no resistance to soybean cyst nematode. Maturity Group IV.

TN 5-85: Has white flowers, grey pubescence, and seed with buff hila. Resistant to race 3 of soybean cyst nematode. Maturity Group V. Has moderate resistance to stem canker and MR to SDS.

TN 4-86: Has purple flowers and tawny pubescence. Resistant to races 3 and 4 of the soybean cyst nematode. Has good resistance to stem canker and high resistance to sudden death syndrome (SDS) and frog eye (maturity group IV).

Terra-Vig 515: Has purple flowers, tawny pubescence, and seed with a black hila. Resistance to Race 3 soybean cyst nematode (maturity group V).

OATS

Fall-Seeded

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

BARLEY

Anson: A medium maturing, medium test weight with good straw strength. It has good disease resistance to leaf rust and powdery mildew. Test weight has been similar to Wysor.

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.

Wysor: A winter-type feed barley that is six-rowed and awnletted to awnless, with short rough awns usually occurring on central spikelets and occasionally on lateral spikelets. Wysor is similar to Henry in test weight, height, lodging and winter hardiness. Wysor is reported to have good resistance to scald, powdery mildew and leaf rust found in Virginia. It is also reported to have some resistance to barley yellow dwarf virus.

SOFT RED WINTER WHEAT

Cardinal: A medium maturing soft red winter wheat variety released by Ohio. Reported to have some resistance to races GP, A, C, & F hessian fly.

Northrup King 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. No Hessian fly resistance.

Northrup King Coker 983: A semi-dwarf which is a few inches shorter than Coker 747. Coker 983 stands well with good tolerance to most prevalent races of leaf rust and powdery mildew. Did not perform as well in 1986 as in 1985 and 1987.

Northrup King Coker 9323: An early variety similar to Coker (N.K.) 916 in plant height, lodging resistance with a slightly lower test weight. This variety is reported to have good leaf rust and powdery mildew resistance with no Hessian fly resistance. In the variety trials there has been a moderate amount of leaf rust and powdery mildew on this variety.

Northrup King Coker 9766: An early variety with a plant height similar to Coker (N.K.) 916 and Saluda with slightly less standing ability than Coker (N.K.) 916 and Saluda. Test weight has been about 2 lbs per bu. lower than Coker (N.K.) 916. It is reported to have good resistance to powdery mildew, leaf rust, and septoria leaf blotch with poor resistance to stem rust. Not reported to have any Hessian fly resistance. This variety has shown good resistance to powdery mildew and leaf rust in the state variety trials.

Northrup King Coker 9733: This variety performs similar to Coker (N.K.) 9766 in yield with the same maturity and with good straw strength similar to Coker (N.K.) 916. Plant height is taller than Coker (N.K.) 9766 with better test weight than Coker (N.K.) 9766. It is reported to be resistant to leaf rust and powdery mildew. No Hessian fly resistance.

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

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

Pioneer brand 2551: An early variety with similar maturity, plant height and straw strength as Pioneer brand 2550. Test weight about two pounds lower than 2550. Leaf rust better than 2550 with above average resistance for powdery mildew. 2551 has tolerance to the predominant biotypes of Hessian fly.

Pioneer brand 2555: An early variety with similar maturity, plant height, test weight, and straw strength as Pioneer brand 2550. Headed a few days earlier than Pioneer brand 2550 or 2551. Field tolerance to prevalent biotype of Hessian fly.

Pioneer brand 2548: An early maturing variety similar to Pioneer brand 2555 in maturity. A few inches shorter than 2555 with higher average test weight. Has shown some tolerance to leaf rust, and powdery mildew disease. Has no resistance to Hessian fly.

Saluda: An awnletted variety with very short tip awns, is white-chaffed and medium-short in height. Spikes are short and compact and generally tend to have three seeds per spikelet. In Virginia, has shown moderate resistance to powdery mildew and leaf rust. It is moderately susceptible to spindle streak virus and is susceptible to stem rust 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 soils (such as Henry) if the surface water is controlled. Alfalfa cannot tolerate flooding for any period of time. Apollo has high resistance to bacterial wilt, but this disease has not been a problem in Tennessee.

Apollo II: A winter-hardy variety with good recovery ability. Apollo II is reported to resistance to bacterial wilt, Fusarium wilt and moderate resistance to anthracnose and verticillium wilt. It is reported to have high resistance to phytophthora root rot and spotted alfalfa aphid.

Armor: Developed by Northrup King and is resistant to bacterial, fusarium wilt and phytophthora root rot with moderate resistance to anthracnose.

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

Dart: Developed by AgriPro and has resistance to bacterial, verticillum and fusarium wilt. Dart also has anthracnose and phytophthora root rot.

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

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

Shenandoah: A Great Plains variety with resistance to bacterial and fusarium wilt. This variety also has resistance to anthracnose, phytophthora root rot and stem nematode.

Vancor: Developed by Northrup King and is resistant to bacterial and fusarium wilt. Vancor has moderate resistance to phytophthora root rot and pea aphid. It also has resistance to anthracnose and stem nematode.

WL 320: A winter-hardy variety with good recovery ability. It is reported to be resistant to bacterial wilt, phytophthora root rot, and spotted alfalfa aphid. It is also reported to be moderate resistant to verticillium wilt, anthracnose, spotted alfalfa aphid, pea aphid, blue alfalfa aphid, stem nematode and root knot nematode. Has high resistance to Fusarium wilt.

DARK FIRE-CURED TOBACCO

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

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

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

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

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

DARK AIR-CURED TOBACCO

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

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

BURLEY TOBACCO

Black Shank Resistant Varieties

TN 86: is a stand-up variety with moderate to high yield potential. TN 86 is resistant to Tobacco Vein Mottling and Tobacco Etch Viruses. It matures about 10-14 days later than 14xL8. For maximum yields, TN 86 should be topped at approximately 22-24 leaves at the elongated button to early flower stage and harvested about five weeks after topping.

TN 90: a new variety released by the University of Tennessee that has moderate yield potential. Is resistant to Tobacco Vein Mottling and Tobacco Etch Viruses. TN 90 differs from TN 86 in that it has mosaic virus resistance, matures about seven days earlier, has a smaller stalk and tolerates drought better.

CLAY 501: has low to moderate yield potential and generally blooms a few days earlier than other varieties with black shank resistance. Clay 501 is recommended for use where black shank disease is severe and crop rotation is restricted.

COOP 543: has low to moderate yield potential. Coop 543 is recommended for use where black shank disease is severe and crop rotation is restricted.

VA 509: has moderate to high yield potential. VA 509 should not be grown where black root rot is a problem. This variety has a large stalk in comparison to other varieties.

R 610: a new variety by Rikard Seed Company that has moderate yield potential. R610 is comparable to TN 90 in yield potential and black shank resistance but has no resistance to viruses.

Black Shank Susceptible Varieties

14xL8: has high yield potential and is early maturing. 14xL8 has large, semi-drooping leaves. This variety has no resistance to Race 1 black shank and should not be grown in fields infested with black shank. 14xL8 tends to produce excessive suckers in some years.

21x10: has high yield potential and usually produces large plants. This variety should not be grown where black root rot is a problem.

COOP 313: has high yield potential. Coop 313 has low resistance to black shank and should not be grown where black shank is a problem.

1991
PERFORMANCE OF FIELD CROP VARIETIES

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

DATA FOR 1991
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 in Tennessee and neighboring states, as well as the best experimental varieties being developed by experiment stations, other public 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 adaptation 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.

Least significant difference (L.S.D.) values at the five percent level for the 1991 tests are shown at the bottom of each table. Yields of any two varieties being compared must differ by at least this amount to be considered different in yielding ability. Also, coefficient of variation (C.V. %) values 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 1991, the soil types are reported at the end of the table.

PERFORMANCE OF CORN HYBRIDS FROM 1989 THROUGH 1991

The medium-season hybrid trials were conducted at seven locations, the full-season at four locations, and the early-maturing hybrids at five locations in 1991. No data are reported for Spring Hill due to drought and herbicide damage. All experimental field trials at Crossville were destroyed in 1990 by a severe hail storm. Early-maturing data from Martin in 1990 was not reported due to yield variability caused by drought, and medium-season (500 group) data were not reported in 1991 due to variability caused by drought. The medium-season (600 group) at Springfield was not harvested in 1991 due to poor stand caused by surface water.

All corn hybrid tests were over-planted and thinned to about 19,000 to 28,000 plants per acre. Population varied from location to location but the population was the same for all hybrids at a given location. The variation in population among locations was due to different row spacing, the within row spacing was the same at all locations. Most tests were conducted using thirty-six inch row spacing, but at Milan and Knoxville spacing between rows was thirty inches. The tests were fertilized with 150 pounds or more of nitrogen per acre. At least as much phosphorus and potassium were applied as recommended by soil test results. The plot size for hand-planted plots in most cases was two rows 11 feet long, and the mechanically harvested plots were two rows 25 to 30 feet in length. Plots were replicated four times at each location. The corn hybrid studies at Jackson, Martin, Spring Hill, and Knoxville were harvested with a combine-sheller and all other tests were harvested by hand in 1991. The early-maturing hybrids at Ames and full-season hybrid at Jackson were grown with and without irrigation in 1990 and 1991.

Two medium-season corn hybrid trials are grown each year and one is referred to as the 500 group and the other as the 600 group. The 500 and 600

refer to entry number. Two trials of this maturity group are conducted because most variety trials are limited to 40 entries and there are usually 70 or 80 hybrids in the medium-maturity group.

Corn yields are expressed in bushels per acre, ADJUSTED TO 15.5 PERCENT MOISTURE. The percent of GRAIN MOISTURE AT HARVEST is presented to show the RELATIVE MATURITY OF EACH HYBRID.

Yield Results—Medium-season—500 group

The medium-season 500 group hybrid results are reported in Tables 1 through 6. No 1991 data are reported for Spring Hill due to herbicide injury to some hybrids which resulted in poor stands. No data are reported for Martin in 1991 due to dry weather and soil variability which resulted in a high C.V. for the medium-season 500 group.

The average for forty hybrids and five locations was 149 bushels per acre (Table 1). Using Dekalb DK 689 as the check hybrid in the 1991 medium-season 500 group, no hybrid produced higher yields (Table 1). The two and three year results are shown in Tables 3 through 6. In Table 5 it can be seen that no hybrid yielded more and four hybrids yielded less (at the .05% level) than the check hybrid (Dekalb DK 689).

Asgrow RX 919 yielded well and has been evaluated in previous years as X9199. The top 4 hybrids (Tables 5 and 6) ranged in yield from 186 to 194 and were not significantly different at the .05% level.

Yield Results—Medium-season—600 group

The 600 group results are shown in Tables 7 through 10. Pioneer brand 3154 was evaluated in 1990 in the full-season trials and in 1991 it was evaluated in medium-season 600 group as well as the full-season trials. This hybrid yielded well in both tests with more lodging occurring in the full-

season trials (Table 12). No results are shown for Knoxville due to errors in mechanical harvesting of this study. No data are reported for Springfield due to poor stands from excess water at planting. No data are reported for Spring Hill due to herbicide injury to some hybrids which resulted in a variable plant population, which resulted in a high C.V.

The average of the top four hybrids produced a higher yield than 36 of the hybrids in this trial (Table 7). No 1990 data was included in Tables 9 and 10. The summaries in these tables were for 1989 and 1991 at only three locations. The average of the top six hybrids was significantly higher than four of the eleven hybrids evaluated in 1989 and 1991 (Table 9).

Full-season hybrids

The results of forty-two full-season hybrids evaluated in 1991 at four locations are shown in Tables 11 and 12. Pioneer brand 3147 did not perform as well in 1991 as it has in previous years. Asgrow X9231, Pioneer brand 3165, and seven other hybrids produced significantly (at the .05% level) higher yields than the average yield of 119 bushels per acre (Table 11). The two and three year results are shown in Tables 13 through 16. Here again, Pioneer brand 3165 was the leading variety in average yield for two or three years. Zimmerman Z-54w, Pioneer brand 3144w, and Zimmerman Z-16w produced higher yields (using the three year average in Table 15) than Zimmerman Z-14w.

Early Maturing

The early-maturing data for 1991 are reported in Tables 17 and 18. Pioneer brand 3394 was one of the earliest (17.6% grain moisture) with Oro 188, Hyperformer HS60, and Southern Cross 511 producing grain with over 20% moisture at harvest. The yield range in the early trial was from 112 to 156 with this Pioneer hybrid being among the top 5 yields (Table 17). Two year results are shown in Tables 19 through 22.

Corn Virus data for 1991

The corn hybrids were grouped by maturity and evaluated at Knoxville for corn virus complex. Little or no virus was noted in this study. The susceptible check produced 99 bushels per acre in the early trials (Table 23) and 85 bushels per acre in the medium grouping (Table 24) and 87 in the full-season group. The range in yield for the early maturing group was 128 to 198. The range in yields for the medium-maturing group was 132 to 206. The full-season produced a range in yield from 124 Bu/A for Pioneer brand 3147 to 200 Bu/A. For Zimmerman Z-63W. No virus ratings were made on any of these trials due to the lack of disease.

Silage Trials

Ten hybrids were harvested for silage at three locations and these results will be published in another report. Five tropical hybrids were evaluated at Knoxville at two planting dates of late May and June.

Table 1. Corn: Yield of medium-season hybrids (500 group) evaluated at five locations in 1991.

| Color | Cross | Brand | Hybrid | Avg. | Greeneville ¹ | Knoxville ² | Springfield ³ | Milan ⁴ | Crossville ⁵ |
|------------------|-------|---------------|---------|-------|--------------------------|------------------------|--------------------------|--------------------|-------------------------|
| Bushels per acre | | | | | | | | | |
| Y | 2X | HyPerformer | HS 9773 | 163 | 190 | 172 | 147 | 169 | 139 |
| Y | 2X | DeKalb | DK 715 | 162 | 145 | 178 | 141 | 229 | 119 |
| Y | 2X | Garst | 8315 | 161 | 147 | 186 | 155 | 194 | 125 |
| Y | 2X | Deltapine | DP 5750 | 157 | 151 | 189 | 141 | 176 | 130 |
| Y | 2X | Pioneer | 3180 | 157 | 155 | 187 | 130 | 178 | 135 |
| Y | 2X | Zimmerman | Z-27Y | 157 | 169 | 180 | 148 | 168 | 119 |
| Y | 2X | DeKalb | DK 689 | 156 | 159 | 192 | 133 | 172 | 126 |
| Y | 2X | Deltapine | G-4666 | 156 | 160 | 199 | 140 | 165 | 117 |
| Y | 2X | McCurdy | 7777 | 155 | 157 | 212 | 115 | 159 | 133 |
| Y | 2X | HyPerformer | HS 9911 | 155 | 165 | 184 | 131 | 180 | 115 |
| Y | 2X | Asgrow | RX 919 | 155 | 139 | 207 | 131 | 174 | 124 |
| Y | 2X | Beck | 87MDM | 153 | 157 | 177 | 147 | 183 | 101 |
| Y | 2X | Northrup King | S8505 | 151 | 167 | 178 | 132 | 165 | 113 |
| Y | 2X | AgraTech | 888 | 151 | 148 | 167 | 135 | 169 | 136 |
| W | 2X | Zimmerman | Z-61W | 151 | 149 | 183 | 128 | 170 | 124 |
| W | 2X | Deltapine | G-4644W | 150 | 159 | 181 | 128 | 164 | 118 |
| Y | 2X | Pioneer | 3295 | 150 | 171 | 160 | 129 | 145 | 145 |
| Y | 2X | HyPerformer | HS 9704 | 148 | 153 | 178 | 122 | 153 | 136 |
| Y | 2X | Asgrow | XP 9079 | 148 | 150 | 178 | 141 | 156 | 113 |
| Y | 2X | Northrup King | S7759 | 146 | 142 | 186 | 119 | 167 | 118 |
| Y | 2X | Northrup King | N7816 | 146 | 143 | 192 | 132 | 157 | 105 |
| Y | 2X | Beck | 81X | 146 | 145 | 173 | 136 | 153 | 121 |
| Y | 2X | Asgrow | X8971 | 145 | 152 | 179 | 121 | 154 | 120 |
| Y | 3X | Beck | 85MDM | 144 | 146 | 159 | 139 | 168 | 110 |
| Y | 2X | Northrup King | N8318 | 144 | 141 | 186 | 123 | 161 | 110 |
| Y | 2X | HyPerformer | HS9802 | 144 | 126 | 194 | 126 | 160 | 114 |
| Y | 2X | AgraTech | 757 | 142 | 143 | 169 | 132 | 147 | 120 |
| Y | 2X | Triple J | 6902 | 142 | 151 | 174 | 128 | 151 | 104 |
| Y | 2X | Asgrow | XP 8090 | 141 | 137 | 187 | 121 | 143 | 119 |
| Y | 2X | Asgrow | XP 8951 | 141 | 139 | 177 | 109 | 160 | 119 |
| Y | 2X | Asgrow | RX 899 | 141 | 157 | 161 | 132 | 146 | 107 |
| Y | 2X | Deltapine | 4581 | 140 | 138 | 167 | 131 | 156 | 108 |
| Y | 2X | Asgrow | X 9141 | 139 | 110 | 194 | 129 | 149 | 115 |
| Y | 2X | AgraTech | 825 | 138 | 126 | 166 | 125 | 152 | 124 |
| Y | 2X | DeKalb | DK 677 | 138 | 156 | 172 | 114 | 133 | 117 |
| Y | 2X | Garst | 8250 | 137 | 116 | 180 | 127 | 141 | 120 |
| L.S.D. (.05) | | | | 11.6 | 25.0 | 24.8 | 24.7 | 32.2 | 17.5 |
| C.V. % | | | | 12.6 | 12.0 | 9.8 | 13.5 | 14.1 | 10.4 |
| AVG. | | | | 148.7 | 148.9 | 180.6 | 131.0 | 163.0 | 120.0 |

¹Waynesboro silt loam (2% to 5% slopes). ⁴Falaya silt loam (2% to 5% slopes).

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

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

Table 2. Corn: Yield and other characteristics of medium-season (500 group) hybrids evaluated at five locations in 1991.

| Color | Cross | Brand | Hybrid | Yield | Lodged Plants | Grain Quality | Husk Cover | Ear Ht. | Grain Moisture at Harvest |
|-------|-------|---------------|---------|-------|------------------|---------------------|---------------------|------------|---------------------------------|
| | | | | Bu/A | Avg. | Rating ¹ | Rating ¹ | In. | % |
| Y | 2X | HyPerformer | HS 9773 | 163 | 4.1 | 4.2 | 4.5 | 59 | 18.4 |
| Y | 2X | DeKalb | DK 715 | 162 | 0.4 | 3.7 | 3.8 | 52 | 19.6 |
| Y | 2X | Garst | 8315 | 161 | 0.6 | 2.8 | 3.3 | 62 | 18.7 |
| Y | 2X | Deltapine | DP 5750 | 157 | 0.4 | 3.3 | 2.7 | 55 | 19.1 |
| Y | 2X | Pioneer | 3180 | 157 | 0.7 | 5.0 | 4.6 | 52 | 18.2 |
| Y | 2X | Zimmerman | Z-27Y | 157 | 0.3 | 3.0 | 3.3 | 60 | 18.8 |
| Y | 2X | DeKalb | DK 689 | 156 | 0.4 | 3.2 | 3.7 | 57 | 19.5 |
| Y | 2X | Deltapine | G-4666 | 156 | 0.1 | 3.8 | 2.8 | 55 | 19.3 |
| Y | 2X | McCurdy | 7777 | 155 | 1.2 | 4.3 | 3.8 | 57 | 19.4 |
| Y | 2X | HyPerformer | HS 9911 | 155 | 0.3 | 4.0 | 2.9 | 59 | 18.8 |
| Y | 2X | Asgrow | RX 919 | 155 | 0.7 | 2.8 | 3.5 | 61 | 19.2 |
| Y | 2X | Beck | 87MDM | 153 | 1.3 | 4.0 | 3.5 | 62 | 20.7 |
| Y | 2X | Northrup King | S 8505 | 151 | 1.6 | 3.2 | 2.9 | 59 | 18.7 |
| Y | 2X | AgraTech | 888 | 151 | 0.6 | 3.8 | 2.8 | 53 | 19.1 |
| W | 2X | Zimmerman | Z-61W | 151 | 0.4 | 3.2 | 3.4 | 62 | 19.4 |
| W | 2X | Deltapine | G-4644W | 150 | 1.0 | 2.8 | 3.1 | 58 | 21.0 |
| Y | 2X | Pioneer | 3295 | 150 | 0.2 | 3.8 | 5.9 | 58 | 18.1 |
| Y | 2X | HyPerformer | HS 9704 | 148 | 0.3 | 2.8 | 3.5 | 53 | 18.3 |
| Y | 2X | Asgrow | XP 9079 | 148 | 0.2 | 2.5 | 3.2 | 60 | 18.7 |
| Y | 2X | Northrup King | S 7759 | 146 | 0.8 | 3.2 | 3.3 | 56 | 18.1 |
| Y | 2X | Northrup King | N 7816 | 146 | 0.3 | 3.7 | 5.1 | 56 | 18.3 |
| Y | 2X | Beck | 81X | 146 | 0.3 | 2.7 | 3.5 | 60 | 18.5 |
| Y | 2X | Asgrow | X 8971 | 145 | 0.2 | 3.5 | 2.9 | 58 | 18.8 |
| Y | 3X | Beck | 85MDM | 144 | 0.7 | 3.8 | 3.0 | 64 | 19.7 |
| Y | 2X | Northrup King | N 8318 | 144 | 0.7 | 4.2 | 3.2 | 54 | 19.3 |
| Y | 2X | HyPerformer | HS 9802 | 144 | 0.6 | 3.7 | 4.1 | 45 | 19.5 |
| Y | 2X | AgraTech | 575 | 142 | 0.3 | 3.0 | 3.9 | 56 | 18.2 |
| Y | 2x | Triple J | 6902 | 142 | 1.0 | 3.3 | 3.6 | 53 | 19.0 |
| Y | 2X | Asgrow | XP 8090 | 141 | 0.3 | 4.5 | 4.7 | 54 | 17.7 |
| Y | 2X | Asgrow | XP 8951 | 141 | 0.4 | 3.0 | 2.7 | 54 | 18.3 |
| Y | 2X | Asgrow | RX 899 | 141 | 0.3 | 3.0 | 3.6 | 58 | 18.5 |
| Y | 2X | Deltapine | 4581 | 140 | 0.2 | 3.2 | 3.4 | 54 | 18.1 |
| Y | 2X | Asgrow | X 9141 | 139 | 0.6 | 3.7 | 4.4 | 44 | 19.0 |
| Y | 2X | AgraTech | 825 | 138 | 0.2 | 4.0 | 4.7 | 44 | 19.9 |
| Y | 2X | DeKalb | DK 677 | 138 | 1.3 | 3.3 | 3.6 | 52 | 18.8 |
| Y | 2X | Garst | 8250 | 137 | 0.1 | 4.3 | 4.7 | 44 | 18.9 |

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

Table 3. Corn: Yield of medium-season hybrids (500 group) evaluated at three locations for two years (1990-91).

| Color Cross Brand Hybrid | Avg. | Knoxville | Spring- | Milan |
|---------------------------|-------|-----------|---------|-------|
| | | | field | |
| Bushels per acre | | | | |
| Y 2X Asgrow RX 919 | 176 | 220 | 139 | 169 |
| Y 2X McCurdy 7777 | 172 | 207 | 144 | 164 |
| Y 2X Garst 8315 | 171 | 192 | 154 | 168 |
| Y 2X Zimmerman Z-27Y | 171 | 194 | 145 | 173 |
| Y 2X Pioneer 3180 | 170 | 200 | 143 | 168 |
| Y 2X HyPerformer HS 9773 | 167 | 187 | 149 | 165 |
| W 2X Zimmerman Z-61W | 166 | 205 | 134 | 160 |
| Y 2X Deltapine DP 5750 | 164 | 191 | 140 | 163 |
| Y 2X DeKalb DK 689 | 163 | 196 | 129 | 164 |
| Y 2X Deltapine G-4666 | 162 | 199 | 139 | 148 |
| Y 2X HyPerformer HS 9911 | 161 | 192 | 121 | 171 |
| Y 2X Northrup King S 8505 | 160 | 185 | 134 | 162 |
| Y 2X DeKalb DK 677 | 158 | 203 | 130 | 142 |
| Y 2X AgraTech 825 | 158 | 179 | 136 | 158 |
| Y 2X AgraTech 888 | 157 | 179 | 139 | 154 |
| Y 2X Pioneer 3295 | 156 | 195 | 129 | 145 |
| Y 2X Garst 8250 | 156 | 185 | 133 | 150 |
| W 2X Deltapine G-4644W | 155 | 174 | 136 | 156 |
| Y 2X Northrup King S 7759 | 153 | 180 | 127 | 151 |
| L.S.D. (.05) | 11.5 | 18.3 | 19.5 | 19.0 |
| C.V. % | 12.4 | 9.6 | 14.4 | 12.0 |
| AVG. | 163.0 | 192.8 | 136.9 | 159.4 |

Table 4. Corn: Yield and other characteristics of medium-season hybrids
(group 500) evaluated at three locations for two years (1990-91).

| Color | Cross Brand | Hybrid | Yield | Grain Quality | Husk Cover | Ear Ht. | Grain Moisture at Harvest |
|-------|------------------|---------|-------|---------------|------------|---------|---------------------------|
| | | | Bu/A | Rating | Rating | In. | % |
| Y | 2X Asgrow | RX 919 | 176 | 2.0 | 3.3 | 62 | 19.4 |
| Y | 2X McCurdy | 7777 | 172 | 3.5 | 3.5 | 56 | 19.7 |
| Y | 2X Garst | 8315 | 171 | 2.0 | 3.2 | 63 | 18.5 |
| Y | 2X Zimmerman | Z-27Y | 171 | 3.0 | 2.8 | 61 | 18.5 |
| Y | 2X Pioneer | 3180 | 170 | 4.5 | 4.8 | 54 | 18.5 |
| Y | 2X Hyperformer | HS 9773 | 167 | 4.0 | 4.5 | 59 | 18.5 |
| W | 2X Zimmerman | Z-61W | 166 | 3.0 | 3.0 | 61 | 19.4 |
| Y | 2X Deltapine | DP 5750 | 164 | 3.0 | 2.7 | 57 | 18.7 |
| Y | 2X DeKalb | DK 689 | 163 | 3.0 | 3.8 | 58 | 19.5 |
| Y | 2X Deltapine | G-4666 | 162 | 3.5 | 2.7 | 56 | 19.1 |
| Y | 2X HyPerformer | HS 9911 | 161 | 3.5 | 3.0 | 61 | 18.8 |
| Y | 2X Northrup King | S 8505 | 160 | 2.5 | 3.0 | 61 | 18.7 |
| Y | 2X DeKalb | DK 677 | 158 | 3.0 | 3.5 | 52 | 18.8 |
| Y | 2X AgraTech | 825 | 158 | 3.0 | 5.0 | 46 | 19.5 |
| Y | 2X AgraTech | 888 | 157 | 3.0 | 2.8 | 54 | 18.9 |
| Y | 2X Pioneer | 3295 | 156 | 4.0 | 6.5 | 61 | 18.1 |
| Y | 2X Garst | 8250 | 156 | 4.0 | 4.8 | 44 | 19.1 |
| W | 2X Deltapine | G-4644W | 155 | 2.5 | 3.2 | 58 | 20.6 |
| Y | 2X Northrup King | S 7759 | 153 | 2.5 | 3.5 | 56 | 18.3 |

Table 5. Corn: Yield of medium-season hybrids (500 group) evaluated at two locations for three years (1989-91).

| Color Cross Brand Hybrid | Avg. Knoxville Milan | | |
|---------------------------|----------------------|-------|-------|
| | Bushels per acre | | |
| Y 2X Asgrow RX 919 | 194 | 201 | 187 |
| Y 2X McCurdy 7777 | 189 | 200 | 179 |
| Y 2X Zimmerman Z-27Y | 186 | 185 | 188 |
| Y 2X DeKalb DK 689 | 186 | 189 | 182 |
| Y 2X Garst 8315 | 183 | 181 | 185 |
| Y 2X Pioneer 3295 | 181 | 192 | 170 |
| Y 2X DeKalb DK 677 | 180 | 196 | 165 |
| Y 2X Northrup King S 8505 | 180 | 178 | 182 |
| Y 2X Deltapine G-4666 | 177 | 190 | 164 |
| Y 2X Deltapine DP 5750 | 177 | 179 | 174 |
| Y 2X Northrup King S 7759 | 170 | 174 | 167 |
| Y 2X AgraTech 888 | 170 | 170 | 170 |
| Y 2X AgraTech 825 | 169 | 168 | 171 |
| W 2X Deltapine G-4644W | 169 | 169 | 169 |
| L.S.D. (.05) | 10.0 | 12.8 | 15.1 |
| C.V. | 9.8 | 8.6 | 10.7 |
| AVG. | 179.4 | 183.7 | 175.2 |

Table 6. Corn: Yield and other characteristics of medium-season hybrids (500 group) evaluated at two locations for three Years (1989-91).

| Color Cross Brand Hybrid | Avg. | Husk | Ear Grain Moisture | |
|---------------------------|------|--------|--------------------|------|
| | | Cover | Ht. at Harvest | |
| | Bu/A | Rating | In. | % |
| Y 2X Asgrow RX 919 | 194 | 4.7 | 60 | 20.2 |
| Y 2X McCurdy 7777 | 189 | 6.2 | 56 | 20.4 |
| Y 2X Zimmerman Z-27Y | 186 | 4.0 | 62 | 18.8 |
| Y 2X DeKalb DK 689 | 186 | 6.2 | 56 | 20.0 |
| Y 2X Garst 8315 | 183 | 5.0 | 62 | 19.2 |
| Y 2X Pioneer 3295 | 181 | 5.7 | 58 | 18.9 |
| Y 2X DeKalb DK 677 | 180 | 5.5 | 55 | 19.4 |
| Y 2X Northrup King S 8505 | 180 | 5.0 | 57 | 19.3 |
| Y 2X Deltapine G-4666 | 177 | 3.0 | 53 | 19.7 |
| Y 2X Deltapine DP 5750 | 177 | 3.5 | 54 | 19.5 |
| Y 2X Northrup King S 7759 | 170 | 4.7 | 59 | 19.0 |
| Y 2X AgraTech 888 | 170 | 3.2 | 54 | 19.7 |
| Y 2X AgraTech 825 | 169 | 5.7 | 51 | 20.1 |
| W 2X Deltapine G-4644W | 169 | 5.5 | 58 | 21.0 |

Table 7. Corn: Yield of medium-season hybrids (600 group) evaluated at four locations in 1991.

| Color | Cross | Cross Hybrid | Avg. | Greeneville ¹ | Milan ² | Crossville ³ | Martin ⁴ | |
|------------------|-------|----------------|---------|--------------------------|--------------------|-------------------------|---------------------|-------|
| Bushels per acre | | | | | | | | |
| Y | 2X | Pioneer | 3142 | 170 | 174 | 186 | 152 | 166 |
| Y | 2X | Pioneer | 3154 | 169 | 170 | 196 | 147 | 164 |
| Y | 2X | FFR Exp. | 18066 | 166 | 177 | 180 | 158 | 150 |
| Y | 2X | Southern Cross | 611 | 166 | 169 | 199 | 141 | 155 |
| Y | 2X | Stanford | S-99 | 153 | 159 | 191 | 120 | 140 |
| Y | 2X | Pfister | 4500 | 153 | 154 | 180 | 115 | 161 |
| Y | 2X | Best | 6711 | 151 | 143 | 183 | 125 | 151 |
| Y | 2X | Terra | TR 1180 | 150 | 148 | 180 | 135 | 138 |
| W | 2X | Asgrow | RX 956W | 149 | 166 | 173 | 124 | 135 |
| Y | 2X | Pioneer | X 0813 | 149 | 155 | 178 | 136 | 129 |
| Y | 2X | Asgrow | RX 908 | 149 | 159 | 176 | 127 | 136 |
| Y | 2X | Jacques | 8210 | 148 | 143 | 173 | 133 | 142 |
| Y | 2X | Triple J | 6780 | 147 | 138 | 170 | 122 | 159 |
| Y | 2X | Pfister | 3965 | 146 | 148 | 161 | 124 | 152 |
| Y | 2X | Callahan | C 774 | 145 | 128 | 178 | 123 | 152 |
| Y | 2X | Sunbelt Exp. | 5018 | 144 | 148 | 166 | 127 | 134 |
| Y | 2X | HyPerformer | HS 97 | 144 | 140 | 165 | 133 | 136 |
| Y | MX | FFR Exp. | 16847 | 143 | 147 | 168 | 128 | 129 |
| Y | 2X | Terra | TR 1190 | 143 | 144 | 178 | 127 | 122 |
| Y | 2X | Cargill | 7997 | 143 | 143 | 161 | 117 | 149 |
| Y | 2X | FFR Exp. | 10467 | 142 | 138 | 167 | 120 | 144 |
| W | 2X | HyPerformer | HS 175W | 142 | 154 | 147 | 122 | 146 |
| Y | 2X | Crows | 670 | 142 | 144 | 181 | 112 | 132 |
| Y | MX | Sunbelt | 1839 | 141 | 147 | 167 | 123 | 129 |
| Y | 2X | FFR Exp. | 19448 | 141 | 142 | 157 | 120 | 144 |
| Y | 2X | Callahan | C 783 | 140 | 127 | 167 | 114 | 151 |
| Y | 2X | Triple J | 6800 | 140 | 120 | 179 | 105 | 154 |
| Y | 2X | Callahan | C 775 | 139 | 146 | 162 | 120 | 129 |
| Y | 2X | Terra | TR 1170 | 139 | 144 | 169 | 115 | 129 |
| Y | 2X | Callahan | C 776 | 139 | 140 | 160 | 122 | 134 |
| Y | MX | FFR | 844 | 138 | 144 | 157 | 119 | 133 |
| W | 2X | Noble Bear | NB 710W | 138 | 120 | 184 | 120 | 126 |
| Y | 2X | Crows | 682 | 136 | 120 | 159 | 120 | 146 |
| Y | 2X | Zimmerman | Z-20 | 136 | 130 | 153 | 110 | 149 |
| Y | 2x | Cargill | 8427 | 135 | 142 | 159 | 115 | 125 |
| Y | 2X | DYNAGRO | 8290 | 135 | 131 | 153 | 119 | 136 |
| Y | 2X | Crows | 669 | 134 | 121 | 153 | 117 | 145 |
| Y | 2X | Jacques | 8288 | 134 | 133 | 156 | 111 | 135 |
| Y | 2X | Crows | 697 | 133 | 121 | 169 | 115 | 125 |
| Y | 2X | Sunbelt | 1803 | 132 | 133 | 154 | 111 | 131 |
| L.S.D. (.05) | | | | 11.7 | 21.4 | 18.2 | 15.6 | N.S. |
| C.V. % | | | | 11.6 | 10.6 | 7.7 | 9.0 | 14.8 |
| AVG. | | | | 144.6 | 143.9 | 170.0 | 123.6 | 141.0 |

¹Waynesboro silt loam (2% to 5% slopes). ³Hartsells silt loam (2% to 5% slopes).

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

Table 8. Corn: Yield and other characteristics of medium-season hybrids (600 group) evaluated at four locations in 1991.

| Color | Cross | Brand | Hybrid | Yield | Lodged | Grain | Husk | Ear | Grain | Moisture |
|-------|-------|----------------|---------|-------|--------|---------------------|---------------------|--------|---------|----------|
| | | | | Bu/A | Plants | Quality | Cover | Ht. at | Harvest | |
| | | | | | Avg. | Rating ¹ | Rating ¹ | In | % | |
| Y | 2X | Pioneer | 3142 | 170 | 0.7 | 3.7 | 4.5 | 61 | 18.0 | |
| Y | 2X | Pioneer | 3154 | 169 | 1.0 | 2.7 | 3.7 | 60 | 18.1 | |
| Y | 2X | FFR Exp. | 18066 | 166 | 2.2 | 3.7 | 4.7 | 54 | 16.9 | |
| Y | 2X | Southern Cross | 611 | 166 | 1.3 | 4.0 | 4.6 | 55 | 17.2 | |
| Y | 2X | Stanford | S-99 | 153 | 0.7 | 4.0 | 3.6 | 56 | 19.0 | |
| Y | 2X | Pfister | 4500 | 153 | 0.3 | 2.7 | 3.2 | 50 | 19.3 | |
| Y | 2X | Best | 6711 | 151 | 0.2 | 5.0 | 3.9 | 56 | 17.9 | |
| Y | 2X | Terra | TR 1180 | 150 | 0.3 | 3.5 | 3.4 | 53 | 17.6 | |
| W | 2X | Asgrow | RX 956W | 149 | 0.2 | 3.0 | 3.0 | 58 | 19.5 | |
| Y | 2X | Pioneer | X 0813 | 149 | 0.3 | 2.0 | 3.9 | 57 | 18.1 | |
| Y | 2X | Asgrow | Rx 908 | 149 | 0.8 | 4.7 | 3.6 | 48 | 17.4 | |
| Y | 2X | Jacques | 8210 | 148 | 0.7 | 3.5 | 2.7 | 48 | 17.8 | |
| Y | 2X | Triple J | 6780 | 147 | 0.0 | 3.7 | 4.5 | 54 | 17.4 | |
| Y | 2X | Pfister | 3965 | 146 | 0.7 | 3.2 | 3.6 | 57 | 17.3 | |
| Y | 2X | Callahan | C 774 | 145 | 0.2 | 3.7 | 2.6 | 53 | 17.1 | |
| Y | 2X | Sunbelt Exp. | 5018 | 144 | 0.2 | 3.2 | 3.4 | 51 | 19.4 | |
| Y | 2X | HyPerformer | HS 97 | 144 | 1.0 | 3.5 | 3.7 | 52 | 17.8 | |
| Y | MX | FFR Exp. | 16847 | 143 | 0.5 | 3.0 | 3.5 | 53 | 18.4 | |
| Y | 2X | Terra | TR 1190 | 143 | 1.2 | 3.7 | 2.7 | 54 | 17.6 | |
| Y | 2X | Cargill | 7997 | 143 | 0.0 | 5.0 | 5.0 | 53 | 17.1 | |
| Y | 2X | FFR Exp. | 10467 | 142 | 0.3 | 3.5 | 3.0 | 58 | 17.9 | |
| W | 2X | HyPerformer | HS 175W | 142 | 0.3 | 3.5 | 2.6 | 56 | 19.4 | |
| Y | 2X | Crows | 670 | 142 | 0.5 | 4.0 | 3.2 | 56 | 17.7 | |
| Y | MX | Sunbelt | 1839 | 141 | 0.7 | 5.5 | 3.6 | 51 | 17.9 | |
| Y | 2X | FFR Exp. | 19448 | 141 | 1.8 | 3.0 | 3.1 | 56 | 17.2 | |
| Y | 2X | Callahan | C 783 | 140 | 0.3 | 3.5 | 2.6 | 52 | 17.6 | |
| Y | 2X | Triple J | 6800 | 140 | 1.2 | 4.5 | 4.7 | 47 | 16.7 | |
| Y | 2X | Callahan | C 775 | 139 | 0.2 | 3.2 | 3.1 | 46 | 18.3 | |
| Y | 2X | Terra | TR 1170 | 139 | 1.2 | 3.7 | 4.5 | 44 | 17.4 | |
| Y | 2X | Callahan | C 776 | 139 | 0.2 | 4.2 | 4.1 | 44 | 17.7 | |
| Y | MX | FFR | 844 | 138 | 1.2 | 5.2 | 3.6 | 58 | 19.1 | |
| W | 2X | Noble Bear | NB 710W | 138 | 1.0 | 6.0 | 4.6 | 51 | 16.3 | |
| Y | 2X | Crows | 682 | 136 | 1.2 | 4.0 | 4.6 | 55 | 16.9 | |
| Y | 2X | Zimmerman | Z-20 | 136 | 0.3 | 3.5 | 4.2 | 52 | 17.6 | |
| Y | 2X | Cargill | 8427 | 135 | 1.7 | 3.5 | 4.1 | 42 | 17.2 | |
| Y | 2X | DYNAGRO | 8290 | 135 | 0.3 | 3.7 | 3.7 | 47 | 17.5 | |
| Y | 2X | Crows | 669 | 134 | 0.5 | 3.0 | 4.1 | 46 | 17.6 | |
| Y | 2X | Jacques | 8288 | 134 | 0.3 | 3.0 | 2.7 | 55 | 18.5 | |
| Y | 2X | Crows | 697 | 133 | 0.0 | 3.5 | 3.0 | 51 | 16.9 | |
| Y | 2X | Sunbelt | 1803 | 132 | 0.3 | 4.0 | 4.5 | 44 | 17.2 | |

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

Table 9 . Corn: Yield of medium-season hybrids (600 group) evaluated at three locations in 1989 and 1991.

| Color | Cross | Brand | Hybrid | Avg. | Greene-ville | Cross-ville | Milan |
|------------------|-------|-------------|---------|-------|--------------|-------------|-------|
| Bushels per acre | | | | | | | |
| Y | 2X | Asgrow | RX 908 | 172 | 160 | 164 | 192 |
| Y | MX | FFR Exp. | 16847 | 172 | 151 | 167 | 198 |
| Y | 2X | Jacques | 8210 | 168 | 152 | 155 | 197 |
| W | 2X | Asgrow | RX 956W | 167 | 155 | 151 | 194 |
| Y | 2X | Terra | TR 1180 | 166 | 151 | 150 | 198 |
| W | 2X | HyPerformer | HS 175W | 165 | 157 | 145 | 194 |
| Y | 2X | Terra | TR 1190 | 161 | 146 | 147 | 190 |
| Y | 2X | Terra | TR 1170 | 157 | 146 | 136 | 190 |
| Y | 2X | HyPerformer | HS 97 | 157 | 139 | 146 | 185 |
| Y | 2X | Zimmerman | Z-20 | 152 | 137 | 135 | 184 |
| Y | 2X | FFR | 844 | 146 | 141 | 130 | 167 |
| L.S.D. (.05) | | | | 8.3 | 14.2 | 11.2 | 14.9 |
| C.V. % | | | | 9.0 | 9.5 | 7.6 | 7.9 |
| AVG. | | | | 162.1 | 148.5 | 147.8 | 189.9 |

Table 10. Corn: Yield and other characteristics of medium-season hybrids (600 group) evaluated at three locations in 1989 and 1991.

| Color | Cross | Brand | Hybrid | Yield | Grain Quality | Husk Cover | Ear Ht. | Grain Moisture at Harvest |
|-------|-------|-------------|---------|-------|---------------------|---------------------|---------|---------------------------|
| | | | | Bu/A | Rating ¹ | Rating ¹ | In. | % |
| Y | 2X | Asgrow | RX 908 | 172 | 4.7 | 3.7 | 48 | 18.5 |
| Y | MX | FFR Exp. | 16847 | 172 | 3.0 | 3.5 | 54 | 19.4 |
| Y | 2X | Jacques | 8210 | 168 | 3.5 | 2.7 | 49 | 18.6 |
| W | 2X | Asgrow | RX 956W | 167 | 3.0 | 3.0 | 58 | 20.2 |
| Y | 2X | Terra | TR 1180 | 166 | 3.5 | 3.5 | 54 | 18.6 |
| W | 2X | HyPerformer | HS 175W | 165 | 3.5 | 2.5 | 57 | 20.0 |
| Y | 2X | Terra | TR 1190 | 161 | 3.7 | 2.8 | 55 | 19.0 |
| Y | 2X | Terra | TR 1170 | 157 | 3.7 | 4.7 | 44 | 18.7 |
| Y | 2X | HyPerformer | HS 97 | 157 | 3.5 | 3.8 | 54 | 19.1 |
| Y | 2X | Zimmerman | Z-20 | 152 | 3.5 | 4.3 | 52 | 18.2 |
| Y | MX | FFR | 844 | 146 | 5.2 | 4.0 | 58 | 20.1 |

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

Table 11. Corn: Yield of full-season hybrids at four locations in 1991.

| Color | Cross | Brand | Hybrid | Avg. | Knox-ville ¹ | Spring Hill ² | Ames Plantation ³ | --Jackson ⁴ -- | Un-Irr Irrigated |
|------------------|-------|-----------------------|----------|-------|-------------------------|--------------------------|------------------------------|---------------------------|------------------|
| Bushels per acre | | | | | | | | | |
| Y | 2X | Asgrow | X 9231 | 136 | 191 | 111 | 104 | 124 | 152 |
| Y | 2X | Pioneer | 3165 | 136 | 183 | 113 | 112 | 126 | 145 |
| Y | 2X | DYNAGRO | 8105 | 134 | 196 | 79 | 96 | 132 | 164 |
| Y | 2X | Jacques | 9220 | 133 | 189 | 88 | 111 | 129 | 149 |
| Y | 2X | Asgrow | XP 9720 | 132 | 223 | 72 | 96 | 118 | 150 |
| Y | 2X | Triple J | 9200 | 131 | 187 | 102 | 96 | 124 | 146 |
| Y | 2X | Pioneer | 3154 | 131 | 227 | 60 | 116 | 120 | 132 |
| Y | MX | Deltapine | 4820 | 131 | 180 | 83 | 95 | 131 | 166 |
| Y | 2X | Cargill | 9027 | 131 | 209 | 91 | 85 | 112 | 156 |
| W | 2X | DeKalb | DK 743 | 130 | 197 | 92 | 98 | 131 | 132 |
| Y | 2X | Pioneer | 3142 | 130 | 196 | 92 | 98 | 122 | 140 |
| Y | 2X | Northrup King | S8645 | 128 | 192 | 88 | 96 | 122 | 141 |
| Y | 2X | Pioneer | 3140 | 128 | 187 | 87 | 91 | 133 | 140 |
| Y | 2X | AgraTech | X 1900 | 127 | 208 | 57 | 95 | 126 | 148 |
| Y | 2X | AgraTech | GK 900 | 126 | 198 | 85 | 85 | 124 | 137 |
| Y | 2X | DYNAGRO | 8116 | 125 | 169 | 92 | 91 | 127 | 146 |
| Y | 2X | FFR Exp. | 45240 | 124 | 187 | 89 | 97 | 103 | 146 |
| Y | 2X | Asgrow | RX 947 | 123 | 181 | 71 | 80 | 115 | 170 |
| W | 2X | Zimmerman | Z-63W | 123 | 208 | 79 | 79 | 111 | 139 |
| Y | 2X | Asgrow | X 9451 | 120 | 205 | 90 | 69 | 92 | 143 |
| W | 2X | Northrup King | N8565W | 119 | 168 | 93 | 84 | 115 | 135 |
| Y | 2X | Tn Exp. | 91-1 | 118 | 162 | 93 | 93 | 112 | 129 |
| W | 2X | Zimmerman | Z-16W | 117 | 195 | 65 | 89 | 104 | 129 |
| Y | MX | FFR | 934 | 116 | 190 | 77 | 88 | 96 | 128 |
| W | 2X | DeKalb | 703W | 116 | 176 | 75 | 91 | 99 | 138 |
| W | 2X | T171 XMol7/Ga.209wSel | | 115 | 164 | 70 | 92 | 121 | 130 |
| Y | 2X | Northrup King | N8727 | 115 | 190 | 60 | 92 | 109 | 124 |
| Y | 2X | Triple J | 9250 | 115 | 149 | 78 | 93 | 123 | 130 |
| W | 2X | Pioneer | 3144W | 114 | 178 | 53 | 93 | 108 | 138 |
| Y | 2X | Southern Cross | 711 | 114 | 189 | 72 | 85 | 106 | 118 |
| W | 2X | Noble Bear | NBX 739W | 113 | 176 | 75 | 75 | 103 | 137 |
| Y | 2X | Jacques | 8410 | 113 | 183 | 78 | 81 | 109 | 114 |
| Y | 2X | Triple J | 9251 | 112 | 162 | 63 | 85 | 112 | 137 |
| W | 2X | Zimmerman | Z-54W | 110 | 184 | 71 | 81 | 99 | 116 |
| W | 2X | Zimmerman | Z-14W | 110 | 177 | 55 | 78 | 102 | 137 |
| W | 2X | Noble Bear | NB 747W | 105 | 172 | 68 | 82 | 95 | 111 |
| Y | 2X | UTN | 320 | 103 | 158 | 53 | 84 | 95 | 125 |
| Y | 2X | Deltapine | G-4868 | 102 | 159 | 59 | 80 | 109 | 104 |
| Y | 3X | UTN | 318 | 102 | 164 | 55 | 67 | 98 | 126 |
| Y | 3X | UTN | 332 | 102 | 149 | 60 | 85 | 104 | 111 |
| Y | 2X | Pioneer | 3147 | 101 | 127 | 67 | 82 | 108 | 122 |
| Y | MX | Sunbelt | 1860 | 101 | 164 | 60 | 64 | 92 | 124 |
| L.S.D. (.05) | | | | 11.1 | 27.8 | 27.6 | 16.4 | 17.7 | 21.3 |
| C.V. % | | | | 15.0 | 10.9 | 25.8 | 13.2 | 11.2 | 11.2 |
| AVG. | | | | 119.3 | 182.2 | 76.7 | 88.9 | 112.8 | 135.9 |

¹Sequatchie silt loam (2% to 5% slopes).³Loring silt loam (2% to 5% slopes).²Maury silt loam (2% to 5% slopes).⁴Lexington silt loam (2% to 5% slopes).

Table 12. Corn: Yield and other characteristics of full-season hybrids in 1991.

| Color | Cross | Brand | Hybrid | Yield | Lodged Plants | Husk Cover | Ear Ht | Grain at Harvest | Moisture |
|-------|-------|------------------|----------|-------|------------------|---------------------|-----------|---------------------|----------|
| | | | | Bu/A | Avg. | Rating ¹ | In | % | |
| Y | 2X | Asgrow | X 9231 | 136 | 2.4 | 2.1 | 54 | 19.2 | |
| Y | 2X | Pioneer | 3165 | 136 | 2.7 | 3.0 | 51 | 20.0 | |
| Y | 2X | DYNAGRO | 8105 | 134 | 1.2 | 3.1 | 44 | 20.8 | |
| Y | 2X | Jacques | 9220 | 133 | 5.9 | 2.6 | 54 | 19.3 | |
| Y | 2X | Asgrow | XP 9720 | 132 | 0.6 | 2.9 | 46 | 20.5 | |
| Y | 2X | Triple J | 9200 | 131 | 2.2 | 2.3 | 53 | 20.4 | |
| Y | 2X | Pioneer | 3154 | 131 | 4.9 | 2.8 | 54 | 17.7 | |
| Y | MX | Deltapine | 4820 | 131 | 2.3 | 2.4 | 51 | 21.9 | |
| Y | 2X | Cargill | 9027 | 131 | 1.6 | 2.4 | 48 | 19.1 | |
| W | 2X | DeKalb | DK 743 | 130 | 3.7 | 3.2 | 51 | 19.8 | |
| Y | 2X | Pioneer | 3142 | 130 | 3.6 | 3.8 | 55 | 18.6 | |
| Y | 2X | Northrup King | S 8645 | 128 | 1.6 | 2.4 | 48 | 18.7 | |
| Y | 2X | Pioneer | 3140 | 128 | 2.6 | 3.0 | 56 | 18.0 | |
| Y | 2X | AgraTech | X 1900 | 127 | 1.4 | 2.5 | 44 | 19.6 | |
| Y | 2X | AgraTech | GK 900 | 126 | 1.9 | 3.3 | 50 | 18.9 | |
| Y | 2X | DYNAGRO | 8116 | 125 | 3.1 | 2.3 | 49 | 18.9 | |
| Y | 2X | FFR Exp. | 45240 | 124 | 3.9 | 3.6 | 52 | 19.8 | |
| Y | 2X | Asgrow | RX 947 | 123 | 2.4 | 1.7 | 58 | 19.5 | |
| W | 2X | Zimmerman | Z-63W | 123 | 3.7 | 2.2 | 53 | 18.8 | |
| Y | 2X | Asgrow | X 9451 | 120 | 1.9 | 2.1 | 51 | 19.9 | |
| W | 2X | Northrup King | N 8565W | 119 | 2.1 | 2.3 | 48 | 21.3 | |
| Y | 2X | Tn Exp. | 91-1 | 118 | 5.6 | 2.9 | 50 | 21.1 | |
| W | 2X | Zimmerman | Z-16W | 117 | 2.9 | 2.0 | 48 | 20.1 | |
| Y | MX | FFR | 934 | 116 | 4.0 | 2.3 | 47 | 19.7 | |
| W | 2X | DeKalb | 703W | 116 | 2.9 | 2.7 | 49 | 18.5 | |
| W | 2X | T171 X Mo 17/Ga. | 209WSe1 | 115 | 4.6 | 2.1 | 53 | 20.7 | |
| Y | 2X | Northrup King | N 8727 | 115 | 2.3 | 2.8 | 45 | 19.7 | |
| Y | 2X | Triple J | 9250 | 115 | 1.2 | 1.9 | 61 | 20.6 | |
| W | 2X | Pioneer | 3144W | 114 | 2.5 | 2.3 | 54 | 18.5 | |
| Y | 2X | Southern Cross | 711 | 114 | 2.2 | 2.7 | 48 | 17.4 | |
| W | 2X | Noble Bear | NBX 739W | 113 | 1.6 | 3.8 | 40 | 18.2 | |
| Y | 2X | Jacques | 8410 | 113 | 2.5 | 3.4 | 47 | 19.7 | |
| Y | 2X | Triple J | 9251 | 112 | 1.2 | 1.8 | 57 | 21.2 | |
| W | 2X | Zimmerman | Z-54W | 110 | 4.4 | 1.7 | 55 | 19.4 | |
| W | 2X | Zimmerman | Z-14W | 110 | 4.9 | 1.7 | 49 | 19.6 | |
| W | 2X | Noble Bear | NB 747W | 105 | 2.6 | 2.8 | 39 | 18.7 | |
| Y | 2X | UTN | 320 | 103 | 4.6 | 3.0 | 56 | 19.4 | |
| Y | 2X | Deltapine | G-4868 | 102 | 4.2 | 2.3 | 52 | 22.0 | |
| Y | 3X | UTN | 318 | 102 | 6.1 | 3.3 | 55 | 19.0 | |
| Y | 3X | UTN | 332 | 102 | 4.6 | 2.6 | 46 | 17.9 | |
| Y | 2X | Pioneer | 3147 | 101 | 7.4 | 2.6 | 52 | 19.6 | |
| Y | MX | Sunbelt | 1860 | 101 | 2.6 | 2.4 | 52 | 21.4 | |

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

Table 13. Corn: Yield of full-season hybrids evaluated at four locations for two years (1990-91).

| Color | Cross | Brand | Hybrid | Avg. | Knox-ville | Spring-Hill | Ames Plantation | --Jackson-- Un-irr. | Irr. | |
|------------------|-------|-----------------|--------|-------|------------|-------------|-----------------|------------------------|------|-------|
| Bushels per acre | | | | | | | | | | |
| Y | 2X | Pioneer | | 3165 | 138 | 194 | 127 | 112 | 112 | 146 |
| Y | 2X | Jacques | | 9220 | 134 | 203 | 100 | 105 | 114 | 146 |
| Y | 2X | Pioneer | | 3140 | 133 | 208 | 105 | 97 | 118 | 137 |
| Y | 2X | Pioneer | | 3142 | 131 | 190 | 109 | 104 | 114 | 136 |
| Y | MX | Deltapine | | 4820 | 130 | 196 | 103 | 95 | 108 | 145 |
| Y | 2X | Pioneer | | 3154 | 129 | 213 | 83 | 115 | 106 | 127 |
| Y | 2X | Cargill | | 9027 | 128 | 205 | 103 | 95 | 97 | 140 |
| Y | 2X | Asgrow | X | 9720 | 127 | 214 | 94 | 98 | 92 | 138 |
| Y | 2X | Northrup King | S | 8645 | 125 | 198 | 107 | 89 | 101 | 131 |
| W | 2X | Pioneer | | 3144W | 123 | 192 | 95 | 103 | 95 | 128 |
| Y | 2X | Northrup King | N | 8727 | 122 | 211 | 86 | 82 | 93 | 137 |
| Y | 2X | AgraTech | GK | 900 | 122 | 195 | 96 | 87 | 101 | 130 |
| W | 2X | Zimmerman | Z | -16W | 121 | 199 | 92 | 91 | 95 | 129 |
| Y | 2X | Asgrow | RX | 947 | 121 | 191 | 88 | 79 | 92 | 154 |
| W | 2X | Zimmerman | Z | -63W | 120 | 212 | 85 | 80 | 93 | 130 |
| W | T171 | X Mo 17/Ga.209W | Sel | | 118 | 179 | 92 | 96 | 102 | 122 |
| W | 2X | Zimmerman | Z | -54W | 116 | 202 | 90 | 84 | 87 | 115 |
| Y | 2X | Southern Cross | | 711 | 113 | 189 | 88 | 84 | 88 | 118 |
| W | 2X | Zimmerman | Z | -14W | 112 | 191 | 73 | 80 | 89 | 129 |
| Y | 2X | Deltapine | G | -4868 | 111 | 174 | 90 | 82 | 97 | 113 |
| Y | 2X | Pioneer | | 3147 | 108 | 156 | 93 | 80 | 92 | 119 |
| L.S.D. (.05) | | | | 8.5 | | 20.9 | 18.6 | 12.6 | 14.8 | 15.6 |
| C.V.% | | | | 15.8 | | 10.8 | 19.7 | 13.8 | 15.0 | 11.9 |
| AVG. | | | | 122.9 | | 195.8 | 95.2 | 92.4 | 99.3 | 131.9 |

Table 14. Corn: Yield and other characteristics of full-season hybrids evaluated at four locations for two years (1990-91).

| Color Cross Brand Hybrid | Yield | Lodged Plants | Husk Cover | Ear Ht. | Grain Moisture at Harvest |
|------------------------------|-------|---------------|---------------------|---------|---------------------------|
| | Bu/A | Avg. | Rating ¹ | In. | % |
| Y 2X Pioneer 3165 | 138 | 2.1 | 3.9 | 49 | 19.4 |
| Y 2X Jaques 9220 | 134 | 3.9 | 3.8 | 50 | 19.3 |
| Y 2X Pioneer 3140 | 133 | 1.9 | 3.8 | 51 | 17.4 |
| Y 2X Pioneer 3142 | 131 | 3.5 | 4.7 | 50 | 17.9 |
| Y MX Deltapine 4820 | 130 | 1.6 | 3.5 | 49 | 21.6 |
| Y 2X Pioneer 3154 | 129 | 7.4 | 4.0 | 50 | 17.5 |
| Y 2X Cargill 9027 | 128 | 1.6 | 4.0 | 46 | 18.4 |
| Y 2X Asgrow X 9720 | 127 | 0.8 | 3.8 | 43 | 20.3 |
| Y 2X Northrup King S 8645 | 125 | 0.9 | 3.5 | 48 | 18.0 |
| W 2X Pioneer 3144W | 123 | 2.8 | 3.5 | 51 | 18.5 |
| Y 2X Northrup King N 8727 | 122 | 2.0 | 4.2 | 42 | 19.6 |
| Y 2X AgraTech GK 900 | 122 | 2.0 | 4.2 | 48 | 19.0 |
| W 2X Zimmerman Z-16W | 121 | 4.0 | 3.5 | 48 | 20.2 |
| Y 2X Asgrow Rx 947 | 121 | 2.5 | 3.1 | 52 | 19.3 |
| W 2X Zimmerman Z-63W | 120 | 4.0 | 3.3 | 50 | 18.9 |
| W 2X T171 X Mo 17/Ga.209WSe1 | 118 | 4.9 | 3.4 | 50 | 20.5 |
| W 2X Zimmerman Z-54W | 116 | 5.0 | 3.1 | 51 | 19.0 |
| Y 2X Southern Cross 711 | 113 | 1.5 | 3.7 | 45 | 16.8 |
| W 2X Zimmerman Z-14W | 112 | 6.6 | 3.1 | 49 | 19.8 |
| Y 2X Deltapine G-4868 | 111 | 4.3 | 3.5 | 50 | 21.3 |
| Y 2X Pioneer 3147 | 108 | 6.1 | 3.8 | 50 | 18.9 |

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

Table 15. Corn: Yield of full-season hybrids evaluated at three locations for three years (1989-91).

| Color Cross Brand Hybrid | Avg. | Knoxville | Spring | Ames |
|---------------------------------|-------|-----------|--------|------------|
| | | | Hill | Plantation |
| Bushels per acre | | | | |
| Y 2X Pioneer 3165 | 156 | 190 | 140 | 138 |
| Y 2X Jacques 9220 | 151 | 197 | 122 | 134 |
| Y 2X Pioneer 3140 | 148 | 198 | 122 | 124 |
| Y MX Deltapine 4820 | 145 | 193 | 117 | 124 |
| W 2X Zimmerman Z-54W | 143 | 194 | 118 | 116 |
| W 2X Pioneer 3144W | 142 | 182 | 117 | 126 |
| Y 2X Northrup King S 8645 | 140 | 183 | 120 | 116 |
| Y 2X Asgrow RX 947 ¹ | 140 | 189 | 115 | 115 |
| Y 2X AgraTech GK 900 | 138 | 185 | 112 | 115 |
| W 2X Zimmerman Z-16W | 137 | 186 | 111 | 113 |
| Y 2X Deltapine G-4868 | 135 | 176 | 107 | 121 |
| Y 2X Northrup King N 8727 | 133 | 191 | 101 | 107 |
| Y 2X Pioneer 3147 | 129 | 165 | 112 | 111 |
| W 2X Zimmerman Z-14W | 129 | 183 | 100 | 104 |
| L.S.D. (.05) | 8.1 | 14.0 | 13.3 | 11.0 |
| C.V. % | 12.5 | 9.3 | 14.3 | 11.4 |
| AVG. | 140.4 | 186.4 | 115.3 | 119.3 |

¹Evaluated as XP9877 in 1989.

Table 16. Corn: Yield and other characteristics of full-season hybrids evaluated at four locations for three years (1989-91).

| Color Cross Brand Hybrid | Yield | Husk | Ear | Grain Moisture | |
|--------------------------|-------|-------|------|----------------|-------|
| | | Cover | Ht. | at Harvest | |
| | | | | | |
| | | Bu/A | HUSK | In. | MOIST |
| Y 2X Pioneer 3165 | 156 | 5.2 | 56 | 21.1 | |
| Y 2X Jacques 9220 | 151 | 3.5 | 60 | 20.3 | |
| Y 2X Pioneer 3140 | 148 | 4.5 | 62 | 18.7 | |
| Y MX Deltapine 4820 | 145 | 3.2 | 59 | 22.4 | |
| W 2X Zimmerman Z-54W | 143 | 3.7 | 60 | 20.1 | |
| W 2X Pioneer 3144W | 142 | 4.7 | 61 | 19.6 | |
| Y 2X Northrup King S8645 | 140 | 2.7 | 51 | 19.0 | |
| Y 2X Asgrow Rx 947 | 140 | 3.0 | 56 | 20.1 | |
| Y 2X AgraTech GK 900 | 138 | 5.0 | 54 | 20.4 | |
| W 2X Zimmerman Z-16W | 137 | 3.0 | 58 | 21.4 | |
| Y 2X Deltapine G-4868 | 135 | 4.7 | 62 | 22.4 | |
| Y 2X Northrup King N8727 | 133 | 5.2 | 52 | 20.5 | |
| Y 2X Pioneer 3147 | 129 | 5.2 | 59 | 20.1 | |
| W 2X Zimmerman Z-14W | 129 | 2.7 | 59 | 21.0 | |

Table 17. Corn: Yield of early-maturing hybrids evaluated at four locations in 1991.

| Color | Cross | Brand | Hybrid | Avg. | Knox-ville ¹ | Cross-ville ² | Ames | | Milan ⁴ | Martin ⁴ |
|-------------------------|-------|-------|---------|-------|-------------------------|--------------------------|-------------------------------|--------|--------------------|---------------------|
| | | | | | | | -Plantation ³ -Irr | Un-Irr | | |
| Bushels per acre | | | | | | | | | | |
| Y 2X Pioneer | | | X0726 | 156 | 200 | 125 | 162 | 123 | 177 | 151 |
| Y 2X Beck | | | 72X | 152 | 190 | 130 | 163 | 103 | 191 | 135 |
| Y 2X Pioneer | | | 3245 | 143 | 173 | 118 | 148 | 100 | 171 | 146 |
| W 2X Pioneer | | | 3281W | 142 | 177 | 107 | 156 | 96 | 186 | 130 |
| Y 2X DeKalb | | | DK 643 | 141 | 188 | 104 | 144 | 103 | 173 | 135 |
| W 2X Zimmerman | | | Z-17W | 140 | 180 | 108 | 154 | 97 | 187 | 116 |
| Y 2X Pioneer | | | 3343 | 139 | 172 | 112 | 153 | 93 | 162 | 142 |
| Y 2X Asgrow | | | XP 7960 | 139 | 207 | 103 | 139 | 95 | 158 | 131 |
| Y 2X N. K. ⁵ | | | PX 9540 | 138 | 183 | 112 | 130 | 89 | 172 | 143 |
| Y 2X Oro | | | 188 | 138 | 164 | 106 | 153 | 101 | 170 | 135 |
| Y 2X Asgrow | | | Rx 811 | 138 | 179 | 106 | 135 | 102 | 183 | 120 |
| Y 2X Oro | | | 180 | 134 | 163 | 108 | 148 | 92 | 162 | 134 |
| Y 2X Jacques | | | 7970 | 134 | 170 | 106 | 124 | 100 | 172 | 132 |
| Y 2X Pioneer | | | 3394 | 133 | 168 | 117 | 128 | 92 | 161 | 135 |
| Y 2X Deltapine | | | G-4543 | 131 | 169 | 119 | 123 | 86 | 153 | 135 |
| Y 2X Zimmerman | | | Z-36 | 130 | 180 | 99 | 136 | 81 | 160 | 125 |
| Y 2X B73 X Mol7 | | | Exp. | 130 | 172 | 81 | 145 | 87 | 150 | 142 |
| Y 2X Asgrow | | | Rx 745 | 130 | 167 | 96 | 138 | 92 | 158 | 126 |
| Y MX HyPerformer | | | HS 60 | 128 | 162 | 98 | 129 | 93 | 149 | 136 |
| Y 2X S. C. ⁶ | | | 511 | 127 | 164 | 108 | 131 | 94 | 140 | 127 |
| Y 2X HyPerformer | | | HS 9592 | 126 | 169 | 99 | 124 | 86 | 149 | 128 |
| Y 2X DYNAGRO | | | 8344 | 125 | 161 | 102 | 120 | 92 | 148 | 128 |
| Y 2X S. C. ⁶ | | | 411 | 123 | 165 | 107 | 100 | 88 | 154 | 127 |
| Y 2X DeKalb | | | DK 649 | 121 | 153 | 90 | 104 | 97 | 156 | 129 |
| Y 2X Asgrow | | | XP 7390 | 118 | 149 | 94 | 125 | 86 | 125 | 131 |
| Y 2X Crows | | | 498 | 112 | 141 | 96 | 84 | 90 | 147 | 114 |
| L.S.D. (.05) | | | | 9.1 | 19.8 | 18.1 | 24.9 | 20.5 | 21.13 | 17.0 |
| C.V. % | | | | 12.0 | 8.2 | 12.2 | 13.2 | 15.4 | 9.2 | 9.2 |
| AVG. | | | | 133.4 | 171.7 | 105.9 | 134.4 | 94.6 | 162.0 | 132.0 |

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

²Hartsells loam (2% to 5% slopes).

³Irrigated and un-irrigated on a Loring silt loam (2% to 5% slopes).

⁴Falaya silt loam (2% to 5% slopes).

⁵N. K.=Northrup King.

⁶S. C.=Southern Cross.

Table 18. Corn: Yield and other characteristics of early-maturing hybrids evaluated at five locations in 1991.

| Cross | Color Brand | Hybrid | Avg. Yield | Lodged Plants | Grain Quality | Husk Cover | Plant Ht. | Moisture at Harvest |
|-------|----------------|---------|------------|---------------|---------------------|---------------------|-----------|---------------------|
| | | | Bu/A | Avg. | Rating ¹ | Rating ¹ | In. | % |
| Y 2X | Pioneer | X 0726 | 156 | 0.5 | 4.0 | 2.4 | 58 | 19.9 |
| Y 2X | Beck | 72X | 152 | 1.8 | 4.0 | 3.6 | 52 | 19.0 |
| Y 2X | Pioneer | 3245 | 143 | 0.6 | 5.0 | 3.4 | 47 | 18.6 |
| W 2X | Pioneer | 3281W | 142 | 0.4 | 4.0 | 2.2 | 51 | 19.8 |
| Y 2X | DeKalb | DK 643 | 141 | 0.4 | 5.0 | 3.8 | 50 | 19.2 |
| W 2X | Zimmerman | Z-17W | 140 | 0.7 | 3.0 | 2.5 | 55 | 19.9 |
| Y 2X | Pioneer | 3343 | 139 | 0.8 | 6.0 | 4.4 | 51 | 18.2 |
| Y 2X | Asgrow | XP 7960 | 139 | 0.3 | 5.0 | 2.4 | 49 | 19.1 |
| Y 2X | Northrup King | Px 9540 | 138 | 0.8 | 4.0 | 2.5 | 47 | 19.1 |
| Y 2X | Oro | 188 | 138 | 0.8 | 5.0 | 2.4 | 55 | 20.9 |
| Y 2X | Asgrow | Rx 811 | 138 | 0.6 | 4.0 | 3.3 | 52 | 18.6 |
| Y 2X | Oro | 180 | 134 | 0.8 | 5.0 | 2.6 | 55 | 19.4 |
| Y 2X | Jaques | 7970 | 134 | 0.5 | 5.0 | 2.2 | 43 | 19.8 |
| Y 2X | Pioneer | 3394 | 133 | 0.6 | 4.0 | 4.4 | 49 | 17.6 |
| Y 2X | Deltapine | G-4543 | 131 | 0.5 | 3.0 | 2.6 | 51 | 18.9 |
| Y 2X | Zimmerman | Z-36 | 130 | 0.6 | 4.0 | 2.5 | 45 | 19.9 |
| Y 2X | B73 X Mol7 | Exp. | 130 | 0.8 | 7.0 | 3.7 | 50 | 19.0 |
| Y 2X | Asgrow | RX 745 | 130 | 0.7 | 4.0 | 3.1 | 54 | 18.6 |
| Y MX | HyPerformer | HS 60 | 128 | 0.6 | 3.0 | 2.4 | 54 | 20.6 |
| Y 2X | Southern Cross | 511 | 127 | 0.4 | 3.0 | 2.6 | 49 | 20.1 |
| Y 2X | HyPerformer | HS 9592 | 126 | 0.2 | 3.0 | 2.4 | 47 | 18.8 |
| Y 2X | DYNAGRO | 8344 | 125 | 0.8 | 4.0 | 2.6 | 49 | 19.1 |
| Y 2X | Southern Cross | 411 | 123 | 0.8 | 4.0 | 2.7 | 49 | 19.3 |
| Y 2X | DeKalb | DK 649 | 121 | 0.6 | 4.0 | 3.6 | 46 | 19.7 |
| Y 2X | Asgrow | XP 7390 | 118 | 0.8 | 4.0 | 3.5 | 46 | 18.7 |
| Y 2X | Crows | 498 | 112 | 1.8 | 5.0 | 2.9 | 37 | 18.4 |

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

Table 19. Corn: Yield of early maturing hybrids evaluated at three locations for two years (1990-91).

| Color Cross Brand | Avg. | Knox-ville ¹ | Milan ² | --Ames Plantation ³ -- | | |
|---------------------|---------|-------------------------|--------------------|-----------------------------------|-----------|-------|
| | | | | Un-Irr. | Irrigated | |
| Bushels per acre | | | | | | |
| Y 2X Beck | 72X | 166 | 210 | 179 | 95 | 180 |
| Y 2X Pioneer | 3245 | 158 | 191 | 175 | 95 | 173 |
| Y 2X Oro | 188 | 158 | 177 | 176 | 102 | 178 |
| Y 2X DeKalb | DK 643 | 158 | 204 | 169 | 95 | 163 |
| W 2X Zimmerman | Z-17W | 153 | 177 | 169 | 90 | 176 |
| Y 2X Pioneer | 3343 | 151 | 178 | 152 | 95 | 179 |
| Y 2X Zimmerman | Z-36 | 149 | 187 | 163 | 89 | 158 |
| Y 2X B73 X Mol7 | Exp. | 146 | 166 | 154 | 93 | 172 |
| Y 2X Deltapine | DP 4543 | 144 | 179 | 159 | 86 | 152 |
| Y 2X HyPerformer | HS 60 | 142 | 171 | 148 | 96 | 155 |
| Y 2X Southern Cross | 511 | 142 | 173 | 149 | 89 | 158 |
| Y 2X Oro | 180 | 142 | 160 | 154 | 88 | 164 |
| Y 2X DeKalb | DK 649 | 139 | 176 | 151 | 97 | 134 |
| Y 2X Southern Cross | 411 | 139 | 173 | 158 | 84 | 142 |
| Y 2X HyPerformer | HS 9592 | 139 | 171 | 150 | 84 | 152 |
| L.S.D. (.05) | | 7.9 | 17.6 | 16.5 | 12.8 | 15.0 |
| C.V.% | | 10.8 | 9.8 | 10.4 | 14.1 | 9.3 |
| AVG. | | 148.6 | 179.6 | 160.4 | 91.9 | 162.5 |

¹Sequatchie silt loam (2% to 5% slopes). ³Loring silt loam (2% to 5% slopes).

²Falaya silt loam (2% to 5% slopes).

Table 20. Corn: Yield and other characteristics of early maturing hybrids evaluated at three locations for two years (1990-91).

| Color Cross Brand | | Avg. Yield | Lodged Plants | Husk Cover | Ear Height | Moisture at Harvest |
|---------------------|---------|------------|---------------|---------------------|------------|---------------------|
| | | Bu/A | Avg. | Rating ¹ | In. | % |
| Y 2X Beck | 72X | 166 | 1.9 | 4.7 | 49 | 18.5 |
| Y 2X Pioneer | 3245 | 158 | 0.8 | 4.7 | 45 | 17.7 |
| Y 2X Oro | 188 | 158 | 1.6 | 4.4 | 51 | 20.5 |
| Y 2X DeKalb | DK 643 | 158 | 0.5 | 5.0 | 48 | 18.0 |
| W 2X Zimmerman | Z-17W | 153 | 1.3 | 4.2 | 51 | 20.1 |
| Y 2X Pioneer | 3343 | 151 | 1.0 | 4.7 | 48 | 17.7 |
| Y 2X Zimmerman | Z-36 | 149 | 0.6 | 4.4 | 42 | 19.6 |
| Y 2X B73 X Mol7 | Exp. | 146 | 2.8 | 4.6 | 48 | 18.3 |
| Y 2X Deltapine | DP 4543 | 144 | 0.5 | 4.2 | 47 | 18.1 |
| Y 2X HyPerformer | HS 60 | 142 | 0.8 | 4.3 | 50 | 19.6 |
| Y 2X Southern Cross | 511 | 142 | 1.0 | 4.3 | 46 | 19.8 |
| Y 2X Oro | 180 | 142 | 1.4 | 4.1 | 51 | 18.8 |
| Y 2X DeKalb | DK 649 | 139 | 1.3 | 4.8 | 43 | 18.5 |
| Y 2X Southern Cross | 411 | 139 | 0.9 | 4.1 | 47 | 18.4 |
| Y 2X HyPerformer | Hs 9592 | 139 | 0.4 | 4.2 | 46 | 18.2 |

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

Table 21. Corn: Yield of early maturing hybrids evaluated at three locations for three years (1989-91).

| Color Cross Brand | Hybrid | Avg. | Knoxville | Milan | Ames Plantation |
|-------------------|---------|-------|-----------|-------|-----------------|
| Bushels per acre | | | | | |
| Y 2X Beck's | 72X | 177 | 205 | 198 | 127 |
| W 2X Zimmerman | Z-17W | 165 | 178 | 188 | 129 |
| Y 2X Pioneer | 3343 | 156 | 176 | 167 | 125 |
| Y 2X DeKalb | DK 649 | 155 | 176 | 167 | 123 |
| Y 2X Deltapine | DP 4543 | 150 | 174 | 165 | 110 |
| Y 2X Oro | 180 | 149 | 165 | 173 | 110 |
| Y B73 X Mol7 | Exp. | 144 | 166 | 160 | 107 |
| L.S.D. (.05) | | 8.0 | 14.6 | 12.3 | 11.7 |
| C.V. % | | 11.0 | 10.1 | 8.6 | 12.0 |
| AVG. | | 156.8 | 177.2 | 174.2 | 118.9 |

Table 22. Corn: Yield and other characteristics of early maturing hybrids evaluated at three locations for three years (1989-91)

| Color | Cross | Brand | Hybrid | Yield | Husk Cover | Ear Ht. | Grain Moisture at Harvest |
|-------|------------|-----------|---------|-------|---------------------|---------|---------------------------|
| | | | | Bu/A | Rating ¹ | In. | % |
| Y | 2X | Beck | 72X | 177 | 5.7 | 58 | 19.3 |
| W | 2X | Zimmerman | Z-17W | 165 | 3.2 | 62 | 20.7 |
| Y | 2X | Pioneer | 3343 | 156 | 6.5 | 56 | 18.3 |
| Y | 2X | DeKalb | DK 649 | 155 | 5.7 | 52 | 19.3 |
| Y | 2X | Deltapine | DP 4543 | 150 | 4.0 | 56 | 19.1 |
| Y | 2X | Oro | 180 | 149 | 4.0 | 59 | 19.5 |
| Y | B73 X Mol7 | | Exp. | 144 | 5.5 | 58 | 19.2 |

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

Table 23 . Performance of early maturing corn hybrids grown under nominal virus disease (mdmv-a/mcdv) conditions at Knoxville in 1991.

| Color | Cross | Brand | Hybrid | Grain Yield | Performance ¹ Index | Grain Moisture |
|--------------|-------|-------------|------------|-------------|--------------------------------|----------------|
| | | | | bu/a | bu/a | % |
| Y | 2X | Pioneer | X 0726 | 198.4 | 175.3 | 21.4 |
| Y | 2X | DeKalb | DK 643 | 182.4 | 170.8 | 18.7 |
| Y | 2X | DeKalb | DK 649 | 175.2 | 160.8 | 19.6 |
| Y | 2X | Oro | 180 | 175.2 | 160.5 | 19.7 |
| Y | 2X | Oro | 188 | 170.4 | 151.9 | 20.9 |
| Y | MX | HyPerformer | HS 60 | 166.5 | 147.8 | 21.1 |
| W | 2X | Zimmerman | Z-17W | 163.5 | 148.3 | 20.1 |
| Y | 2X | Zimmerman | Z-36 | 159.0 | 144.1 | 20.1 |
| Y | 2X | DYNAGRO | 8344 | 148.7 | 135.4 | 20.0 |
| Y | 2X | Asgrow | XP 7390 | 128.1 | 121.8 | 17.9 |
| Y-W | 2X | Susc. Check | T13 x T218 | 98.7 | 86.9 | 21.5 |
| L.S.D. (.05) | | | | 26.1 | 24.0 | 1.0 |
| C.V. % | | | | 11.3 | 11.4 | 3.6 |
| AVG. | | | | 160.6 | 145.8 | 20.1 |

¹ Performance index = (yield x [100 + 2(15.5 - % Moisture)])/100.
(Data provided by David Kincer and Dennis West.)

Table 24. Performance of medium-season corn hybrids grown under nominal virus disease (mdmv-a/mcdv) conditions at Knoxville in 1991.

| Color | Cross | Brand | Hybrid | Grain Yield bu/a | Performance ¹ Index bu/a | Grain Moisture % |
|--------------|-------|-------------|------------|---------------------|---|------------------------|
| Y | 2X | Pioneer | 3154 | 204.2 | 176.7 | 22.3 |
| Y | 2X | HyPerformer | HS 9773 | 184.5 | 171.1 | 19.1 |
| Y | 2X | Deltapine | G-4666 | 177.7 | 161.3 | 20.1 |
| Y | 2X | Terra | TR 1180 | 175.8 | 158.5 | 20.4 |
| Y | 2X | Stanford | S-99 | 172.0 | 157.7 | 19.6 |
| Y | 2X | DeKalb | 689 | 169.6 | 156.6 | 19.3 |
| Y | 2X | Deltapine | DP 5750 | 166.6 | 153.4 | 19.4 |
| Y | 2X | McCurdy | 777 | 165.4 | 149.0 | 20.5 |
| W | 2X | Zimmerman | Z-61W | 162.6 | 150.1 | 19.3 |
| Y | 2X | Asgrow | X-9199 | 162.4 | 151.8 | 18.6 |
| Y | 2X | Deltapine | 4581 | 161.7 | 150.5 | 18.9 |
| Y | 2X | Terra | TR 1190 | 159.1 | 146.5 | 19.5 |
| Y | 3X | Beck's | 87MDM | 156.1 | 134.1 | 22.5 |
| Y | 2X | DYNAGRO | 8290 | 154.7 | 140.5 | 20.1 |
| W | 2X | HyPerformer | HS 175W | 154.4 | 138.0 | 20.8 |
| Y | 2X | Cargill | 8427 | 153.4 | 136.1 | 21.1 |
| Y | MX | HyPerformer | HS 97 | 151.1 | 135.3 | 20.7 |
| Y | 2X | Zimmerman | Z-20 | 150.4 | 140.8 | 18.6 |
| Y | 2X | Jacques | 8288 | 148.2 | 129.9 | 21.6 |
| Y | 2X | HyPerformer | HS 9911 | 146.7 | 133.4 | 20.1 |
| Y | 2X | Agratech | 888 | 144.4 | 132.2 | 19.8 |
| Y | 3X | Beck | 85 MDM | 139.3 | 123.3 | 21.1 |
| Y | M2X | FFR | 844 | 135.3 | 125.1 | 19.4 |
| Y | MX | Triple J. | 8950 | 132.2 | 121.0 | 19.7 |
| Y-W | 2X | Susc. Check | T13 x T218 | 84.9 | 75.0 | 21.3 |
| L.S.D. (.05) | | | | 27.3 | 24.6 | 1.0 |
| C.V.% | | | | 12.4 | 12.3 | 3.7 |
| AVG. | | | | 156.5 | 141.9 | 20.2 |

¹ Performance index = (yield x [100 + 2(15.5 - % Moisture)])/100.
(Data provided by David Kincer and Dennis West.)

Table 25. Performance of full-season corn hybrids grown under nominal virus disease (mdmv-a/mcdv) conditions at Knoxville in 1991.

| Color | Cross | Brand | Hybrid | Grain Yield bu/a | Performance ¹ Index bu/a | Grain Moisture % |
|--------------|-------|---------------|------------|---------------------|---|------------------------|
| W | 2X | Zimmerman | Z-63W | 200.1 | 169.5 | 23.2 |
| Y | 2X | Jacques | 9220 | 183.4 | 159.8 | 21.9 |
| W | 2X | Zimmerman | Z-16W | 183.0 | 149.7 | 24.6 |
| Y | 2X | FFR | EXP. 45240 | 181.8 | 160.0 | 21.5 |
| Y | 2X | Agratech | GK 900 | 177.6 | 153.3 | 22.3 |
| W | 2X | Zimmerman | Z-14W | 176.9 | 153.1 | 22.2 |
| Y | MX | Deltapine | 4820 | 171.7 | 141.9 | 24.2 |
| Y | 2X | Jacques | 8410 | 156.6 | 132.3 | 23.2 |
| W | 2X | Zimmerman | Z-54W | 152.8 | 135.8 | 21.0 |
| Y | 2X | Deltapine | G-4868 | 149.3 | 119.1 | 25.5 |
| Y | 2X | Sunbelt | 1860 | 143.3 | 114.5 | 25.6 |
| Y | MX | DYNAGRO | 8116 | 142.9 | 127.7 | 20.8 |
| Y | 2X | Pioneer | 3165 | 139.6 | 120.5 | 22.3 |
| Y | 2X | Northrup King | S 8645 | 136.5 | 121.4 | 21.0 |
| Y | 2X | Pioneer | 3147 | 124.0 | 108.6 | 21.7 |
| Y-W | 2X | Susc. Check | T13 x T218 | 87.3 | 75.1 | 22.5 |
| L.S.D. (.05) | | | | 23.5 | 20.0 | 1.1 |
| C.V. % | | | | 8.9 | 8.9 | 3.0 |
| AVG. | | | | 156.7 | 133.9 | 22.7 |

¹Performance index = (yield x [100 + 2(15.5 - % Moisture)]) / 100.
(Data provided by David Kincer and Dennis West.)

Performance of Wheat, Barley, Oats and Rye Varieties for 1991

-----WHEAT-----

Thirty-six soft red winter wheat varieties were evaluated at Knoxville, Crossville, Greeneville, Spring Hill, Springfield, Milan and Jackson in 1991. Nine varieties were seeded at two planting dates (Oct. 26 and Nov. 26) at Ames Plantation in 1991.

Disease incidence was higher than usual in 1991 at Milan, Jackson, and Knoxville. At Milan, ratings were taken for leaf rust, bacterial stripe, head scab, glume and leaf blotch by Melvin Newman, Professor of Entomology and Plant Pathology, Agricultural Extension Service, Jackson, and Mark Harrison, Research Associate, Milan Experiment Station.

Data from Knoxville were not included in the state summary because of the variability in yields due to the disease take-all. Data are not usually reported when the C.V. is as high as 45%. In addition, in this case most of the variability was a result of disease. Take-all is soil borne and does not occur uniformly over an entire area, thus resulting in yield variability.

The wheat test at Springfield was planted twice due to water damage to the earlier planting. The second (late planting) also was damaged by excessive moisture in the fall. Many varieties failed to produce tillers or grow normally under these adverse conditions, therefore, no data are reported for this location in 1991.

The wheat data are reported in Tables 26 through 32. The yield level was lower than usual at most locations in 1991 due to the disease complex caused by the wet spring. Good yields were obtained at Greeneville and Spring Hill with fair yields being produced at Milan.

Stewart ST 363, N.K. Coker 803, Ky. Exp. 83-38, ABI Exp. E 86-9541, Pioneer brand 2548, Madison, Cardinal, FFR 555, ABI Exp. E-85-81, N.K. Coker

9024, Saluda, FFR 525, and Pioneer 2555 produced higher grain yields than the average (Table 26). The yield at Jackson was low due to water damage in the fall and disease pressure in the spring. Some of the older varieties such as N.K. Coker 916 and Caldwell did not perform well in 1991.

The Knoxville data were not included in the state average but were reported separately to show the effect of the take-all disease on wheat yields. Pioneer brand 2555 has shown tolerance to take-all in other trials and was one of the higher yielders in this trial. Clark also seemed to perform better than some varieties under this high level of take-all. N.K. Coker 9877 produced only seven bushels per acre at Knoxville in 1991.

The Milan data are also reported separately because of a large number of wheat diseases. The Milan data were included in the state summary because of the low C.V. (Table 26). Pioneer brand 2548, Ky. Exp. 83-38, N.K. Coker 9733, and Cardinal produced higher yields than the average for the test (Tables 26 and 29). The wheat disease ratings for five diseases are reported in Tables 30 and 31.

No two or three year summaries including 1991 data were performed due to the erratic performance of the wheat varieties under these adverse conditions. For 1990 and 1989 small grain data see Agricultural Experiment Station Bulletin 678 '1990 Performance of Field Crop Varieties'.

The recommended wheat varieties for 1991-92 are Cardinal, FFR 525, N.K. Coker 983¹, N.K. Coker 916¹, N.K. Coker 9323, N.K. Coker 9766¹, N.K. Coker 9733, Massey, Pioneer brand 2550¹, Pioneer brand 2555, Pioneer brand 2551¹, Pioneer brand 2548, and Saluda. Becker has yielded well in the state variety trials, but it is very susceptible to powdery mildew disease. For this variety to yield consistently well, a fungicide spray program should be used to control this disease.

-----BARLEY-----

Three awnless barley varieties were evaluated in 1991. Pennco produced a higher yield than Anson. Wysor was intermediate in yield (Table 33).

The recommended barley varieties for 1991-92 are Anson, Volbar¹ and Wysor.

-----Fall-Seeded Oats-----

Fall-seeded oats were planted at six locations. Oats at Jackson winter killed in 1991. FFR SS 76-30 and AK 833 produced higher yields than the other four varieties. These data are reported in Table 35 and 36.

-----Spring-Seeded Oats-----

Eight spring-seeded oats were evaluated at Knoxville in 1991. The recommended spring oats are Don, Ogle, Larry, and Otee.

-----Rye-----

Twenty-three rye and two triticale varieties were evaluated at Knoxville in 1991. These data are shown in Table 39. A three year rye summary is presented in Table 40. Most of the varieties evaluated have performed similar.

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

Table 26. Wheat: Yield of soft red winter wheat varieties evaluated at five locations in 1991.

| Brand/Variety | | Avg. Yield | Greene- ¹ ville | Spring ² Hill | Jackson ³ | Milan ⁴ | Crossville |
|------------------|---------------------|------------|----------------------------|--------------------------|----------------------|--------------------|------------|
| Bushels per acre | | | | | | | |
| Stoneville | St 350 ⁶ | 40 | 50 | 51 | 27 | 37 | 35 |
| | 9803 | 37 | 50 | 48 | 17 | 33 | 36 |
| Ky. Exp. | 83-38 | 37 | 48 | 52 | 18 | 40 | 26 |
| ABI Exp. | E-86-9541 | 35 | 39 | 47 | 17 | 33 | 38 |
| Pioneer | 2548 | 35 | 40 | 43 | 21 | 42 | 29 |
| Va. | Madison | 34 | 42 | 41 | 25 | 34 | 30 |
| Ohio | Cardinal | 34 | 40 | 45 | 13 | 39 | 33 |
| FFR | 555 | 34 | 40 | 46 | 12 | 30 | 40 |
| ABI Exp. | E-85-81 | 33 | 35 | 44 | 20 | 35 | 32 |
| | 9024 | 33 | 38 | 47 | 19 | 33 | 29 |
| Va. | Saluda | 33 | 43 | 40 | 16 | 35 | 32 |
| FFR | 525 | 33 | 41 | 42 | 20 | 36 | 26 |
| Pioneer | 2555 | 33 | 46 | 49 | 13 | 32 | 24 |
| Tn. Exp. | T-84-774 | 32 | 45 | 40 | 15 | 28 | 32 |
| Va. | Wakefield | 31 | 46 | 37 | 15 | 31 | 29 |
| Ohio | Clark | 31 | 42 | 41 | 16 | 30 | 28 |
| Ohio | Becker | 31 | 40 | 38 | 16 | 33 | 29 |
| Tn. Exp. | T-84-519 | 30 | 35 | 39 | 17 | 33 | 28 |
| Tn. Exp. | T-85-517 | 30 | 39 | 34 | 13 | 29 | 37 |
| Va | Massey | 29 | 35 | 35 | 18 | 34 | 25 |
| Terral | 101 | 28 | 41 | 37 | 12 | 28 | 24 |
| Ill. | Dynasty | 28 | 35 | 34 | 10 | 33 | 29 |
| Ar. Exp. | 26145 | 28 | 37 | 35 | 11 | 31 | 25 |
| | 9733 | 28 | 28 | 32 | 15 | 40 | 23 |
| | 9323 | 28 | 39 | 26 | 19 | 31 | 23 |
| | 916 | 27 | 35 | 32 | 10 | 30 | 31 |
| Ind | Caldwell | 27 | 29 | 32 | 14 | 30 | 29 |
| Ohio | GR 876 | 27 | 36 | 38 | 11 | 22 | 25 |
| | 9877 | 26 | 41 | 27 | 9 | 31 | 24 |
| Ohio | GR 863 | 26 | 33 | 32 | 9 | 31 | 23 |
| ABI | Twain | 25 | 35 | 27 | 14 | 28 | 23 |
| FFR | 544 | 25 | 26 | 31 | 15 | 29 | 22 |
| Terral | 877 | 23 | 36 | 28 | 10 | 27 | 16 |
| ABI | Cherokee | 23 | 30 | 24 | 15 | 30 | 18 |
| | 983 | 23 | 30 | 29 | 10 | 25 | 22 |
| | 9766 | 22 | 25 | 23 | 12 | 26 | 24 |
| L.S.D. (.05) | | 2.9 | 6.9 | 6.2 | 4.7 | 6.8 | 5.9 |
| C.V. % | | 15.7 | 12.9 | 11.9 | 22.3 | 15.1 | 15.2 |
| Avg. | | 30.0 | 38.0 | 37.3 | 15.0 | 31.9 | 27.7 |

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

⁴Memphis silt loam (2% to 5% slopes).

²Maury silt loam (2% to 5% slopes).

⁵Hartsells loam (2% to 5% slopes).

³Lexington silt loam (2% to 5% slopes).

⁶Exp. No. St 363.

Table 27. Wheat: Yield and other characteristics of varieties evaluated at five locations in 1991.

| Brand/Variety | Avg. Yield | Date Headed | Date Mature | Plant Height | Lodging % | Bushel Weight | Leaf Rust | Glume Mildew | Glume Blotch |
|--------------------------------|------------|-------------|-------------|--------------|-----------|---------------|------------------|--------------|--------------|
| | Bu/A | | | in | % | lb/bu | (Rating 0 to 10) | | |
| Stoneville St 350 ⁶ | 40 | 4-28 | 5-31 | 38 | 4 | 49.8 | 0.0 | 1.2 | 2.3 |
| 9803 | 37 | 4-28 | 5-30 | 34 | 8 | 49.3 | 0.0 | 0.8 | 2.6 |
| Ky. Exp. 83-38 | 37 | 5-2 | 6-4 | 39 | 6 | 47.8 | 0.0 | 1.2 | 1.4 |
| ABI Exp. E-86-9541 | 35 | 5-1 | 5-31 | 36 | 10 | 47.6 | 0.0 | 2.0 | 3.0 |
| Pioneer 2548 | 35 | 4-30 | 6-1 | 34 | 3 | 48.6 | 0.4 | 0.2 | 2.6 |
| Va. Madison | 34 | 4-26 | 5-30 | 36 | 10 | 48.2 | 1.2 | 0.8 | 4.9 |
| Ohio Cardinal | 34 | 5-4 | 6-4 | 40 | 2 | 46.8 | 0.0 | 4.0 | 2.2 |
| FFR 555 | 34 | 5-1 | 6-2 | 36 | 3 | 46.1 | 0.0 | 2.8 | 2.4 |
| ABI Exp. E-85-81 | 33 | 4-30 | 6-1 | 37 | 13 | 47.8 | 0.0 | 2.2 | 2.9 |
| 9024 | 33 | 5-2 | 6-4 | 40 | 21 | 47.3 | 0.0 | 2.4 | 1.3 |
| Va. Saluda | 33 | 4-30 | 5-30 | 34 | 10 | 48.1 | 3.8 | 1.6 | 2.7 |
| FFR 525 | 33 | 4-28 | 5-30 | 36 | 15 | 47.9 | 2.4 | 5.0 | 4.1 |
| Pioneer 2555 | 33 | 4-28 | 6-1 | 37 | 6 | 45.8 | 1.6 | 1.8 | 1.8 |
| Tn. Exp. T-84-774 | 32 | 5-7 | 6-5 | 42 | 10 | 46.9 | 0.4 | 2.8 | 2.2 |
| Va. Wakefield | 31 | 5-3 | 6-2 | 37 | 2 | 47.3 | 0.0 | 0.0 | 4.4 |
| Ohio Clark | 31 | 4-28 | 5-28 | 36 | 5 | 48.6 | 0.0 | 2.8 | 5.6 |
| Ohio Becker | 31 | 5-1 | 5-31 | 35 | 2 | 46.6 | 6.0 | 7.2 | 3.7 |
| Tn. Exp. T-84-519 | 30 | 4-30 | 6-2 | 39 | 29 | 49.7 | 0.0 | 3.0 | 2.4 |
| Tn. Exp. T-85-517 | 30 | 5-1 | 6-1 | 38 | 38 | 49.6 | 0.0 | 2.2 | 2.2 |
| Va. Massey | 29 | 4-28 | 6-1 | 37 | 19 | 48.4 | 5.2 | 0.6 | 3.3 |
| Terral 101 | 28 | 5-1 | 6-1 | 38 | 20 | 45.0 | 0.0 | 0.4 | 4.0 |
| Ill. Dynasty | 28 | 5-2 | 6-1 | 37 | 9 | 46.7 | 3.2 | 3.0 | 3.4 |
| Ar. Exp. 26145 | 28 | 5-1 | 5-30 | 36 | 1 | 47.5 | 2.4 | 2.6 | 2.3 |
| 9733 | 28 | 4-30 | 6-3 | 37 | 4 | 48.9 | 0.0 | 1.2 | 4.4 |
| 9323 | 28 | 4-30 | 5-30 | 33 | 10 | 47.1 | 0.4 | 1.0 | 4.4 |
| 916 | 27 | 4-28 | 5-29 | 34 | 13 | 46.8 | 0.0 | 1.6 | 6.7 |
| Ind Caldwell | 27 | 5-2 | 6-1 | 37 | 9 | 46.6 | 0.2 | 3.2 | 4.6 |
| Ohio GR 876 | 27 | 5-10 | 6-7 | 39 | 4 | 45.2 | 0.0 | 0.0 | 1.4 |
| 9877 | 26 | 5-7 | 6-6 | 37 | 2 | 45.3 | 0.0 | 4.2 | 2.9 |
| Ohio GR 863 | 26 | 5-1 | 5-31 | 35 | 6 | 47.1 | 0.0 | 1.4 | 5.1 |
| ABI Twain | 25 | 5-1 | 5-29 | 38 | 10 | 48.4 | 0.0 | 0.0 | 6.6 |
| FFR 544 | 25 | 5-1 | 6-1 | 37 | 3 | 48.0 | 0.0 | 3.4 | 5.3 |
| Terral 877 | 23 | 5-1 | 5-31 | 36 | 13 | 46.3 | 0.0 | 0.6 | 3.0 |
| ABI Cherokee | 23 | 4-28 | 5-28 | 38 | 8 | 46.6 | 0.0 | 2.4 | 6.1 |
| 983 | 23 | 5-3 | 6-3 | 33 | 4 | 48.5 | 0.0 | 0.6 | 3.8 |
| 9766 | 22 | 5-5 | 6-3 | 35 | 26 | 46.2 | 0.0 | 2.2 | 4.6 |

⁶Exp. No. St 363.

Table 28. Wheat: Yield and other characteristics of varieties evaluated at Knoxville where Take-All disease was severe in 1991.

| Brand/Variety | | Yield | Date Headed | Date Mature | Plant Height | Bushel Weight | Take-All ¹ |
|---------------|---------------------|-------|-------------|-------------|--------------|---------------|-----------------------|
| | | Bu/A | | | in | lb/bu | (Rating 0-10) |
| Pioneer | 2555 | 40 | 4-23 | 5-28 | 38 | 46.9 | 2 |
| Ind. | Clark | 37 | 4-22 | 5-29 | 37 | 50.9 | 3 |
| Ohio | Cardinal | 33 | 4-29 | 5-30 | 38 | 46.2 | 3 |
| Exp. | T84-774 | 31 | 4-27 | 5-31 | 40 | 47.6 | 3 |
| Tn. Exp | T84-517 | 30 | 4-21 | 5-28 | 38 | 50.8 | 4 |
| Ohio | Becker | 29 | 4-29 | 5-29 | 34 | 50.2 | 3 |
| | 9024 | 29 | 4-25 | 5-29 | 36 | 50.9 | 4 |
| Ky Exp. | 83-38 | 29 | 4-25 | 5-27 | 38 | 50.2 | 4 |
| Ill | Dynasty | 29 | 4-29 | 5-30 | 38 | 50.9 | 2 |
| Terral | 101 | 29 | 4-23 | 5-30 | 37 | 43.7 | 3 |
| ABI | Cherokee | 28 | 4-22 | 5-27 | 39 | 48.2 | 3 |
| FFR | 555 | 28 | 4-26 | 5-30 | 37 | 50.8 | 2 |
| Ind. | Caldwell | 28 | 4-30 | 5-31 | 37 | 54.8 | 4 |
| Va. | Wakefield | 28 | 4-25 | 5-29 | 36 | 50.2 | 4 |
| Tn. Exp. | T84-519 | 27 | 4-21 | 5-30 | 40 | 49.5 | 4 |
| AR. Exp. | AR 26145 | 27 | 4-24 | 5-28 | 34 | 51.3 | 5 |
| Ohio | GR 863 | 26 | 4-27 | 5-29 | 36 | 46.9 | 4 |
| Pioneer | 2548 | 25 | 4-27 | 5-29 | 34 | 51.5 | 2 |
| Stoneville | ST 350 ² | 24 | 4-20 | 5-28 | 35 | 47.8 | 7 |
| Va | Saluda | 24 | 4-26 | 5-30 | 34 | 50.2 | 4 |
| ABI | E86-9541 | 24 | 4-25 | 5-30 | 37 | 52.1 | 1 |
| | 916 | 23 | 4-20 | 5-27 | 35 | 50.2 | 6 |
| Terral | 877 | 23 | 4-25 | 5-31 | 37 | 58.3 | 3 |
| ABI Exp. | 85-81 | 23 | 4-21 | 5-30 | 35 | 49.5 | 6 |
| Va | Madison | 23 | 4-19 | 5-25 | 33 | 47.6 | 7 |
| Ohio | GR 876 | 22 | 4-37 | 5-24 | 39 | 46.3 | 3 |
| | 9803 | 22 | 4-22 | 5-29 | 35 | 52.8 | 5 |
| Va | Massey | 19 | 4-22 | 5-30 | 36 | 46.9 | 5 |
| FFR | 525 | 19 | 4-22 | 5-29 | 36 | 51.5 | 3 |
| ABI | Twain | 18 | 4-23 | 5-28 | 38 | 52.2 | 6 |
| | 9733 | 14 | 4-25 | 5-31 | 32 | 56.1 | 8 |
| | 983 | 12 | 4-25 | 5-31 | 29 | 57.4 | 8 |
| | 9766 | 11 | 4-25 | 5-28 | 33 | 52.2 | 8 |
| | 9323 | 11 | 4-25 | 5-30 | 29 | 46.9 | 7 |
| FFR | 544 | 10 | 4-31 | 5-30 | 33 | 44.3 | 5 |
| | 9877 | 7 | 4-29 | 6-2 | 31 | 36.5 | 9 |
| L.S.D. (.05) | | 15.1 | | | | | |
| C.V. % | | 45.2 | | | | | |
| Avg. | | 23.8 | | | | | |

¹Take-all disease rating based on a scale of 0 through 10, with 0 = no injury and 10 = severe damage or 100% infected.

²Tested as ST 363

Table 29. Wheat: Yield and other characteristics of varieties evaluated at Milan in 1991.

| Brand/Variety | Yield | Date Headed | Date Mature | Plant Height | Lodging | Bushel Weight | |
|---------------|----------------------|-------------|-------------|--------------|---------|---------------|------|
| | Bu/A | | | in | % | lb/bu | |
| Pioneer | 2548 | 42 | 5-3 | 6-1 | 35 | 0 | 49.9 |
| Ky. Exp. | 83-38 | 40 | 5-3 | 6-1 | 41 | 10 | 48.3 |
| | 9733 | 40 | 4-29 | 6-2 | 38 | 3 | 50.8 |
| Ohio | Cardinal | 39 | 5-4 | 6-2 | 39 | 0 | 48.8 |
| Stoneville | St 350W ¹ | 37 | 5-1 | 6-2 | 38 | 8 | 51.2 |
| FFR | 525 | 36 | 4-29 | 5-29 | 36 | 11 | 48.7 |
| ABI Exp. | 85-81 | 35 | 5-1 | 6-1 | 36 | 11 | 49.9 |
| Va. | Saluda | 35 | 4-30 | 5-29 | 32 | 8 | 48.4 |
| Va. | Madison | 34 | 4-29 | 5-31 | 36 | 14 | 48.5 |
| Va. | Massey | 34 | 4-30 | 5-31 | 37 | 28 | 48.9 |
| Ill. | Dynasty | 33 | 5-4 | 5-30 | 35 | 0 | 47.5 |
| | 9024 | 33 | 5-4 | 6-4 | 38 | 5 | 47.5 |
| Tn. Exp. | T 84-519 | 33 | 5-1 | 6-1 | 39 | 49 | 51.4 |
| ABI Exp. | 86-9541 | 33 | 5-3 | 5-31 | 37 | 27 | 46.8 |
| Ohio | Becker | 33 | 5-3 | 5-1 | 36 | 0 | 47.8 |
| | 9803 | 33 | 4-29 | 5-30 | 35 | 10 | 47.1 |
| Pioneer | 2555 | 32 | 4-30 | 6-2 | 38 | 0 | 46.3 |
| | 9323 | 31 | 5-1 | 5-31 | 34 | 20 | 47.5 |
| Ak. Exp. | 26145 | 31 | 5-3 | 5-30 | 34 | 0 | 49.1 |
| Va. | Wakefield | 31 | 5-3 | 6-2 | 38 | 0 | 48.0 |
| Ohio | Gr 863 | 31 | 4-28 | 6-1 | 37 | 0 | 48.1 |
| | 9877 | 31 | 5-9 | 6-6 | 37 | 1 | 46.9 |
| Ind. | Caldwell | 30 | 5-5 | 5-30 | 37 | 6 | 46.6 |
| FFR | 555 | 30 | 5-5 | 6-1 | 35 | 3 | 46.0 |
| | 916 | 30 | 4-29 | 5-29 | 33 | 20 | 47.8 |
| Ohio | Clark | 30 | 4-28 | 5-29 | 36 | 9 | 49.6 |
| ABI | Cherokee | 30 | 4-27 | 5-26 | 37 | 5 | 47.6 |
| FFR | 544 | 29 | 5-1 | 6-1 | 37 | 3 | 48.2 |
| Tn. Exp. | T 84-517 | 29 | 5-2 | 6-1 | 38 | 73 | 50.9 |
| Tn. Exp. | T 84-774 | 28 | 5-10 | 6-5 | 39 | 4 | 47.6 |
| Terral | 101 | 28 | 5-2 | 6-3 | 38 | 16 | 45.5 |
| ABI | Twain | 28 | 5-1 | 5-31 | 37 | 4 | 47.3 |
| Terral | 877 | 27 | 5-3 | 6-1 | 36 | 5 | 47.2 |
| | 9766 | 26 | 5-5 | 6-3 | 33 | 29 | 47.1 |
| | 983 | 25 | 5-4 | 6-2 | 33 | 10 | 48.7 |
| Ohio | Gr 876 | 22 | 5-13 | 6-7 | 38 | 5 | 45.5 |

¹Tested as St 363

Table 30. Wheat: Disease ratings of wheat varieties evaluated at Milan in 1991.

| Brand/Variety | Disease ¹ | | |
|--------------------------------|----------------------|-----------------------------|-------------|
| | Leaf Rust | Glume Blotch | Leaf Blotch |
| | | (Ratings 0-10) ² | |
| Massey | 7.7 A | 6.2 BCDEFG | 4.0 ABCD |
| Caldwell | 0.2 E | 7.5 ABC | 4.7 ABC |
| Saluda | 5.5 B | 5.2 DEFGHIJ | 4.0 ABCD |
| Northrup King Coker 983 | 0.0 E | 5.7 CDEFGHI | 4.2 ABC |
| Northrup King Coker 916 | 0.0 E | 7.0 ABCD | 5.2 ABC |
| Twain | 1.7 CDE | 8.5 A | 1.2 DE |
| Northrup King Coker 9223 | 2.7 CD | 6.5 ABCDEF | 5.0 ABC |
| Cardinal | 0.0 E | 4.7 EFGHIJ | 3.7 BCD |
| Northrup King Coker 9733 | 0.2 E | 4.2 GHIJ | 5.2 ABC |
| Northrup King Coker 9766 | 0.2 E | 4.2 GHIJ | 4.7 ABC |
| GR 863 | 0.2 E | 7.5 ABC | 6.7 A |
| Pioneer 2555 | 1.2 DE | 4.0 HIJ | 5.0 ABC |
| Becker | 8.0 A | 8.0 AB | 3.2 CD |
| FFR 525 | 0.0 E | 5.2 DEFGHIJ | 5.7 ABC |
| Dynasty | 3.0 C | 6.7 ABCDE | 6.2 AB |
| Pioneer 2548 | 0.2 E | 5.5 CDEFGHIJ | 4.5 ABC |
| FFR 544 | 0.0 E | 6.7 ABCDE | 6.0 ABC |
| T84 774 | 0.7 E | 3.5 J | 4.0 ABCD |
| Terral 101 | 0.2 E | 6.5 ABCDEF | 4.0 ABCD |
| Wakefield | 0.0 E | 5.7 CDEFGH | 4.5 ABC |
| Madison | 0.0 E | 4.5 FGHIJ | 4.5 ABC |
| Ark 26145 | 1.0 E | 4.7 EFGHIJ | 6.0 ABC |
| Northrup King Coker 9877 | 0.0 E | 4.0 HIJ | 3.7 BCD |
| ABI Exp. 85 81 | 0.2 E | 4.7 EFGHIJ | 4.7 ABC |
| Cherokee | 0.0 E | 8.5 A | 0.0 E |
| Northrup King Coker 9024 | 0.2 E | 3.5 J | 3.2 CD |
| Northrup King Coker 9803 | 0.0 E | 6.0 BCDEFGH | 4.5 ABC |
| KY 83 38 | 0.0 E | 5.7 CDEFGHI | 5.0 ABC |
| Stoneville ST 350 ³ | 0.5 E | 3.7 I J | 4.5 ABC |
| GR 876 | 0.0 E | 3.7 I J | 3.5 BCD |
| Clark | 1.0 E | 7.5 ABC | 4.2 ABC |
| E 86 9541 | 0.0 E | 5.7 CDEFGHI | 5.7 ABC |
| Terral 877 | 0.0 E | 5.7 CDEFGHI | 5.2 ABC |
| FFR 555 | 0.0 E | 4.7 EFGHIJ | 5.2 ABC |
| T 84 519 | 0.0 E | 5.7 CDEFGHI | 4.7 ABC |
| T 84 517 | 0.0 E | 7.5 ABC | 4.7 ABC |

¹Means followed by the same letter within a column are not different.

²Ratings made by Melvin Newman, Professor of Entomology and Plant Pathology, Agricultural Extension Service, Jackson, and Mark Harrison, Research Associate, Milan Experiment Station.

³Tested as ST 363

Table 31. Wheat: Continuation of disease ratings of wheat varieties evaluated at Milan in 1991.

| Brand/Variety | Bacterial Stripe | Head Scab |
|---------------------------------|------------------|-----------|
| (Ratings 0-10) ^{1,2} | | |
| Massey | 1.5 EFGH | 6.5 ABCDE |
| Caldwell | 5.5 AB | 7.2 ABCDE |
| Saluda | 1.5 EFGH | 8.5 A |
| Northrup King Coker 983 | 4.0 ABCDEF | 8.0 AB |
| Northrup King Coker 916 | 3.7 ABCDEF | 6.5 ABCDE |
| Twain | 0.5 GH | 5.5 DEF |
| Northrup King Coker 9223 | 3.0 BCDEFGH | 8.2 AB |
| Cardinal | 5.0 ABC | 6.2 BCDE |
| Northrup King Coker 9733 | 5.2 ABC | 7.2 ABCDE |
| Northrup King Coker 9766 | 1.5 EFGH | 7.2 ABCDE |
| GR 863 | 3.7 ABCDEF | 7.7 ABC |
| Pioneer 2555 | 5.2 ABC | 8.5 A |
| Becker | 1.2 FGH | 7.7 ABC |
| FFR 525 | 2.5 BCDEFGH | 8.2 AB |
| Dynasty | 3.2 BCDEFG | 6.2 BCDE |
| Pioneer 2548 | 4.7 ABCD | 7.0 ABCDE |
| FFR 544 | 3.2 BCDEFG | 7.5 ABCD |
| T84-774 | 3.5 ABCDEFG | 5.2 EF |
| Terral 101 | 4.2 ABCDEF | 8.0 AB |
| Wakefield | 2.5 BCDEFGH | 8.2 AB |
| Madison | 4.2 ABCDEF | 8.0 AB |
| Ark 26145 | 3.5 ABCDEFG | 7.5 ABCD |
| Northrup King Coker 9877 | 2.2 CDEFGH | 5.7 CDEF |
| ABI Exp. 85-81 | 4.5 ABCDE | 6.7 ABCDE |
| Cherokee | 0.0 H | 5.5 DEF |
| Northrup King Coker 9024 | 1.2 FGH | 5.7 CDEF |
| Northrup King Coker 9803 | 4.0 ABCDEF | 8.2 AB |
| KY 83-38 | 4.5 ABCDE | 8.5 A |
| Stoneville ST 350W ³ | 5.5 AB | 7.0 ABCDE |
| GR 876 | 1.7 DEFGH | 4.2 F |
| Clark | 6.5 A | 5.7 CDEF |
| E 86-9541 | 4.2 ABCDEF | 8.0 AB |
| Terral 877 | 4.2 ABCDEF | 8.0 AB |
| FFR 555 | 4.5 ABCDE | 7.5 ABCD |
| T 84-519 | 3.5 ABCDEFG | 7.0 ABCDE |
| T 84-517 | 4.2 ABCDEF | 6.5 ABCDE |

¹Means followed by the same letter within a column are not different.

²Ratings made by Melvin Newman, Professor of Entomology and Plant Pathology, Agricultural Extension Service, Jackson, and Mark Harrison, Research Associate, Milan Experiment Station.

³Tested as St 363

Table 32. Wheat: Yield and plant height of nine varieties evaluated at Ames Plantation when planted on October 26 and November 26, 1990.

| Brand/Variety | Avg. Yield | Date Planted | | | |
|---------------------|------------|--------------|------|---------|------|
| | | Oct. 26 | | Nov. 26 | |
| | Bu/A | Bu/A | in | Bu/A | in |
| Pioneer | 2548 | 41 | 49 | 37 | 35 |
| FFR | 525 | 38 | 42 | 37 | 37 |
| Ohio | Becker | 36 | 40 | 37 | 36 |
| Va. | Saluda | 35 | 40 | 35 | 35 |
| Ohio | Cardinal | 34 | 38 | 42 | 41 |
| FFR | 544 | 32 | 34 | 38 | 37 |
| Northrup King Coker | 916 | 32 | 34 | 35 | 35 |
| Pioneer | 2555 | 29 | 34 | 38 | 37 |
| Ind. | Caldwell | 29 | 33 | 39 | 36 |
| L.S.D. (.05) | -- | | 5.9 | | 3.7 |
| C.V. % | -- | | 10.5 | | 8.4 |
| Avg. | -- | | 38.2 | | 29.9 |

Table 33. Barley: Yield of varieties evaluated at six locations in 1991.

| Brand/Variety | Avg. Yield | Greeneville ¹ | Knoxville ² | Springfield ³ | Spring Hill ⁴ | Crossville ⁵ |
|------------------|------------|--------------------------|------------------------|--------------------------|--------------------------|-------------------------|
| Bushels per acre | | | | | | |
| Pennco | 48 | 52 | 53 | 55 | 41 | 40 |
| Wysor | 44 | 52 | 51 | 40 | 36 | 41 |
| Anson | 43 | 43 | 44 | 50 | 36 | 40 |
| L.S.D. (.05) | 4.9 | N.S. | 8.8 | 7.2 | 7.5 | N.S. |
| C.V. % | 17.2 | 18.5 | 10.4 | 8.5 | 11.4 | 20.2 |
| Avg. | 45.0 | 49.0 | 49.4 | 48.7 | 37.7 | 40.1 |

¹Waynesboro silt loam (2% to 5% slopes). ²Maury silt loam (2% to 5% slopes).
³Cumberland silt loam (2% to 5% slopes). ⁴Hartsells loam (2% to 5% slopes).
⁵Dickson silt loam (2% to 5% slopes).

Table 34. Barley: Yield and other characteristics of varieties evaluated at six locations in 1991.

| Brand/Variety | Yield | Date Headed | Date Mature | Plant Height | Lodging | Bushel Weight |
|---------------|-------|-------------|-------------|--------------|---------|---------------|
| | Bu/A | | | in | % | lb/bu |
| Pennco | 48 | 4-24 | 5-27 | 36 | 66 | 40.1 |
| Wysor | 44 | 4-23 | 5-27 | 36 | 84 | 41.1 |
| Anson | 43 | 4-26 | 5-28 | 38 | 47 | 40.1 |

Table 35. Fall-seeded Oats: Yield of varieties evaluated at five locations in 1991.

| Brand/Variety | Avg. Yield | Greeneville ¹ | Knoxville ² | Spring Hill ³ | Crossville ⁴ | Springfield ⁵ |
|---------------|------------|--------------------------|------------------------|--------------------------|-------------------------|--------------------------|
| | Bu/A | Bushels per acre | | | | |
| FFR SS 76-30 | 47 | 37 | 55 | 62 | 36 | 54 |
| Ak 833 | 47 | 47 | 56 | 55 | 31 | 24 |
| S.C. Simpson | 35 | 24 | 38 | 42 | 36 | 45 |
| N.C. Brooks | 30 | 41 | 50 | 4 | 24 | 0 ⁶ |
| Ak. Ozark | 22 | 26 | 13 | 28 | 19 | 30 |
| Ak. Bob | 14 | 19 | 12 | 10 | 16 | 0 ⁶ |
| L.S.D. (.05) | 8.9 | 10.0 | 12.9 | 7.1 | 6.4 | 15.9 |
| C.V. % | 39.0 | 20.7 | 23.0 | 14.0 | 15.7 | 26.0 |
| Avg. | 32.5 | 32.4 | 37.2 | 33.6 | 27.0 | 38.3 |

¹Waynesboro silt loam (2% to 5% slopes). ⁴Hartsells loam (2% to 5% slopes).
²Cumberland silt loam (2% to 5% slopes). ⁵Dickson silt loam (2% to 5% slopes).
³Maury silt loam (2% to 5% slopes). ⁶Winter killed.

Table 36. Fall-seeded Oats: Yield and other characteristics of varieties evaluated at five locations in 1991.

| Brand/Variety | Avg. Yield | Date Headed | Date Mature | Plant Height | Lodging | Bushel Weight | Winter ¹ Injury |
|---------------|------------|-------------|-------------|--------------|---------|---------------------|----------------------------|
| | Bu/A | | | in | % | lb/bu (Rating 0-10) | |
| FFR SS 76-30 | 47 | 5-5 | 6-3 | 42 | 34 | 35.6 | 0.8 |
| Ak. 833 | 47 | 5-12 | 6-4 | 39 | 31 | 34.6 | 1.0 |
| S.C. Simpson | 35 | 5-9 | 6-3 | 39 | 38 | 33.9 | 2.7 |
| N.C. Brooks | 30 | 5-10 | 6-9 | 36 | 40 | 34.5 | 9.5 |
| Ak. Ozark | 22 | 5-10 | 6-2 | 37 | 42 | 34.1 | 3.5 |
| Ak. Bob | 14 | 5-9 | 6-5 | 34 | 35 | 35.4 | 9.0 |

¹Average of winter injury at locations where injury occurred.

Table 37. Spring Oats: Yield and other characteristics of varieties evaluated at Knoxville in 1991.¹

| Brand/Variety | Yield | | Date Headed | Date Mature | Plant Height | Lodging | Bushel Weight |
|------------------|-------|------------------|-------------|-------------|--------------|---------|---------------|
| | Bu/A | T/A ² | | | in | % | lb/bu |
| Don | 50 | 1.6 | 5-30 | 6-28 | 35 | 48 | 22.8 |
| Ogle | 40 | 1.7 | 6-4 | 6-23 | 37 | 5 | 24.8 |
| Larry | 38 | 1.5 | 6-2 | 6-22 | 32 | 23 | 22.1 |
| Bates | 33 | 1.6 | 5-31 | 6-28 | 35 | 56 | 24.7 |
| Hazel | 32 | 1.4 | 6-4 | 6-29 | 36 | 25 | 23.4 |
| Otee | 31 | 1.6 | 6-2 | 6-24 | 35 | 29 | 25.4 |
| Hy-Test. (Co-op) | 26 | 1.4 | 6-1 | 6-30 | 40 | 38 | 26.7 |
| Porter | 14 | 1.5 | 6-8 | 7-1 | 35 | 13 | 22.8 |
| L.S.D. (.05) | 4.2 | 0.2 | | | | | |
| C.V. % | 8.7 | 9.7 | | | | | |
| Avg. | 32.9 | 1.5 | | | | | |

¹Cumberland silt loam (2% to 5% slopes). ²Oven dry forage yield.

Table 38. Spring Oats: Yield of varieties evaluated for four years at Knoxville.

| Variety | Avg. | Grain Yield | | | | Avg. | Forage Yield | | |
|---------|------|-------------|----|----|----|------|--------------|-----|-----|
| | | 1991 | 90 | 89 | 88 | | 1991 | 90 | 88 |
| | | Bu/A | | | | | Tons/A | | |
| Don | 60 | 50 | 60 | 88 | 41 | 1.3 | 1.6 | 1.3 | 0.9 |
| Ogle | 49 | 40 | 47 | 73 | 36 | 1.4 | 1.7 | 1.4 | 1.2 |
| Larry | 45 | 38 | 41 | 65 | 37 | 1.2 | 1.5 | 1.1 | 1.0 |
| Otee | 38 | 31 | 37 | 51 | 31 | 1.2 | 1.6 | 1.3 | 0.9 |
| Hazel | 34 | 32 | 27 | 37 | 42 | 1.3 | 1.4 | 1.4 | 1.0 |
| Porter | 29 | 14 | 35 | 46 | 21 | 1.3 | 1.5 | 1.5 | 1.0 |

Table 39. Rye: Yields and other characteristics of varieties evaluated at Knoxville in 1991.¹

| Brand/Variety | Yield | | | Date Headed | Date Mature | Plant Height | Lodging | Bushel Weight |
|--------------------|-------|--------------|--------------|-------------|-------------|--------------|---------|---------------|
| | Bu/A | T/A | | | | in | % | lb/bu |
| | | ² | ³ | | | | | |
| AFC 20-20 | 45 | 1.7 | 12.7 | 4-9 | 6-5 | 64 | 63 | 48.9 |
| AFC 20-20X | 43 | 1.9 | 11.5 | 4-11 | 6-7 | 67 | 64 | 50.2 |
| NF 109 | 40 | 2.1 | 12.9 | 4-9 | 6-6 | 65 | 61 | 47.6 |
| AFC 20-10 | 40 | 2.1 | 14.0 | 4-10 | 6-5 | 64 | 81 | 52.8 |
| Volunteer Magic | 40 | 2.3 | 14.3 | 4-10 | 6-4 | 64 | 66 | 52.8 |
| RGS 2001 | 40 | 2.3 | 14.1 | 4-16 | 6-7 | 62 | 68 | 51.5 |
| RGS 1992 | 39 | 2.2 | 13.9 | 4-10 | 6-6 | 62 | 70 | 50.8 |
| GI 88 | 39 | 2.2 | 13.2 | 4-9 | 6-5 | 63 | 85 | 46.2 |
| Grazer King | 39 | 2.4 | 14.5 | 4-10 | 6-5 | 64 | 78 | 51.5 |
| GI Grazer 200x | 38 | 2.2 | 14.3 | 4-11 | 6-5 | 63 | 74 | 49.5 |
| FFC 1999 | 37 | 2.3 | 15.5 | 4-10 | 6-4 | 60 | 76 | 50.8 |
| NF 142 | 36 | 2.2 | 15.1 | 4-17 | 6-6 | 65 | 75 | 51.5 |
| AFC 20-30 (TFC) | 36 | 2.2 | 13.8 | 4-10 | 6-5 | 62 | 79 | 55.5 |
| GI 90 | 35 | 2.2 | 13.5 | 4-18 | 6-5 | 65 | 53 | 49.5 |
| GI 87 | 34 | 2.4 | 14.4 | 4-29 | 6-13 | 62 | 79 | 54.1 |
| GI 85 | 34 | 2.2 | 13.8 | 4-15 | 6-4 | 61 | 73 | 55.7 |
| AFC 20-50 | 33 | 2.3 | 15.0 | 4-30 | 6-13 | 63 | 75 | 52.2 |
| Elbon | 32 | 1.9 | 13.0 | 4-10 | 6-6 | 64 | 70 | 48.9 |
| Dossco Grazer II | 31 | 2.4 | 13.7 | 4-15 | 6-5 | 62 | 78 | 51.5 |
| Gurley Grazer 2000 | 31 | 2.4 | 15.3 | 4-9 | 6-5 | 64 | 64 | 49.6 |
| Bonel | 29 | 2.1 | 13.3 | 4-9 | 6-5 | 64 | 79 | 48.9 |
| Dossco Grazer III | 29 | 2.7 | 17.2 | 4-16 | 6-6 | 63 | 74 | 46.2 |
| Maton | 28 | 2.2 | 15.3 | 4-16 | 6-7 | 63 | 81 | 56.5 |
| Trical Stan I | 20 | 2.7 | 16.3 | 4-17 | 6-8 | 56 | 60 | 45.2 |
| Trical Jenkins | 5 | 3.1 | 18.7 | 4-10 | 6-9 | 62 | 86 | -- |
| L.S.D. | 0.57 | | | | | | | |
| C.V. % | 17.9 | | | | | | | |
| Avg. | 2.27 | | | | | | | |

¹Cumberland silt loam (2% to 5% slope.) ²Oven dry forage yield obtained at late boot stage. ³Green weight in tons per acre.

Table 40. Rye: Yield of varieties evaluated for three years at Knoxville.

| Variety | 3yr Avg. | Grain Yield | | | 2yr Avg. | Forage Yield | |
|-----------------------------|-------------|-------------|----|----|-------------|--------------|-----|
| | | 1991 | 90 | 89 | | 1991 | 90 |
| | | Bu/A | | | | Tons/A | |
| AFC 20-20 | 34 | 45 | 30 | 28 | 2.0 | 1.7 | 2.3 |
| Volunteer Magic | 34 | 40 | 32 | 31 | 2.3 | 2.3 | 2.3 |
| AFC 20-20X | 33 | 43 | 28 | 28 | 1.9 | 1.9 | 1.9 |
| GI 87 | 32 | 34 | 32 | 29 | 2.4 | 2.4 | 2.1 |
| AFC 20-10 | 31 | 40 | 28 | 26 | 2.0 | 2.1 | 1.9 |
| GI 88 | 31 | 39 | 32 | 23 | 2.2 | 2.2 | 2.3 |
| Elbon | 31 | 32 | 34 | 27 | 2.1 | 1.9 | 2.3 |
| GI 85 | 30 | 34 | 30 | 25 | 2.2 | 2.2 | 2.2 |
| Maton | 29 | 28 | 32 | 28 | 2.4 | 2.2 | 2.5 |
| AFC 30-30 | 29 | 36 | 27 | 24 | 2.1 | 2.2 | 2.0 |
| GI 90 | 28 | 35 | 26 | 23 | 2.1 | 2.2 | 2.0 |
| Bonel | 28 | 29 | 33 | 22 | 2.4 | 2.1 | 2.6 |
| Trical Stan I ¹ | 17 | 20 | 14 | 18 | 2.7 | 2.6 | 2.6 |
| Trical Jenkins ¹ | 10 | 5 | 15 | 10 | 2.0 | 2.1 | 1.8 |

¹Triticale varieties.

Performance of Soybean Varieties in 1991

Early Maturing Soybeans (Maturity Group IV)

Thirty two early-maturing varieties were evaluated at five locations, Knoxville, Crossville, Springfield, Milan, and Ames Plantation in 1991. Commercial strains of maturity group IV were grown at Jackson only. The maturity of varieties in this early test ranged from late maturity in group IV to the earlier maturity group III. The varieties that showed a late IV maturity were Pioneer brand 9501 (10-5), Riverside 499 (10-4), Avery (10-4) and Northrup King RA 452 (10-5). These varieties probably should have been evaluated with maturity group V.

The maturity group IV results are presented in Tables 41 through 47. Pioneer brand 9501, Hartz HX 4042, Riverside 499, Northrup King S 48-84 produced higher yields than the check variety Tn 4-86. DeKalb CX 415, Pioneer brand 9443, and Ill. F4090 produced lower yields than Tn 4-86 (Table 41 & 42).

In the 1991 strains (Maturity Group IV) test at Jackson, seven strains yielded more than the check variety Tn 4-86 (Table 43). Five of these high yielding strains were later in maturity than the check variety (Table 43).

The two year yield data and other characteristics are presented in Tables 44 and 45. Three years data are shown in Tables 46 and 47.

Table 41. Soybeans: Yield of varieties (Maturity Group IV) evaluated at five locations in 1991.

| Brand | Variety | Avg. Yield | Knox-ville ¹ | Cross-ville ² | Spring-field ³ | Milan ⁴ | Ames Plantation ⁵ |
|------------------|----------|------------|-------------------------|--------------------------|---------------------------|--------------------|------------------------------|
| Bushels per acre | | | | | | | |
| Pioneer | 9501 | 53 | 51 | 63 | 66 | 46 | 38 |
| Hartz | HX 54042 | 53 | 48 | 47 | 76 | 48 | 46 |
| Riverside | 499 | 52 | 53 | 63 | 62 | 41 | 41 |
| Northrup King | S 48-84 | 52 | 48 | 62 | 57 | 55 | 35 |
| Northrup King | RA 452 | 51 | 49 | 52 | 70 | 49 | 36 |
| Delsoy | 4900 | 50 | 42 | 62 | 74 | 36 | 37 |
| DYNO-GRO | 3450 | 50 | 49 | 68 | 55 | 41 | 34 |
| FFR | 464 | 49 | 46 | 55 | 61 | 44 | 39 |
| Hartz | H 4464 | 48 | 43 | 51 | 65 | 46 | 36 |
| Deltapine | DPX 3484 | 48 | 46 | 63 | 54 | 44 | 32 |
| AgraTech | AT 455 | 47 | 44 | 52 | 62 | 45 | 33 |
| Callahan | 9480 | 47 | 47 | 42 | 66 | 45 | 36 |
| DYNO-GRO | 3405 | 47 | 52 | 49 | 67 | 39 | 27 |
| Deltapine | DPX 3456 | 46 | 49 | 40 | 65 | 42 | 37 |
| DeKakb | CX 458 | 46 | 41 | 53 | 69 | 37 | 31 |
| Callahan | 1490X | 46 | 43 | 48 | 57 | 46 | 38 |
| Pioneer | 9461 | 46 | 51 | 44 | 67 | 41 | 28 |
| HyPerformer | HY 401 | 46 | 42 | 44 | 68 | 40 | 35 |
| Tn. | TN 4-86 | 45 | 51 | 39 | 62 | 45 | 30 |
| Pioneer | 9442 | 44 | 43 | 39 | 60 | 42 | 35 |
| Mo. | Avery | 44 | 37 | 46 | 61 | 39 | 35 |
| DYNO-GRO | 3409 | 44 | 42 | 48 | 53 | 42 | 32 |
| Agratech | AT 495 | 43 | 41 | 44 | 48 | 49 | 34 |
| Noble Bear | 3990 | 43 | 50 | 41 | 69 | 31 | 25 |
| Callahan | 8464 | 43 | 50 | 42 | 48 | 35 | 38 |
| Delsoy | 4500 | 42 | 46 | 48 | 49 | 43 | 24 |
| Callahan | 1466N | 42 | 41 | 43 | 51 | 44 | 29 |
| Callahan | 1410 | 40 | 49 | 32 | 55 | 28 | 35 |
| Noble Bear | NB 3750 | 40 | 45 | 32 | 64 | 25 | 32 |
| DeKalb | CX 415 | 38 | 45 | 37 | 51 | 30 | 27 |
| Pioneer | 9443 | 38 | 49 | 34 | 46 | 36 | 23 |
| Ill. | F4090 | 36 | 56 | 33 | 33 | 34 | 26 |
| L.S.D. (.05) | | 6.2 | 15.2 | 15.2 | 15.9 | 9.7 | 8.8 |
| C.V. % | | 21.7 | 23.4 | 22.9 | 19.0 | 17.0 | 19.0 |
| Avg. | | 45.5 | 46.5 | 47.4 | 59.7 | 40.9 | 33.2 |

¹Sequatchie loam (2% to 5% slopes). ⁴Vicksburg silt loam (2% to 5% slopes).

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

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

Table 42. Soybeans: Yield and other characteristics of varieties (Maturity group IV) evaluated at three locations in 1991.

| Brand | Variety | Yield | Full | Matur- | Plant | Lodged | Flo- | Pubes- | Moist. at |
|---------------|---------|-------|-------|--------|-------|--------|----------------|--------|-----------|
| | | | Bloom | ity | Ht. | | wer | cence | Harvest |
| | | Bu/A | Date | Date | In. | % | Color | Color | % |
| Pioneer | 9501 | 53 | 7-27 | 10-5 | 41 | 7.4 | W | T | 12.9 |
| Hartz | HX54042 | 53 | 8-5 | 10-9 | 33 | 3.2 | W | T(B) | 11.8 |
| Riverside | 499 | 52 | 8-4 | 10-4 | 43 | 5.2 | P | G | 12.9 |
| Northrup King | S48-84 | 52 | 7-27 | 10-2 | 37 | 14.8 | P | T | 13.4 |
| Northrup King | RA 452 | 51 | 8-2 | 10-5 | 37 | 16.4 | W | G | 14.7 |
| Delsoy | 4900 | 50 | 8-1 | 10-4 | 33 | 11.9 | P | T | 13.2 |
| DYNO-GRO | 3450 | 50 | 7-27 | 9-30 | 36 | 17.8 | P | T | 13.2 |
| FFR | 464 | 49 | 7-23 | 9-26 | 36 | 11.4 | P | T | 12.6 |
| Hartz | H 4464 | 48 | 7-25 | 9-30 | 37 | 16.3 | W | T(B) | 13.9 |
| Deltapine DPX | 3484 | 48 | 7-27 | 10-2 | 41 | 1.6 | P | G | 12.9 |
| AgraTech | AT 455 | 47 | 7-23 | 9-26 | 34 | 2.2 | P | T | 13.8 |
| Callahan | 9480 | 47 | 7-22 | 9-26 | 34 | 3.4 | W | T | 12.9 |
| DYNO-GRO | 3405 | 47 | 7-25 | 9-25 | 33 | 8.8 | P | T | 12.9 |
| Deltapine DPX | 3456 | 46 | 7-21 | 9-26 | 31 | 2.6 | W | T | 12.0 |
| DeKalb | CX 458 | 46 | 7-18 | 9-25 | 29 | 1.3 | W | T | 12.6 |
| Callahan | 1490X | 46 | 7-20 | 9-30 | 34 | 2.4 | P ¹ | T | 14.1 |
| Pioneer | 9461 | 46 | 7-19 | 9-23 | 27 | 1.7 | W | T | 13.7 |
| HyPerformer | HY 401 | 46 | 7-26 | 9-28 | 40 | 21.9 | P | G | 13.9 |
| Tn. | Tn 4-86 | 45 | 7-27 | 9-27 | 40 | 4.2 | P | T | 13.3 |
| Pioneer | 9442 | 44 | 7-20 | 9-24 | 29 | 0.8 | P | T | 13.0 |
| Mo. | Avery | 44 | 7-29 | 10-4 | 48 | 17.8 | W | T | 12.4 |
| DYNO-GRO | 3409 | 44 | 7-27 | 10-2 | 39 | 22.5 | W ² | T | 13.1 |
| AgraTech | AT 495 | 43 | 7-27 | 10-1 | 29 | 0.4 | W | T | 12.5 |
| Noble Bear | 3990 | 43 | 7-17 | 9-15 | 28 | 0.6 | P | T | 13.5 |
| Callahan | 8464 | 43 | 7-19 | 9-20 | 32 | 2.6 | P | T | 14.2 |
| Delsoy | 4500 | 42 | 7-21 | 9-26 | 34 | 7.6 | W | G | 13.5 |
| Callahan | 1466N | 42 | 7-19 | 9-23 | 32 | 2.8 | M(W/P) | T | 14.2 |
| Callahan | 1410 | 40 | 7-18 | 9-15 | 28 | 1.1 | P | T | 14.4 |
| Noble Bear NB | 3750 | 40 | 7-18 | 9-14 | 33 | 1.9 | M(W/P) | G | 14.0 |
| DeKalb | CX 415 | 38 | 7-18 | 9-17 | 32 | 1.4 | W | T | 14.0 |
| Pioneer | 9443 | 38 | 7-17 | 9-16 | 28 | 0.5 | W | T | 14.4 |
| Ill. | F4090 | 36 | 7-17 | 9-16 | 30 | 1.3 | W | T | 12.5 |

¹Entry form list this variety as being white flowered.

²Entry form list this variety as being purple flowered.

Table 43. Soybeans: Yield and other characteristics of strains (maturity group IV) evaluated at Jackson in 1991.

| Brand | Strain | Yield Bu/A | Bloom Date | Mat- urity Date | Plant | | Flower Color | Pubes- cence Color | Moisture at Harv. % |
|--------------|----------|---------------|---------------|-----------------------|------------|-------------|------------------|--------------------------|---------------------------|
| | | | | | Ht. In. | Lodged % | | | |
| Eagle | LB 90-66 | 51 | 7-26 | 10-5 | 46 | 27.5 | W | G | 10.6 |
| Eagle | LB 90-39 | 48 | 7-26 | 10-10 | 52 | 20.0 | W ¹ | G | 10.8 |
| Pioneer | 9501 | 47 | 7-26 | 9-30 | 41 | 3.2 | W | T | 11.1 |
| Eagle | LB 90-40 | 45 | 7-26 | 10-7 | 45 | 45.0 | P | G | 10.5 |
| Eagle | LB 90-44 | 44 | 7-26 | 10-5 | 43 | 28.8 | W | G | 10.6 |
| Hartz | HX 46096 | 44 | 7-26 | 9-25 | 32 | 5.5 | W | T | 10.7 |
| Eagle | LB 90-42 | 42 | 7-26 | 10-3 | 45 | 22.5 | W | G | 10.8 |
| Riverside | 460 | 41 | 7-8 | 9-17 | 39 | 17.5 | W | T | 14.8 |
| Callanan | 1414 NX | 39 | 7-8 | 9-13 | 32 | 0.2 | P ² | T | 15.7 |
| AgraTech | AT 495 | 34 | 7-26 | 9-25 | 34 | 12.5 | W | T | 10.5 |
| Tn. | Tn 4-86 | 33 | 7-26 | 9-20 | 46 | 17.5 | P | T | 15.7 |
| Callahan | 1410 | 31 | 7-8 | 9-13 | 31 | 1.3 | P&W ² | T | 14.6 |
| L.S.D. (.05) | | 8.1 | | | | | | | |
| C.V. % | | 13.7 | | | | | | | |
| Avg. | | 41.4 | | | | | | | |

¹Entry form list this strain to be purple flowered.

²Entry form list this strain to be white flowered.

Table 44. Soybeans: Yield of varieties (Maturity Group IV) evaluated at three locations for two years (1990-91).

| Brand | Variety | Avg. Yield | Knoxville | Springfield | Milan |
|------------------|---------|---------------|-----------|-------------|-------|
| Bushels per acre | | | | | |
| Northrup King | S 48-84 | 49 | 47 | 43 | 57 |
| Pioneer | 9461 | 47 | 47 | 51 | 42 |
| Hartz | H 4464 | 47 | 45 | 46 | 49 |
| Northrup King | RA 452 | 47 | 47 | 47 | 46 |
| Tn | 4-86 | 46 | 47 | 46 | 44 |
| Riverside | 499 | 45 | 49 | 44 | 42 |
| Pioneer | 9442 | 44 | 44 | 46 | 42 |
| FFR | 464 | 44 | 43 | 46 | 42 |
| Delsoy | 4900 | 43 | 42 | 47 | 41 |
| HyPerformer | HY 401 | 43 | 41 | 49 | 39 |
| DeKalb | CX 458 | 43 | 41 | 48 | 38 |
| Mo. | Avery | 42 | 39 | 44 | 42 |
| AgraTech | AT 495 | 42 | 45 | 35 | 45 |
| Delsoy | 4500 | 41 | 43 | 36 | 44 |
| DeKalb | CX 415 | 39 | 41 | 41 | 36 |
| Noble Bear | NB 3750 | 39 | 40 | 46 | 31 |
| L.S.D. (.05) | | 5.0 | N.S. | 9.0 | 7.3 |
| C.V. % | | 20.2 | 20.6 | 20.3 | 17.2 |
| Avg. | | 43.7 | 43.8 | 44.7 | 42.7 |

Table 45. Soybeans: Yield and other characteristics of varieties (Maturity group IV) evaluated for two years (1990-91).

| Brand | Variety | Yield | Full Bloom | Maturity | Plant Ht. | Lodged | Flower | Pubescence |
|---------------|---------|-------|------------|----------|-----------|--------|--------|------------|
| | | Bu/A | Date | Date | In | % | Color | Color |
| Northrup King | S 48-84 | 49 | 7-22 | 10-4 | 39 | 50 | P | T |
| Pioneer | 9461 | 47 | 7-18 | 9-26 | 28 | 10 | W | T |
| Hartz | H 4464 | 47 | 7-21 | 10-5 | 39 | 30 | W | T |
| Northrup King | RA 452 | 47 | 7-28 | 10-7 | 40 | 20 | W | G |
| Tn | 4-86 | 46 | 7-22 | 9-30 | 41 | 20 | P | T |
| Riverside | 499 | 45 | 7-30 | 10-8 | 45 | 30 | P | G |
| Pioneer | 9442 | 44 | 7-18 | 9-25 | 30 | 10 | P | T |
| FFR | 464 | 44 | 7-19 | 9-29 | 35 | 30 | P | T |
| Delsoy | 4900 | 43 | 7-28 | 10-6 | 34 | 20 | P | T |
| HyPerformer | HY 401 | 43 | 7-20 | 9-30 | 38 | 50 | P | G |
| DeKalb | CX 458 | 43 | 7-17 | 9-27 | 29 | 10 | W | T |
| Mo. | Avery | 42 | 7-23 | 10-7 | 49 | 40 | W | T |
| AgraTech | AT 495 | 42 | 7-25 | 10-2 | 30 | 00 | W | T |
| Delsoy | 4500 | 41 | 7-18 | 9-28 | 34 | 20 | W | G |
| DeKalb | CX 415 | 39 | 7-16 | 9-21 | 33 | 10 | W | T |
| Noble Bear | NB 3750 | 39 | 7-16 | 9-22 | 34 | 20 | W/P | G |

Table 46. Soybeans: Yield of varieties (Maturity Group IV) evaluated at three locations for three years (1989-91).

| Brand | Variety | Avg. Yield | Knoxville | Springfield | Milan |
|------------------|---------|------------|-----------|-------------|-------|
| Bushels per acre | | | | | |
| Northrup King | RA 452 | 48 | 48 | 46 | 50 |
| Pioneer | 9461 | 47 | 44 | 51 | 47 |
| Riverside | 499 | 46 | 47 | 45 | 46 |
| Tn | 4-86 | 46 | 48 | 43 | 46 |
| Pioneer | 9442 | 44 | 44 | 43 | 46 |
| DeKalb | CX 458 | 44 | 41 | 47 | 44 |
| Mo. | Avery | 44 | 42 | 42 | 48 |
| HyPerformer | HY 401 | 43 | 41 | 45 | 44 |
| DeKalb | CX 415 | 39 | 38 | 40 | 39 |
| L.S.D. (.05) | | 3.8 | 6.9 | 6.9 | 6.0 |
| C.V. % | | 18.5 | 19.5 | 19.2 | 16.2 |
| Avg. | | 44.6 | 43.6 | 44.5 | 45.6 |

Table 47. Soybeans: Yield and other characteristics of varieties (Maturity Groups IV) evaluated for three years (1989-91).

| Brand | Variety | Avg. Yield | Full Bloom | Matur-ity | Plant Ht. | Lodged | Flower | Pubes-cence |
|---------------|---------|------------|------------|-----------|-----------|--------|--------|-------------|
| | | Bu/A | Date | Date | In. | % | Color | Color |
| Northrup King | RA 452 | 48 | 7-27 | 10-5 | 40 | 30 | W | G |
| Pioneer | 9461 | 47 | 7-18 | 9-23 | 30 | 10 | W | T |
| Riverside | 499 | 46 | 7-28 | 10-6 | 45 | 40 | P | G |
| Tn | Tn-4-86 | 46 | 7-22 | 9-30 | 42 | 20 | P | G |
| Pioneer | 9442 | 44 | 7-18 | 9-23 | 31 | 10 | P | T |
| DeKalb | CX 458 | 44 | 7-18 | 9-24 | 31 | 10 | W | T |
| Mo. | Avery | 44 | 7-23 | 10-6 | 50 | 50 | W | T |
| HyPerformer | HY 401 | 43 | 7-20 | 9-29 | 39 | 50 | P | G |
| DeKalb | CX 415 | 39 | 7-17 | 9-15 | 35 | 10 | W | T |

Maturity Group V

The maturity group V varieties were evaluated at Greeneville, Knoxville, Spring Hill, Springfield, Martin, and Ames Plantation. The Greeneville test was discarded due to poor stand and weed problems.

The soybean trials at Knoxville were affected by Race 2 soybean cyst nematode and Sudden Death Syndrome (SDS) disease. Disease ratings were made by Newman and Hadden, extension plant pathologists at Jackson and Knoxville, respectively. The 1991 trials at Knoxville were planted May 3 following corn and on land infested with race 2 soybean cyst nematodes. Moisture was adequate during the growing season and the damage from nematodes was not apparent.

The data for Knoxville were reported separate to show the effects of SDS on yield. No severe disease problem was noted at the other locations. The test at Spring Hill seeded May 22 was subjected to drought stress most of the growing season. No disease problem was observed at this location. The other locations had adequate rainfall for good yields. The first planting for maturity group V at Milan was made May 31 and replanted June 6, 1991 due to a heavy rain immediately after planting on May 31. A Commercial strains test for maturity group V was conducted at Jackson.

The data of maturity group V are reported in Tables 48 through 55. The strains test results (maturity group V) from Jackson are reported in Table 51.

Hartz HX 5566, Asgrow A 5979, Asgrow 5403, Northrup King S 59-60 produced higher yields in 1991 than the check variety Hutcheson (Table 48). Hutcheson yields were lower than usual at Milan. Essex produced low yields at Springfield, Milan and Martin in 1991 (Table 48). At Knoxville (Table 50) no maturity ratings were made due to SDS disease causing all varieties to mature at the same time. This disease was severe but it did not seem to affect the yields in the maturity group (V) as it did in the later

maturing test. Pioneer brand 9521 was very susceptible to SDS but produced 54 bushels per acre. HyPerformer HSC 557 was the only variety at Knoxville that produced lower yields than the check variety Hutcheson (Table 50).

The commercial strains of maturity group V results are reported in Table 51. The check variety Hutcheson produced the highest average yield which was significantly higher than Hartwig and four strains (Table 51).

The two years results for maturity group V are shown in Tables 52 and 53. The three year data for maturity V are presented in Tables 54 and 55. Asgrow A 5979 and Hutcheson were among the higher producing varieties over a three year period (Table 54).

Table 48. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations in 1991.

| Brand | Variety | Avg. | Knox-ville ¹ | Spring Hill ² | Spring-field ³ | Milan ⁴ | Ames Plantation ⁵ | Martin ⁶ |
|------------------|-----------|------|-------------------------|--------------------------|---------------------------|--------------------|------------------------------|---------------------|
| Bushels per acre | | | | | | | | |
| Hartz | H 5566 | 43 | 57 | 33 | 43 | 40 | 39 | 47 |
| Asgrow | A 5979 | 43 | 59 | 33 | 40 | 44 | 41 | 43 |
| Asgrow | A 5403 | 42 | 51 | 35 | 41 | 39 | 40 | 47 |
| Northrup King | S 59-60 | 42 | 52 | 34 | 41 | 38 | 44 | 42 |
| Terra-Vig | 5693 | 41 | 48 | 30 | 48 | 35 | 46 | 41 |
| Terra-Vig | 5452 | 41 | 55 | 36 | 39 | 37 | 39 | 40 |
| Hartz | HX51914 | 40 | 60 | 29 | 38 | 38 | 36 | 40 |
| Pioneer | 9591 | 40 | 52 | 28 | 36 | 34 | 40 | 47 |
| HyPerformer | HSC 591 | 39 | 48 | 31 | 40 | 35 | 42 | 39 |
| Pioneer | 9593 | 39 | 55 | 30 | 37 | 37 | 41 | 36 |
| Hartz | H X58613 | 39 | 58 | 30 | 38 | 36 | 39 | 35 |
| Deltapine | 415 | 39 | 47 | 33 | 41 | 35 | 40 | 38 |
| AgraTech | AT 575 | 39 | 48 | 27 | 43 | 32 | 43 | 41 |
| Pioneer | 9551 | 39 | 53 | 32 | 35 | 37 | 38 | 39 |
| Stoneville | ST 551 | 39 | 50 | 33 | 39 | 37 | 33 | 41 |
| Northrup King | C6955 | 39 | 57 | 29 | 34 | 34 | 44 | 33 |
| FFR | 561 | 39 | 52 | 30 | 39 | 36 | 37 | 37 |
| Pioneer | 9521 | 38 | 54 | 36 | 35 | 35 | 35 | 34 |
| Deltapine | 105 | 38 | 39 | 29 | 38 | 35 | 47 | 40 |
| DYNA-GRO | 3501 | 38 | 44 | 28 | 39 | 33 | 43 | 41 |
| FFR (Exp. 36578) | 595 | 38 | 47 | 35 | 36 | 32 | 42 | 35 |
| UAPX | 42 | 38 | 46 | 30 | 34 | 36 | 43 | 38 |
| FFR | 565 | 38 | 48 | 35 | 35 | 34 | 37 | 37 |
| Northrup King | C485 | 38 | 46 | 30 | 32 | 38 | 39 | 41 |
| Terra Vig | 515 | 38 | 45 | 27 | 37 | 34 | 42 | 41 |
| Mo. | Rhodes | 38 | 52 | 30 | 34 | 33 | 38 | 40 |
| Va. | Hutcheson | 38 | 47 | 30 | 37 | 32 | 41 | 39 |
| Tn | 5-85 | 38 | 54 | 26 | 34 | 32 | 44 | 35 |
| Northrup King | C425 | 37 | 49 | 26 | 37 | 36 | 35 | 40 |
| FFR | 562 | 37 | 46 | 25 | 39 | 34 | 42 | 38 |
| Stoneville | ST 571 | 37 | 52 | 27 | 37 | 35 | 31 | 42 |
| Hartz | H 5668 | 37 | 39 | 32 | 35 | 37 | 42 | 39 |
| Mo. | Hartwig | 37 | 51 | 27 | 31 | 35 | 36 | 44 |
| Hartz | HX5191 | 37 | 49 | 22 | 36 | 32 | 44 | 40 |
| AgraTech | AT 550 | 37 | 47 | 32 | 36 | 34 | 41 | 32 |
| Hartz | HX 5088 | 37 | 50 | 27 | 35 | 35 | 38 | 36 |
| Va. | Essex | 37 | 50 | 30 | 32 | 34 | 41 | 34 |
| Terra-Vig | X 5652 | 37 | 47 | 36 | 29 | 31 | 42 | 36 |
| Riverside | 577 | 37 | 41 | 24 | 41 | 33 | 42 | 40 |
| Hartz | HX 5258 | 37 | 46 | 25 | 39 | 35 | 38 | 37 |
| HyPerformer | HSC 557 | 36 | 33 | 32 | 35 | 37 | 45 | 35 |
| Tn. Exp. | 85-157 | 36 | 49 | 31 | 35 | 31 | 34 | 34 |
| FFR Exp. | 38091 | 36 | 50 | 30 | 26 | 31 | 37 | 39 |
| HyPerformer | HSC 579 | 35 | 43 | 23 | 38 | 29 | 43 | 34 |
| L.S.D. (.05) | | 3.3 | 9.3 | 4.7 | 4.9 | 4.5 | 10.1 | 7.8 |
| C.V. % | | 15.1 | 13.5 | 11.2 | 9.4 | 9.3 | 18.0 | 14.4 |
| Avg. | | 38.3 | 49.3 | 30.0 | 36.9 | 34.9 | 40.1 | 38.8 |

¹Sequatchie silt loam (2% to 5% slopes). ⁴Vicksburg silt loam (2% to 5% slopes).
²Maury silt loam (2% to 5% slopes). ⁵Loring silt loam (2% to 5% slopes).
³Dickson silt loam (2% to 5% slopes). ⁶Falaya silt loam (2% to 5% slopes).

Table 49. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations in 1991.

| Brand | Variety | Yield | Full Bloom | Maturity | Plant Ht. | Lodging | Flower | Pubescence | Moisture at Harv. |
|-------------------|-----------|-------|------------|----------|-----------|---------|--------|------------|-------------------|
| | | Bu/A | Date | Date | Ht. | % | | | % |
| | | | | | | | | MOIST | |
| Hartz | H 5566 | 43 | 7-21 | 10-2 | 35 | 4 | W | T | 11.6 |
| Asgrow | A 5979 | 43 | 7-20 | 11-4 | 33 | 2 | W | G | 11.3 |
| Asgrow | A 5403 | 42 | 7-19 | 9-29 | 31 | 1 | P | G | 11.2 |
| Northrup King | S59-60 | 42 | 7-21 | 10-4 | 33 | 29 | P | T | 11.5 |
| Terra-Vig | 5693 | 41 | 7-24 | 10-6 | 31 | 8 | P | G | 11.2 |
| Terra-Vig | 5452 | 41 | 7-22 | 10-3 | 34 | 16 | W | G | 11.5 |
| Hartz | HX51914 | 40 | 7-21 | 10-5 | 30 | 3 | P | T | 11.4 |
| Pioneer | 9591 | 40 | 7-20 | 10-7 | 27 | 0 | P | G | 11.2 |
| HyPerformer | HSC 591 | 39 | 7-27 | 10-6 | 40 | 4 | W | T | 11.6 |
| Pioneer | 9593 | 39 | 7-22 | 10-2 | 38 | 3 | W | T | 11.3 |
| Hartz | H X58613 | 39 | 7-21 | 9-31 | 35 | 4 | W | T | 11.3 |
| Deltapine | 415 | 39 | 7-21 | 9-30 | 32 | 5 | P | G | 11.7 |
| AgraTech | AT 575 | 39 | 7-25 | 10-4 | 33 | 3 | W | G | 11.9 |
| Pioneer | 9551 | 39 | 7-18 | 9-29 | 30 | 2 | W | T | 11.4 |
| Stoneville | ST 551 | 39 | 7-20 | 9-28 | 33 | 5 | W | T | 11.2 |
| Northrup King | C6955 | 39 | 7-20 | 9-31 | 32 | 4 | W | T | 11.6 |
| FFR | 561 | 39 | 7-20 | 10-2 | 32 | 2 | W | G | 11.5 |
| Pioneer | 9521 | 38 | 7-18 | 9-23 | 29 | 0 | P | T | 11.6 |
| Deltapine | 105 | 38 | 7-23 | 10-2 | 36 | 22 | P | G | 11.5 |
| DYNO-GRO | 3501 | 38 | 7-22 | 9-30 | 34 | 18 | P | T | 10.8 |
| FFR (Exp. 36578) | 595 | 38 | 7-27 | 10-6 | 40 | 6 | W | T | 11.4 |
| UAPX ¹ | 42 | 38 | 7-27 | 10-3 | 40 | 21 | W | T | 10.9 |
| FFR | 565 | 38 | 7-21 | 10-2 | 34 | 2 | W | T | 11.3 |
| Northrup King | C485 | 38 | 7-22 | 10-7 | 33 | 11 | P | T | 11.4 |
| Terra-Vig | 515 | 38 | 7-25 | 10-9 | 34 | 16 | P | T | 12.1 |
| Mo. | Rhodes | 38 | 7-20 | 10-3 | 33 | 4 | W | T | 11.7 |
| Va. | Hutcheson | 38 | 7-21 | 10-6 | 29 | 5 | W | G | 11.3 |
| Tn | 5-85 | 38 | 7-19 | 9-30 | 35 | 14 | W | G | 11.3 |
| Northrup King | C425 | 37 | 7-18 | 10-2 | 25 | 0 | P | T | 11.1 |
| FFR | 562 | 37 | 7-25 | 10-5 | 38 | 8 | P | G | 11.4 |
| Stoneville | ST 571 | 37 | 7-19 | 10-4 | 29 | 0 | W | G | 11.3 |
| Hartz | H 5668 | 37 | 7-21 | 10-4 | 37 | 15 | P | T | 11.6 |
| Mo. | Hartwig | 37 | 7-21 | 9-29 | 31 | 4 | W | T | 10.9 |
| Hartz | H X5191 | 37 | 7-21 | 10-6 | 34 | 4 | W | G | 11.9 |
| AgraTech | AT 550 | 37 | 7-22 | 10-3 | 40 | 6 | P | T | 12.1 |
| Hartz | HX 5088 | 37 | 7-19 | 10-2 | 34 | 15 | W | T | 11.1 |
| Va. | Essex | 37 | 7-18 | 9-29 | 26 | 1 | P | G | 11.1 |
| Terra-Vig | X 5652 | 37 | 7-22 | 10-7 | 29 | 6 | P | T | 11.9 |
| Riverside | 577 | 37 | 7-23 | 10-3 | 37 | 21 | W | G | 11.5 |
| Hartz | HX 5258 | 37 | 7-18 | 9-31 | 33 | 2 | P | T | 11.9 |
| HyPerformer | HSC 557 | 36 | 7-27 | 10-4 | 44 | 16 | P | T | 11.7 |
| Tn. Exp. | 85-157 | 36 | 7-23 | 9-29 | 36 | 13 | W | G | 10.8 |
| FFR Exp. | 38091 | 36 | 7-17 | 9-22 | 26 | 0 | W | G | 11.2 |
| HyPerformer | HSC 579 | 35 | 7-26 | 10-2 | 33 | 1 | P | T | 11.2 |

¹Tri-State Delta Chem Inc., Rayville, LA.

Table 50. Soybeans Yield and other characteristics of varieties evaluated (Maturity group V) at Knoxville under severe SDS (Sudden Death Syndrome Disease) in 1991.

| Brand | Variety | Yield Bu/A | Full Bloom Date | Plant Ht. In. | Lodging % | ----SDS Disease---- | |
|-----------------|-----------|---------------|--------------------|------------------|--------------|--|------------------------------|
| | | | | | | Severity Rating ¹ DS ¹ | Incidence DI ² |
| Hartz | HX51914 | 60 | 7-4 | 36 | 15 | 4.2 | 47.5 |
| Asgrow | A 5979 | 59 | 7-3 | 36 | 05 | 6.2 | 95.0 |
| Hartz | H X58613 | 58 | 7-4 | 40 | 10 | 5.7 | 88.7 |
| Hartz | HX 5566 | 57 | 7-4 | 36 | 10 | 5.0 | 72.5 |
| Northrup King | 6955 | 57 | 7-2 | 36 | 10 | 6.0 | 67.5 |
| Terra-Vig | 5452 | 55 | 7-5 | 35 | 20 | 6.0 | 77.5 |
| Pioneer | 9593 | 55 | 7-6 | 37 | 20 | 5.0 | 60.0 |
| Tn. | Tn. 5-85 | 54 | 7-2 | 37 | 35 | 5.7 | 92.5 |
| Pioneer | 9521 | 54 | 6-28 | 31 | 00 | 7.2 | 100.0 |
| Pioneer | 9551 | 53 | 6-29 | 30 | 00 | 6.2 | 87.5 |
| Northrup King | S 59-60 | 52 | 7-5 | 33 | 65 | 5.5 | 56.5 |
| Stoneville | ST 571 | 52 | 7-35 | 28 | 00 | 5.0 | 80.0 |
| Pioneer | 9591 | 52 | 7-4 | 28 | 00 | 6.7 | 57.5 |
| FFR | 561 | 52 | 7-2 | 33 | 00 | 5.2 | 92.5 |
| Mo. | Rhodes | 52 | 7-3 | 34 | 25 | 5.5 | 96.2 |
| Mo. | Hartwig | 51 | 7-7 | 30 | 05 | 6.0 | 92.2 |
| Asgrow | A 5403 | 51 | 7-2 | 33 | 00 | 7.0 | 98.7 |
| Hartz | HX 5088 | 50 | 7-2 | 34 | 40 | 7.5 | 88.7 |
| FFR Exp. | 38091 | 50 | 6-6 | 29 | 00 | 7.2 | 100.0 |
| Stoneville | ST 551 | 50 | 7-5 | 33 | 15 | 4.7 | 68.7 |
| Va. | Essex | 50 | 6-30 | 28 | 05 | 6.5 | 92.5 |
| Tn. Exp. | 85-157 | 49 | 7-9 | 42 | 45 | 8.0 | 87.5 |
| Northrup King | C 425 | 49 | 6-30 | 27 | 00 | 6.0 | 97.2 |
| Hartz | H X5191 | 49 | 7-5 | 34 | 15 | 6.0 | 61.2 |
| HyPerformer | HSC 591 | 48 | 7-11 | 45 | 30 | 1.3 | 8.0 |
| FFR | 565 | 48 | 7-3 | 34 | 15 | 6.2 | 65.0 |
| AgraTech | AT 575 | 48 | 7-6 | 38 | 15 | 5.5 | 50.0 |
| Terra-Vig | 5693 | 48 | 7-7 | 34 | 25 | 6.2 | 52.5 |
| Va. | Hutcheson | 47 | 7-5 | 33 | 40 | 7.0 | 66.2 |
| FFR(exp. 36578) | 595 | 47 | 7-8 | 46 | 35 | 5.0 | 47.5 |
| Terra-Vig | X 5652 | 47 | 7-7 | 29 | 05 | 3.2 | 21.3 |
| Deltapine | 415 | 47 | 7-6 | 36 | 25 | 5.7 | 60.0 |
| AgraTech | AT 550 | 47 | 7-2 | 46 | 15 | 7.0 | 95.0 |
| Exp. | UAPX-42 | 46 | 7-11 | 46 | 75 | 5.0 | 80.0 |
| Hartz | HX 5258 | 46 | 6-30 | 33 | 00 | 7.2 | 93.5 |
| FFR | 562 | 46 | 7-7 | 40 | 40 | 6.5 | 71.2 |
| Northrup King | C485 | 46 | 7-6 | 35 | 35 | 5.2 | 52.5 |
| Terra-Vig | 515 | 45 | 7-9 | 38 | 70 | 6.5 | 57.5 |
| DYNA-GRO | 3501 | 44 | 7-3 | 33 | 70 | 5.5 | 81.2 |
| HyPerformer | HSC 579 | 43 | 7-10 | 34 | 10 | 4.7 | 52.5 |
| Riverside | 577 | 41 | 7-7 | 43 | 25 | 5.7 | 76.2 |
| Deltapine | 106 | 39 | 7-7 | 36 | 60 | 6.2 | 69.7 |
| Hartz | H 5668 | 39 | 7-40 | 38 | 55 | 7.7 | 75.0 |
| HyPerformer | HSC 557 | 33 | 7-14 | 49 | 55 | 8.0 | 91.2 |
| L.S.D. (.05) | | 9.3 | | | | | |
| C V % | | 13.5 | | | | | |
| Avg. | | 49.3 | | | | | |

¹DS refers to disease systems and the severity ratings were made by Melvin Newman, Extension Plant Pathologist, West Tn. Ag. Exp. Station, Jackson. A scale of 0 through 9 was use with 0= no symptoms and 9= Premature plant death.
²DI refers to disease incidence and these ratings were also made by Newman. These ratings were based on percent damage.

Table 51. Yield and other characteristics of strains (Maturity Group V) evaluated at Jackson in 1991.

| Brand | Strains | Yield | Bloom | Mat- urity | Plant Ht. | Lodg- ing | Pubes- | | Moist. at Harvest |
|--------------|-----------|-------|-------|---------------|--------------|--------------|--------|-------|----------------------|
| | | | | | | | Flower | cence | |
| | | Bu/A | Date | Date | In. | % | Color | Color | % |
| Va. | Hutcheson | 62 | 8-2 | 10-11 | 35 | 36.2 | W | G | 12.6 |
| Hartz | HX 57393 | 60 | 8-3 | 10-11 | 35 | 10.5 | W | T | 12.6 |
| Callahan | 2595 NX | 59 | 8-6 | 10-11 | 43 | 40.0 | P | T | 11.4 |
| Callahan | 7510 N | 58 | 7-23 | 10-7 | 36 | 15.0 | P | T | 12.0 |
| Callahan | 2575 NX | 58 | 7-26 | 10-11 | 41 | 72.5 | P | T | 13.4 |
| Deltapine | DPX 2384 | 57 | 8-6 | 10-11 | 43 | 68.7 | P | G | 14.5 |
| Deltapine | DPX 2389 | 57 | 8-5 | 10-11 | 47 | 50.0 | P | T | 15.4 |
| Davis R.A. | UAPX-76 | 57 | 7-27 | 10-11 | 33 | 66.2 | W | G | 12.3 |
| Davis R.A. | UAPC-79 | 56 | 8-5 | 10-11 | 37 | 52.5 | P | T | 13.3 |
| Deltapine | DPX 2385 | 56 | 8-6 | 10-11 | 41 | 78.7 | P | G | 13.2 |
| Hartz | HX 57396 | 56 | 8-3 | 10-11 | 37 | 53.7 | W | T | 11.8 |
| Deltapine | DPX 2341 | 56 | 8-5 | 10-11 | 38 | 16.3 | P | T | 12.1 |
| Davis R.A. | UAPX-77 | 56 | 7-26 | 10-11 | 38 | 81.2 | W | T | 12.8 |
| Davis R.A. | UAPX-78 | 54 | 7-28 | 10-11 | 40 | 80.0 | W | G | 12.4 |
| Callahan | 2565 NX | 53 | 7-25 | 10-11 | 36 | 27.5 | P | T | 13.6 |
| Deltapine | DPX 2359 | 53 | 8-2 | 10-11 | 46 | 43.7 | W | T | 12.6 |
| Callahan | 2502 NX | 52 | 7-24 | 10-2 | 32 | 3.5 | P | T | 11.3 |
| USDA | Hartwig | 50 | 7-25 | 10-11 | 35 | 40.0 | W | T | 11.5 |
| L.S.D. (.05) | | 8.0 | | | | | | | |
| C.V. % | | 10.1 | | | | | | | |
| Avg. | | 56.1 | | | | | | | |

Table 52. Soybeans: Yield of varieties (Maturity Group V) evaluated at five locations for two years (1990-91).

| Brand | Variety | Avg. Yield | Knox-ville | Spring Hill | Spring-field | Milan | Ames Plantation |
|------------------|-----------|------------|------------|-------------|--------------|-------|-----------------|
| Bushels per acre | | | | | | | |
| Asgrow | A 5979 | 41 | 54 | 30 | 28 | 55 | 40 |
| Hartz | HX 5566 | 39 | 50 | 31 | 28 | 50 | 36 |
| Va. | Hutcheson | 38 | 49 | 28 | 29 | 47 | 39 |
| Asgrow | A 5403 | 38 | 50 | 31 | 28 | 44 | 37 |
| Northrup King | C485 | 38 | 50 | 29 | 24 | 49 | 36 |
| Deltapine | 105 | 37 | 43 | 29 | 28 | 48 | 40 |
| Northrup King | C425 | 37 | 51 | 25 | 24 | 50 | 38 |
| Deltapine | 415 | 37 | 47 | 29 | 25 | 47 | 38 |
| FFR (Exp. 36578) | 595 | 37 | 46 | 32 | 26 | 47 | 35 |
| Northrup King | C6955 | 37 | 54 | 28 | 25 | 41 | 38 |
| Pioneer | 9591 | 37 | 52 | 28 | 27 | 41 | 38 |
| Terra-Vig | 515 | 37 | 45 | 27 | 28 | 45 | 37 |
| AgraTech | AT 550 | 36 | 46 | 30 | 25 | 44 | 38 |
| AgraTech | AT 575 | 36 | 45 | 26 | 30 | 44 | 36 |
| Va. | Essex | 36 | 46 | 28 | 22 | 49 | 36 |
| Tn Exp. 85-157 | | 36 | 49 | 28 | 26 | 44 | 33 |
| FFR | 561 | 36 | 50 | 27 | 27 | 41 | 35 |
| Hartz | HX 5258 | 35 | 44 | 24 | 24 | 48 | 36 |
| FFR | 562 | 35 | 43 | 25 | 28 | 44 | 35 |
| Riverside | 577 | 35 | 45 | 23 | 25 | 45 | 36 |
| Tn | 5-85 | 35 | 50 | 25 | 21 | 41 | 36 |
| FFR | 565 | 33 | 42 | 30 | 23 | 39 | 33 |
| L.S.D. (.05) | | 2.7 | 6.5 | 3.4 | 3.7 | 6.5 | 6.9 |
| C.V. % | | 17.0 | 13.8 | 12.3 | 14.5 | 14.5 | 19.1 |
| Avg. | | 36.8 | 47.8 | 27.8 | 25.9 | 45.6 | 36.7 |

Table 53. Soybeans: Yield and other characteristics of varieties (Maturity group V) evaluated for two years (1990-91).

| Brand | Variety | Yield | Full Bloom | Maturity | Plant Ht. | Lodging | Flower | Pubescence |
|------------------|-----------|-------|------------|----------|-----------|---------|--------|------------|
| | | Bu/A | Date | Date | In. | % | | |
| Asgrow | A 5979 | 41 | 7-23 | 10-8 | 36 | 10 | W | G |
| Hartz | HX 5566 | 39 | 7-23 | 10-7 | 37 | 10 | W | T |
| Va. | Hutcheson | 38 | 7-24 | 10-8 | 32 | 10 | W | G |
| Asgrow | A 5403 | 38 | 7-21 | 10-1 | 34 | 00 | P | G |
| Northrup King | C485 | 38 | 7-25 | 10-12 | 35 | 10 | P | T |
| Deltapine | 105 | 37 | 7-26 | 10-7 | 39 | 20 | P | G |
| Northrup King | C425 | 37 | 7-18 | 10-2 | 29 | 00 | P | T |
| Deltapine | 415 | 37 | 7-23 | 10-4 | 35 | 10 | P | G |
| FFR (Exp. 36578) | 595 | 37 | 7-28 | 10-10 | 42 | 10 | W | T |
| Northrup King | C6955 | 37 | 7-22 | 10-4 | 35 | 00 | W | T |
| Pioneer | 9591 | 37 | 7-23 | 10-8 | 30 | 00 | P | G |
| Terra Vig | 515 | 37 | 7-27 | 10-14 | 36 | 20 | P | T |
| AgraTech | AT 550 | 36 | 7-23 | 10-10 | 42 | 10 | P | T |
| AgraTech | AT 575 | 36 | 7-28 | 10-9 | 36 | 00 | W | G |
| Va. | Essex | 36 | 7-16 | 9-31 | 31 | 00 | P | G |
| Tn. Exp. | 85-157 | 36 | 7-25 | 10-3 | 41 | 20 | W | G |
| FFR | 561 | 36 | 7-22 | 10-5 | 35 | 00 | W | G |
| Hartz | HX 5258 | 35 | 7-20 | 10-2 | 35 | 10 | P | T |
| FFR | 562 | 35 | 7-27 | 10-9 | 40 | 10 | P | G |
| Riverside | 577 | 35 | 7-25 | 10-7 | 39 | 20 | W | G |
| Tn | 5-85 | 35 | 7-21 | 10-2 | 36 | 10 | W | G |
| FFR | 565 | 33 | 7-22 | 10-6 | 37 | 00 | W | T |

Table 54. Yield of varieties (Maturity Group V) evaluated for three years (1989-91).

| Brand | Variety | Avg. Yield | Knox-ville | Spring Hill | Spring-field | Milan | Ames Plantation |
|------------------|-----------|------------|------------|-------------|--------------|-------|-----------------|
| Bushels per acre | | | | | | | |
| Asgrow | A 5979 | 43 | 54 | 38 | 30 | 58 | 36 |
| Va. | Hutcheson | 42 | 52 | 38 | 32 | 50 | 36 |
| Deltapine | 415 | 41 | 48 | 39 | 29 | 52 | 34 |
| Northrup King | C 485 | 40 | 49 | 36 | 28 | 55 | 32 |
| Pioneer | 9591 | 40 | 50 | 38 | 32 | 45 | 35 |
| Asgrow | A 5403 | 40 | 52 | 38 | 30 | 47 | 34 |
| Northrup King | C 6955 | 39 | 54 | 35 | 28 | 46 | 34 |
| Deltapine | 105 | 39 | 46 | 37 | 31 | 48 | 36 |
| Northrup King | C 425 | 39 | 49 | 36 | 27 | 48 | 34 |
| Agratech | AT 550 | 39 | 46 | 38 | 27 | 47 | 36 |
| FFR | 561 | 39 | 49 | 35 | 31 | 45 | 32 |
| Terra Vig | 515 | 39 | 45 | 35 | 31 | 48 | 33 |
| AgraTech | AT 575 | 38 | 46 | 35 | 32 | 47 | 32 |
| Va. | Essex | 38 | 47 | 36 | 24 | 52 | 32 |
| FFR | 562 | 38 | 46 | 37 | 30 | 47 | 31 |
| Tn. | Tn 5-85 | 38 | 51 | 36 | 23 | 46 | 32 |
| Riverside | 577 | 37 | 45 | 34 | 26 | 49 | 33 |
| FFR | 565 | 37 | 44 | 38 | 27 | 46 | 31 |
| L.S.D. (.05) | | 2.3 | 4.8 | 3.0 | 3.4 | 6.2 | 5.0 |
| C.V. % | | 16.2 | 12.3 | 10.2 | 14.8 | 15.7 | 18.8 |
| Avg. | | 39.2 | 48.4 | 36.6 | 28.8 | 48.7 | 33.4 |

Table 55. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated for three years (1989-91).

| Brand | Variety | Avg. Yield | Full Bloom | Matur- ing | Plant Ht. | Lodging | Flower | Pubes- cence |
|---------------|-----------|------------|------------|------------|-----------|---------|--------|--------------|
| | | Bu/A | Date | Date | In. | % | Color | Color |
| Asgrow | A 5979 | 43 | 7-15 | 10-8 | 36 | 20 | W | G |
| Va. | Hutcheson | 42 | 7-15 | 10-7 | 33 | 10 | W | G |
| Deltapine | 415 | 41 | 7-14 | 10-3 | 35 | 10 | P | G |
| Northrup King | C485 | 40 | 7-17 | 10-12 | 35 | 20 | P | T |
| Pioneer | 9591 | 40 | 7-14 | 10-9 | 30 | 10 | P | G |
| Asgrow | A 5403 | 40 | 7-13 | 10-1 | 34 | 00 | P | G |
| Northrup King | C6955 | 39 | 7-13 | 10-4 | 35 | 10 | W | T |
| Deltapine | 105 | 39 | 7-16 | 10-8 | 38 | 30 | P | G |
| Northrup King | C425 | 39 | 7-10 | 10-2 | 29 | 00 | P | T |
| AgraTech | AT 550 | 39 | 7-15 | 10-10 | 42 | 10 | P | T |
| FFR | 561 | 39 | 7-13 | 10-5 | 35 | 10 | W | G |
| Terra Vig | 515 | 39 | 7-18 | 10-14 | 36 | 30 | P | T |
| AgraTech | AT 575 | 38 | 7-19 | 10-10 | 36 | 20 | W | G |
| Va. | Essex | 38 | 7-11 | 9-31 | 30 | 10 | P | G |
| FFR | 562 | 38 | 7-18 | 10-9 | 39 | 20 | P | G |
| Tn | 5-85 | 38 | 7-12 | 10-3 | 36 | 20 | W | G |
| Riverside | 577 | 37 | 7-16 | 10-7 | 37 | 40 | W | G |
| FFR | 565 | 37 | 7-13 | 10-7 | 36 | 10 | W | T |

Maturity Groups VI and VII

Thirty one late maturing soybean varieties (groups VI and VII) were grown in 1990 and only sixteen entered in the 1991 trials. The late maturing varieties were evaluated at Knoxville, Spring Hill, Milan, and Ames Plantation in 1991. A late maturing commercial strains test was conducted at Jackson.

The late maturing data are presented in Tables 56 through 63. Spring Hill soybean trials were seeded May 22 and grew under drought conditions most of the season. The average yield of the late maturing group at Spring Hill was only 25 bushels per acre under drought conditions (Table 56). The late maturing varieties at Knoxville were infested by SDS (Sudden Death Syndrome disease). The SDS ratings and yield for this late maturing group at Knoxville are shown in Table 58. Tn 6-90 and Pioneer brand 9691 had low yields (Table 58). Asgrow A 6785 and Northrup King RA 606 showed tolerance to this disease. The disease was so severe and uniform that no maturity notes were taken.

The commercial strains results for 1991 are shown in Table 59. The two and three years data are presented in Tables 60 through 63. Pioneer brand 9681, Asgrow A 6297, and Asgrow A 6785 were among the top yield producers from 1989 through 1991.

Table 56. Soybeans: Yield of varieties (Maturity Groups VI & VII) evaluated at four locations in 1991.

| Brand | Variety | Avg. Yield | Knox-ville ¹ | Spring Hill ² | Milan ³ | Ames Plantation ⁴ |
|------------------|----------|------------|-------------------------|--------------------------|--------------------|------------------------------|
| Bushels per acre | | | | | | |
| Asgrow | A 6297 | 43 | 45 | 30 | 51 | 47 |
| Asgrow | A 6785 | 42 | 50 | 24 | 43 | 50 |
| HyPerformer | HSC B2J | 41 | 42 | 26 | 49 | 46 |
| Pioneer | 9681 | 40 | 39 | 23 | 48 | 49 |
| Deltapine | DPX 3627 | 39 | 35 | 24 | 49 | 49 |
| Northrup King | RA 606 | 39 | 41 | 21 | 47 | 47 |
| HyPerformer | HSC 623 | 39 | 31 | 28 | 50 | 46 |
| Pioneer | 9641 | 39 | 33 | 23 | 50 | 49 |
| Riverside | Cajun | 38 | 38 | 24 | 44 | 47 |
| Riverside | 699 | 37 | 38 | 23 | 39 | 51 |
| Northrup King | S 61-89 | 37 | 32 | 28 | 49 | 40 |
| Tn | Tn 6-90 | 37 | 26 | 29 | 45 | 48 |
| Northrup King | S 64-23 | 36 | 31 | 25 | 45 | 43 |
| Riverside | 696 | 35 | 28 | 22 | 48 | 44 |
| Riverside | 677 | 34 | 35 | 22 | 32 | 46 |
| Pioneer | 9691 | 32 | 18 | 27 | 38 | 45 |
| L.S.D. (.05) | | 3.5 | 7.9 | 4.1 | 9.2 | 5.1 |
| C.V. % | | 13.1 | 15.8 | 11.6 | 14.3 | 7.7 |
| Avg. | | 38.0 | 35.0 | 24.8 | 45.4 | 46.6 |

¹Sequatchie silt loam (2% to 5% slopes). ³Vicksburg silt loam (2% to 5% slopes).

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

Table 57. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated in 1991.

| Brand | Variety | Yield | Full Bloom | Matur- ing | Plant Ht. | Lodg- ing | Flower | Pubes- cence |
|---------------|----------|-------|------------|------------|-----------|-----------|--------|--------------|
| | | Bu/A | Date | Date | In. | % | Color | Color |
| Asgrow | A 6297 | 43 | 7-19 | 10-12 | 35 | 8 | W | G |
| Asgrow | A 6785 | 42 | 7-29 | 10-17 | 36 | 24 | W | G |
| HyPerformer | HSC B2J | 41 | 7-17 | 10-9 | 35 | 4 | P | T |
| Pioneer | 9681 | 40 | 7-25 | 10-15 | 38 | 13 | P | T |
| Deltapine | DPX 3627 | 39 | 7-21 | 10-11 | 35 | 1 | P | G |
| Northrup King | RA 606 | 39 | 7-28 | 10-13 | 40 | 18 | W | G |
| HyPerformer | HSC 623 | 39 | 7-18 | 10-10 | 36 | 24 | W | G |
| Pioneer | 9641 | 39 | 7-26 | 10-12 | 34 | 18 | P | G |
| Riverside | Cajun | 38 | 7-24 | 10-13 | 31 | 13 | W | T |
| Riverside | 699 | 37 | 7-18 | 10-13 | 36 | 4 | W | G |
| Northrup King | S61-89 | 37 | 7-18 | 10-9 | 40 | 9 | P | T |
| Tn | Tn 6-90 | 37 | 7-29 | 10-16 | 37 | 1 | W | T |
| Northrup King | S64-23 | 36 | 7-29 | 10-14 | 41 | 21 | W | T |
| Riverside | 696 | 35 | 7-30 | 10-16 | 37 | 10 | P | T |
| Riverside | 677 | 34 | 7-17 | 10-14 | 35 | 2 | W | G |
| Pioneer | 9691 | 32 | 7-24 | 10-17 | 37 | 16 | W | T |

Table 58. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated under severe SDS (Sudden Death Syndrome disease) at Knoxville in 1991.

| Brand | Variety | Yield Bu/A | Full Bloom Date | Plant | | Moist. at Harvest % | --SDS Disease-- Severity Incidence | |
|---------------|---------|---------------|--------------------|------------|--------------|------------------------|---------------------------------------|-----------------|
| | | | | Ht. In. | Lodging % | | Rating DS ¹ | DI ² |
| Asgrow | A 6785 | 50 | 7-21 | 42 | 75 | 12.3 | 3.2 | 10.0 |
| Asgrow | A 6297 | 45 | 7-10 | 39 | 20 | 11.4 | 5.2 | 53.0 |
| HyPerformer | HSC B2J | 42 | 7-6 | 37 | 10 | 12.2 | 6.5 | 86.2 |
| Northrup King | RA 606 | 41 | 7-21 | 45 | 40 | 11.7 | 1.3 | 9.3 |
| Pioneer | 9681 | 39 | 7-13 | 38 | 45 | 12.1 | 6.2 | 62.5 |
| Riverside | Cajun | 38 | 7-12 | 30 | 15 | 12.1 | 5.0 | 49.2 |
| Riverside | 699 | 38 | 7-8 | 37 | 15 | 12.1 | 6.0 | 68.7 |
| Riverside | 677 | 35 | 7-7 | 37 | 05 | 12.1 | 6.0 | 62.2 |
| Deltapine | 3627 | 35 | 7-12 | 34 | 05 | 12.1 | 8.5 | 96.2 |
| Pioneer | 9641 | 33 | 7-16 | 36 | 70 | 11.7 | 6.0 | 61.2 |
| Northrup King | S 61-89 | 32 | 7-8 | 40 | 20 | 12.2 | 8.3 | 100 |
| HyPerformer | HSC 623 | 31 | 7-8 | 34 | 45 | 13.3 | 8.3 | 96.2 |
| Northrup King | S-64-23 | 31 | 7-21 | 43 | 60 | 12.2 | 5.7 | 72.5 |
| Riverside | 696 | 28 | 7-21 | 42 | 40 | 12.1 | 5.5 | 77.5 |
| Tn. Exp. | Tn 6-90 | 26 | 7-21 | 40 | 05 | 11.9 | 8.0 | 90.0 |
| Pioneer | 9691 | 18 | 7-11 | 39 | 25 | 12.3 | 7.0 | 85.0 |
| L.S.D. (.05) | | 7.8 | | | | | | |
| C.V. % | | 15.8 | | | | | | |
| Avg. | | 35.0 | | | | | | |

Table 59. Yield and other characteristics of strains (maturity groups VI and VII) evaluated at Jackson in 1991.

| Brand | Strain | Yield Bu/A | Bloom Date | Mat- urity Date | Plant Ht. In. | Lodg- ing % | Flower Color | Pubes- cence Color | Moisture at Harvest % |
|--------------|----------|---------------|---------------|-----------------------|---------------------|-------------------|-----------------|--------------------------|-----------------------------|
| | | | | | | | | | |
| Asgrow | A6297 | 52 | 8-5 | 10-16 | 40 | 38.7 | W | G | 12.7 |
| Deltapine | 2571 | 52 | 8-7 | 10-15 | 44 | 65.0 | W | T | 13.0 |
| Deltapine | 1282 | 49 | 8-8 | 10-17 | 40 | 35.0 | P | G | 12.8 |
| Pioneer | 9641 | 46 | 8-8 | 10-15 | 38 | 52.5 | P | G | 12.9 |
| Underwood | 609 | 44 | 8-11 | 10-17 | 43 | 56.2 | W | T | 13.0 |
| Underwood | 607 | 40 | 8-10 | 10-16 | 49 | 51.2 | W | T | 12.8 |
| Hartz | HX 69939 | 39 | 8-10 | 10-14 | 42 | 30.0 | P | T | 12.9 |
| Underwood | 119(611) | 36 | 8-6 | 10-15 | 41 | 77.5 | P | T | 12.9 |
| L.S.D. (.05) | | 8.8 | | | | | | | |
| C.V. % | | 13.4 | | | | | | | |
| Avg. | | 44.7 | | | | | | | |

Table 60. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated at three locations for two years (1990-91).

| Brand | Variety | Avg. Yield | Knox-ville | Spring Hill | Milan |
|------------------|----------|------------|------------|-------------|-------|
| Bushels per acre | | | | | |
| Asgrow | A 6297 | 47 | 47 | 34 | 58 |
| Asgrow | A 6785 | 42 | 51 | 26 | 50 |
| Pioneer | 9681 | 42 | 43 | 27 | 55 |
| Tn | Tn-90 | 41 | 39 | 33 | 51 |
| HyPerformer | HSC B2J | 41 | 47 | 26 | 49 |
| Deltapine | DPX 3627 | 41 | 44 | 27 | 51 |
| Pioneer | 9641 | 40 | 43 | 27 | 49 |
| Northrup King | S 61-89 | 40 | 39 | 29 | 51 |
| Northrup King | RA 606 | 39 | 43 | 24 | 52 |
| Riverside | 696 | 39 | 39 | 27 | 50 |
| Northrup King | S 64-24 | 39 | 39 | 28 | 49 |
| Riverside | Cajun | 38 | 42 | 24 | 48 |
| Riverside | 699 | 37 | 41 | 24 | 46 |
| Pioneer | 9691 | 37 | 33 | 30 | 48 |
| Riverside | 677 | 37 | 40 | 27 | 43 |
| L.S.D. (.05) | | 3.3 | 5.5 | 4.2 | 6.0 |
| C.V. % | | 14.4 | 13.2 | 15.5 | 12.1 |
| Avg. | | 39.9 | 42.1 | 27.5 | 49.9 |

Table 61. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated for two years (1990-91).

| Brand | Variety | Avg. | Full | Matur- | Plant | Lodg- | Pubes- | |
|---------------|----------|-------|-------|--------|-------|-------|--------|-------|
| | | yield | Bloom | ity | Ht. | ing | Flower | cence |
| | | Yield | Date | Date | In. | % | Color | Color |
| Asgrow | A 6297 | 47 | 8-5 | 10-30 | 38 | 10 | W | G |
| Asgrow | A 6785 | 42 | 8-14 | 11-4 | 39 | 20 | W | G |
| Pioneer | 9681 | 42 | 8-6 | 10-30 | 41 | 10 | P | T |
| Tn | Tn-90 | 41 | 8-11 | 10-31 | 41 | 10 | W | T |
| HyPerformer | HSC B2J | 41 | 8-1 | 10-25 | 38 | 10 | P | T |
| Deltapine | DPX 3627 | 41 | 8-4 | 10-25 | 38 | 10 | P | G |
| Pioneer | 9641 | 40 | 8-8 | 10-28 | 38 | 10 | P | G |
| Northrup King | S 61-89 | 40 | 8-2 | 10-24 | 40 | 20 | P | T |
| Northrup King | RA 606 | 39 | 8-11 | 10-30 | 41 | 20 | W | G |
| Riverside | 696 | 39 | 8-10 | 11-2 | 40 | 20 | P | T |
| Northrup King | S 64-24 | 39 | 8-12 | 10-27 | 43 | 20 | W | T |
| Riverside | Cajun | 38 | 8-6 | 10-29 | 34 | 10 | W | T |
| Riverside | 699 | 37 | 8-2 | 10-28 | 38 | 00 | W | G |
| Pioneer | 9691 | 37 | 8-7 | 11-3 | 39 | 20 | W | T |
| Riverside | 677 | 37 | 8-2 | 11-4 | 37 | 10 | W | G |

Table 62. Soybeans: Yield of varieties (Maturity Groups VI & VII) evaluated at three locations for three years (1989-91).

| Brand | Variety | Avg. | Spring | | |
|------------------|---------|-------|-----------|------|-------|
| | | Yield | Knoxville | Hill | Milan |
| Bushels per acre | | | | | |
| Asgrow | A 6297 | 48 | 46 | 42 | 57 |
| HyPerformer | HSC B2J | 45 | 46 | 34 | 54 |
| Asgrow | A 6785 | 45 | 48 | 34 | 52 |
| Tn. | Tn-90 | 43 | 39 | 38 | 53 |
| Pioneer | 9641 | 43 | 40 | 37 | 51 |
| Northrup King | RA 606 | 42 | 42 | 33 | 53 |
| Riverside | 699 | 42 | 41 | 37 | 48 |
| Riverside | Cajun | 41 | 40 | 33 | 50 |
| Pioneer | 9691 | 41 | 36 | 36 | 50 |
| Riverside | 696 | 40 | 39 | 31 | 51 |
| Riverside | 677 | 40 | 40 | 36 | 44 |
| L.S.D. (.05) | | 3.6 | 3.8 | 4.3 | 5.0 |
| C.V. % | | 18.1 | 11.2 | 15.0 | 11.9 |
| Avg. | | 42.8 | 41.5 | 35.5 | 51.3 |

Table 63. Soybeans: Yield and other characteristics of varieties (Maturity Groups VI & VII) evaluated for three years (1989-91).

| Brand | Variety | Avg. Yield | Full Bloom | Matur-ity | Plant Ht. | Lodged | Flower | Pubes-cence |
|---------------|---------|------------|------------|-----------|-----------|--------|--------|-------------|
| | | Bu/A | Date | Date | In. | | Color | Color |
| Asgrow | A 6297 | 48 | 8-3 | 10-27 | 39 | 10 | W | G |
| HyPerformer | HSC B2J | 45 | 7-31 | 10-22 | 39 | 20 | P | T |
| Asgrow | A 6785 | 45 | 8-10 | 10-30 | 39 | 30 | W | G |
| Tn. | Tn-90 | 43 | 8-8 | 10-28 | 42 | 10 | W | T |
| Pioneer | 9641 | 43 | 8-6 | 10-24 | 39 | 20 | P | G |
| Northrup King | RA 606 | 42 | 8-8 | 10-27 | 42 | 30 | W | G |
| Riverside | 699 | 42 | 7-31 | 10-24 | 39 | 10 | W | G |
| Riverside | Cajun | 41 | 8-3 | 10-25 | 36 | 10 | W | T |
| Pioneer | 9691 | 41 | 8-5 | 10-29 | 40 | 20 | W | T |
| Riverside | 696 | 40 | 8-7 | 10-28 | 41 | 30 | P | T |
| Riverside | 677 | 40 | 8-1 | 10-30 | 39 | 10 | W | G |

Soybean Cyst Nematode Ratings Made in 1991

The soybean cyst nematode ratings were made by Lawrence D. Young when these varieties were grown in the greenhouse during the summer of 1991 at Jackson, Tn. Soybean varieties from the state variety trials and strains were evaluated for resistance to races 3, 4, and 5. A susceptible and resistant check variety was used for each race. The ratings were based on a scale of 1 through 5 with 5 being the most susceptible. The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. These mean severity indexes are presented for each variety or strain for the three cyst nematode races. These data are presented in Tables 64 through 69.

Table 64. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity group IV grown in the greenhouse at Jackson during the summer of 1991.

| -----Soybean Cyst Nematode Race----- | | | | |
|--------------------------------------|-------------|---|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| | | Mean Severity Index ¹ (1-5) | | |
| Northrup King | RA 452 | 4.3 | 5.0 | 4.8 |
| Tn. | Tn 4-86 | 1.0 | 3.4 | 5.0 |
| DeKalb | CX 415 | 4.8 | 5.0 | 4.5 |
| Pioneer | 9442 | 5.0 | 5.0 | 5.0 |
| Riverside | 499 | 5.0 | 5.0 | 5.0 |
| Mo. | Avery | 1.1 | 2.4 | 5.0 |
| DeKalb | CX 458 | 5.0 | 5.0 | 4.8 |
| Pioneer | 9461 | 5.0 | 5.0 | 5.0 |
| HyPerformer | HY 401 | 5.0 | 4.8 | 4.8 |
| FFR | 464 | 4.8 | 5.0 | 5.0 |
| Mo. | Delsoy 4500 | 1.0 | 5.0 | 1.8 |
| Mo. | Delsoy 4900 | 1.2 | 4.8 | 4.8 |
| Northrup King | S 48-84 | 5.0 | 4.5 | 3.7 |
| Hartz | H 4464 | 1.0 | 4.8 | 1.6 |
| Agratech | AT 495 | 1.1 | 1.4 | 4.2 |
| Noble Bear | NB 3750 | 4.8 | 5.0 | 5.0 |
| DYNO-GRO | 3409 | 5.0 | 5.0 | 5.0 |
| DYNO-GRO | 3450 | 5.0 | 5.0 | 4.8 |
| DYNO-GRO | 3405 | 5.0 | 4.8 | 4.5 |
| Hartz | HX 4042 | 4.8 | 4.8 | 5.0 |
| Pioneer | 9501 | 5.0 | 5.0 | 5.0 |
| Pioneer | 9443 | 1.2 | 1.4 | 4.1 |
| Deltapine | DPX 3456 | 5.0 | 5.0 | 4.6 |
| Deltapine | DPX 3484 | 5.0 | 5.0 | 5.0 |
| AgraTech | AT 455 | 5.0 | 5.0 | 4.7 |
| Noble Bear | 3990 | 5.0 | 5.0 | 5.0 |
| Callahan | 1490X | 5.0 | 5.0 | 4.8 |
| Callahan | 1460N | 5.0 | 4.8 | 5.0 |
| Callahan | 9480 | 5.0 | 4.8 | 5.0 |
| Callahan | 8464 | 5.0 | 5.0 | 4.8 |
| Callahan | 1416 | 4.8 | 5.0 | 5.0 |
| Ill. | F 4090 | 1.0 | 1.4 | 4.7 |
| Check | Essex | 5.0 | --- | --- |
| Check | Centennial | 1.0 | 5.0 | --- |
| Check | Bedford | --- | 3.0 | 5.0 |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Table 65. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity group V grown in the greenhouse at Jackson during the summer of 1991.

| -----Soybean Cyst Nematode Race----- | | | | |
|--------------------------------------|------------|-----|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| Mean Severity Index ¹ | | | | |
| (1-5) | | | | |
| Va. | Essex | 4.8 | 4.5 | 4.6 |
| Deltapine | 105 | 4.7 | 4.8 | 5.0 |
| Tn. | Tn 5-85 | 1.5 | 4.5 | 3.4 |
| Northrup King | Coker 485 | 5.0 | 3.8 | 3.3 |
| Northrup King | Coker 425 | 4.8 | 5.0 | 5.0 |
| FFR | 562 | 4.8 | 4.7 | 5.0 |
| Terra Vig | 515 | 1.2 | 5.0 | 4.4 |
| Riverside | 577 | 1.0 | 6.6 | 2.7 |
| Deltapine | 415 | 1.0 | 4.7 | 4.8 |
| FFR | 565 | 1.0 | 1.8 | 5.0 |
| AgraTech | AT 575 | 4.7 | 4.7 | 5.0 |
| AgraTech | AT 550 | 1.0 | 1.2 | 4.6 |
| Asgrow | A 5403 | 1.0 | 1.0 | 4.4 |
| Northrup King | 6955 | 1.0 | 4.5 | 4.6 |
| Va. | Hutcheson | 4.8 | 4.8 | 4.7 |
| FFR Exp. | 38091 | 1.3 | 1.0 | 5.0 |
| HyPerformer | HSC 557 | 1.0 | 1.0 | 5.0 |
| | UAPX-42 | 1.0 | 1.3 | 4.6 |
| Mo. | Hartwig | 1.0 | 1.0 | 1.0 |
| Pioneer | 9591 | 5.0 | 3.3 | 4.8 |
| Asgrow | A 5979 | 1.0 | 1.1 | 5.0 |
| Hartz | HX 5258 | 5.0 | 4.2 | 5.0 |
| Hartz HX | HX 5566 | 1.0 | 1.1 | 5.0 |
| FFR | 595 | 1.0 | 1.1 | 4.6 |
| Tn. Exp. | 85-157 | 1.0 | 3.7 | 1.0 |
| Pioneer | 9521 | 1.0 | 4.0 | 1.0 |
| Pioneer | 9551 | 1.0 | 1.4 | 5.0 |
| Pioneer | 9593 | 1.0 | 4.2 | 5.3 |
| Hartz | HX 5088 | 1.3 | 4.4 | 4.7 |
| DYNA-GRO | 3501 | 1.0 | 4.5 | 5.0 |
| Hartz | H 5668 | 1.0 | 4.3 | 2.3 |
| Mo. | Rhodes | 1.0 | 4.5 | 1.1 |
| Hartz | HX 51914 | 5.0 | 4.2 | 5.0 |
| Hartz | HX 5191 | 5.0 | 4.5 | 4.5 |
| Hartz | HX 58613 | 1.0 | 1.2 | 4.7 |
| Northrup King | S 59-60 | 1.0 | 1.1 | 4.7 |
| Terra Vig | 5693 | 5.0 | 4.6 | 4.5 |
| Terra Vig | 5452 | 1.0 | 4.7 | 4.5 |
| Terra Vig | X 5652 | 1.0 | 1.0 | 5.0 |
| HyPerformer | HSC 579 | 5.0 | 4.5 | 4.8 |
| HyPerformer | HSC 591 | 1.0 | 1.3 | 5.0 |
| Stoneville | ST 551 | 1.0 | 4.7 | 5.0 |
| Stoneville | ST 571 | 5.0 | 4.8 | 4.8 |
| Check | Essex | 4.8 | --- | |
| Check | Centennial | 1.0 | 4.8 | --- |
| Check | Bedford | --- | 2.3 | 4.7 |
| Check | Cordell | --- | --- | 1.0 |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Table 66. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity groups VI and VII grown in the greenhouse at Jackson during the summer of 1991.

| -----Soybean Cyst Nematode Race----- | | | | |
|--------------------------------------|----------|---|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| | | Mean Severity Index ¹ (1-5) | | |
| Northrup King | RA 606 | 1.0 | 5.0 | 4.7 |
| Riverside | 696 | 1.0 | 3.8 | 4.0 |
| Asgrow | A 6785 | 4.5 | 5.0 | 5.0 |
| Riverside | Cajun | 1.2 | 3.8 | 4.4 |
| Riverside | 677 | 4.8 | 5.0 | 5.0 |
| Riverside | 699 | 4.8 | 5.0 | 5.0 |
| Asgrow | A 6297 | 1.0 | 3.1 | 4.8 |
| Pioneer | 9691 | 1.0 | 4.3 | 4.3 |
| HyPerformer | HSC B2J | 1.0 | 4.7 | 2.8 |
| Pioneer | 9641 | 4.8 | 5.0 | 5.0 |
| Tn. | Tn 6-90 | 1.0 | 3.1 | 5.0 |
| Pioneer | 9681 | 1.0 | 4.7 | 3.2 |
| Deltapine | DPX 3627 | 5.0 | 4.0 | 4.3 |
| Northrup King | S 64-23 | 1.0 | 1.7 | 5.0 |
| Northrup King | S 61-89 | 1.0 | 2.2 | 5.0 |
| HyPerformer | HSC 623 | 1.0 | 3.2 | 5.0 |
| Bedford | (Check) | --- | 3.0 | 5.0 |
| Centennial | (Check) | --- | 4.7 | --- |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Table 67. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity groups IV strains grown in the greenhouse at Jackson during the summer of 1991.

| -----Soybean Cyst Nematode Race----- | | | | |
|---|----------|-----|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| Mean Severity Index ¹ (1-5) | | | | |
| Callahan | 1414N | 5.0 | 4.3 | 5.0 |
| Callahan | 1410 | 2.7 | 4.2 | 4.1 |
| Riverside | 460 | 5.0 | 5.4 | 4.8 |
| Eagle | LB 90-39 | 5.0 | 4.8 | 4.8 |
| Eagle | LB 90-40 | 5.0 | 5.0 | 5.0 |
| Eagle | LB 90-42 | 4.7 | 4.8 | 5.0 |
| Eagle | LB 90-44 | 5.0 | 5.0 | 5.0 |
| Eagle | LB 90-66 | 5.0 | 5.0 | 5.0 |
| Hartz | HX 46096 | 5.0 | 5.0 | 5.0 |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Table 68. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity groups V strains grown in the greenhouse at Jackson during the summer of 1991.

| -----Soybean Cyst Nematode Race----- | | | | |
|--------------------------------------|------------|---|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| | | Mean Severity Index ¹ (1-5) | | |
| Davis | RA UAPX-76 | 5.5 | 4.3 | 5.0 |
| Davis | RA UAPX-77 | 5.0 | 4.3 | 5.0 |
| Davis | RA UAPX-78 | 2.0 | 4.4 | 4.7 |
| Davis | RA UAPX-79 | 1.0 | 4.6 | 3.6 |
| Callahan | 7510 N | 1.0 | 4.3 | 5.0 |
| Callahan | 2502 NX | 2.7 | 5.0 | 5.0 |
| Callahan | 2565 NX | 1.8 | 5.0 | 2.8 |
| Callahan | 2575 NX | 1.0 | 3.8 | 5.0 |
| Callahan | 2595 NX | 1.0 | 3.7 | 5.0 |
| Deltapine | DPX 2359 | 1.5 | 4.0 | 5.0 |
| Deltapine | DPX 2341 | 1.0 | 4.8 | 4.8 |
| Deltapine | DPX 2389 | 1.0 | 5.0 | 4.6 |
| Deltapine | DPX 2384 | 5.0 | 4.7 | 4.7 |
| Deltapine | DPX 2385 | 5.0 | 5.0 | 5.0 |
| Hartz | HX 57393 | 1.2 | 3.0 | 4.8 |
| Hartz | HX 57396 | 1.0 | 1.8 | 5.0 |
| Check | Centennial | -- | 4.8 | -- |
| Check | Bedford | -- | -- | 4.8 |
| Check | Cordell | -- | -- | 1.0 |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Table 69. Soybeans: Soybean cyst nematode ratings made by Lawrence D. Young on maturity groups VI and VII strains grown in the greenhouse at Jackson during the summer of 1991.

| | | -----Soybean Cyst Nematode Race----- | | |
|-----------|------------|---|-----|-----|
| Brand | Variety | 3 | 4 | 5 |
| | | Mean Severity Index ¹ (1-5) | | |
| Hartz | HX 69939 | 1.2 | 1.0 | 5.0 |
| Deltapine | 1282 | 1.0 | 4.4 | 1.3 |
| Deltapine | 2571 | 1.1 | 1.0 | 4.7 |
| Underwood | 609 | 5.0 | 4.3 | 5.0 |
| Underwood | 607 | 1.4 | 4.0 | 1.3 |
| Underwood | (119) 611 | 1.0 | 1.0 | 4.8 |
| Check | Essex | 5.0 | -- | -- |
| Check | Centennial | 1.0 | 4.8 | -- |
| Check | Bedford | -- | 1.7 | 5.0 |
| Check | Cordell | -- | -- | 1.0 |

¹The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale 1 through 5 with 5 being the most susceptible.

Performance of Summer Annuals

(Sorghum X Sudangrass Cross and Pearl millets)

Sixteen summer annuals were evaluated for forage production at Knoxville and Spring Hill in 1991. The plants were cut to a six inch stubble when they reached 30 to 36 inches in height. The tests were harvested with a forage harvester at both locations. The yields are reported as tons of oven dry forage (Table 70).

Table 70. Summer Annuals: Yield of varieties evaluated at Knoxville and Spring Hill in 1991.

| Type | Brand | Variety | Avg. | Knoxville | Spring Hill |
|----------------------------------|---------------|------------------|------|-----------|-------------|
| Tons of oven dry forage per acre | | | | | |
| SS | HyPerformer | Tastemaker DR | 4.40 | 6.27 | 2.54 |
| SS | Pennington | Summergrazer III | 3.99 | 5.63 | 2.36 |
| SS | Vista | Greentreat II | 3.98 | 5.22 | 2.73 |
| SS | | Tastemaker III | 3.92 | 5.38 | 2.47 |
| SS | Northrup King | Sordan 79 | 3.92 | 5.33 | 2.50 |
| | Vista | Grazer | 3.80 | 5.04 | 2.57 |
| SS | Co-op | MS 7469 X 233 | 3.60 | 4.86 | 2.34 |
| Mil | Pennington | Southgraze | 3.58 | 4.71 | 2.46 |
| SS | Vista | Greentreat III | 3.57 | 4.52 | 2.62 |
| SS | DeKalb | S X 17 | 3.54 | 4.45 | 2.64 |
| SS | Co-op | MS 7483 X 233 | 3.38 | 4.36 | 2.40 |
| | | 8888 | 3.35 | 4.29 | 2.42 |
| Mil | Co-op | Leafy 20 | 3.32 | 4.74 | 1.89 |
| Su | Northrup King | Trudan 8 | 3.32 | 4.28 | 2.35 |
| Mil | | Millex 24 | 3.32 | 4.16 | 2.49 |
| SS | Co-op | Ms 85 X 233 | 3.31 | 4.30 | 2.32 |
| L.S.D. (.05) | | | | 0.95 | 0.22 |
| C.V. % | | | | 13.7 | 6.3 |
| AVG. | | | | 4.84 | 2.44 |

Performance of Grain Sorghum Varieties

Grain Sorghum trials were conducted at Springfield, Milan, Spring Hill and Ames Plantation in 1991. The test at Milan was planted no-till in killed wheat. The other trials were conducted in a conventional seedbed.

The grain sorghum test at Spring Hill was treated with mesural three times (August 2, 15, and 22) for bird control. Bird damage was excessive and the ratings are shown in Table 72.

The data for grain sorghum are shown in Tables 71 through 74.

Table 71. Grain Sorghum: Yield and other characteristics of varieties evaluated at Springfield in 1991.

| Brand | Variety | Yield | Headed | Maturity | Plant | Head | Head | Grain | Moisture |
|---------------|----------|-------|--------|----------|-------|-------------------|--------------------|------------|----------|
| | | | | | Ht. | Ext. ¹ | Type | at Harvest | |
| | | Bu/A | Date | Date | In. | In. | (1-3) ² | % | |
| Cargill | 70 | 85 | 7-5 | 8-16 | 44.2 | 5.5 | 1.8 | 17.2 | |
| Cargill | 757 | 81 | 7-5 | 8-27 | 55.2 | 7.2 | 1.5 | 19.5 | |
| Northrup King | S9740Y | 79 | 7-4 | 8-27 | 57.2 | 7.0 | 1.3 | 19.3 | |
| DeKalb | X-967 | 78 | 7-11 | 8-31 | 49.7 | 5.0 | 2.2 | 18.1 | |
| Cargill | 837 | 78 | 7-9 | 8-30 | 51.0 | 6.0 | 2.7 | 18.6 | |
| Northrup King | KS710 | 77 | 7-4 | 8-27 | 43.5 | 4.5 | 2.0 | 17.7 | |
| Pioneer | 8230 | 75 | 7-4 | 8-27 | 53.2 | 6.7 | 2.5 | 19.1 | |
| Northrup King | KS555Y | 75 | 7-4 | 8-27 | 52.0 | 4.7 | 2.0 | 20.2 | |
| HyPerformer | Wings | 75 | 7-9 | 8-20 | 51.7 | 3.7 | 3.0 | 19.2 | |
| DeKalb | DK 37 | 75 | 7-6 | 8-16 | 54.0 | 4.5 | 2.0 | 21.6 | |
| Northrup King | 2660 | 74 | 7-7 | 8-17 | 47.2 | 5.2 | 3.0 | 18.1 | |
| DeKalb | DK 56 | 74 | 7-12 | 8-22 | 53.2 | 5.5 | 1.5 | 19.5 | |
| Deltapine | 1552 | 73 | 7-8 | 8-16 | 56.0 | 4.7 | 2.0 | 19.8 | |
| Deltapine | G-1711 | 72 | 7-9 | 8-20 | 48.0 | 5.2 | 3.0 | 20.9 | |
| Cargill | 6670 | 71 | 7-9 | 8-29 | 54.0 | 4.0 | 3.0 | 20.8 | |
| HyPerformer | Cherokee | 70 | 7-7 | 8-28 | 50.0 | 4.5 | 3.0 | 20.8 | |
| Northrup King | KS 737 | 69 | 7-6 | 8-28 | 52.2 | 6.5 | 2.2 | 19.6 | |
| FFR | 321 | 66 | 7-10 | 8-20 | 44.7 | 3.7 | 2.2 | 17.7 | |
| Deltapine | G-522A | 66 | 7-5 | 8-16 | 46.5 | 5.7 | 2.0 | 18.9 | |
| Pioneer | 8333 | 64 | 7-5 | 8-16 | 47.7 | 4.7 | 1.3 | 19.1 | |
| DeKalb | DK 60 | 62 | 7-11 | 8-21 | 52.2 | 6.0 | 2.7 | 19.0 | |
| DeKalb | DK 40Y | 59 | 7-10 | 8-28 | 48.2 | 3.2 | 1.0 | 19.0 | |
| FFR | 331 | 56 | 7-12 | 8-24 | 58.0 | 4.5 | 2.5 | 20.4 | |
| Deltapine | G-522DR | 56 | 7-8 | 8-18 | 46.2 | 4.7 | 2.7 | 19.2 | |
| DeKalb | M-565 | 54 | 7-9 | 8-22 | 45.5 | 2.2 | 1.8 | 19.6 | |
| HyPerformer | 1225DR | 52 | 7-11 | 8-23 | 46.7 | 2.7 | 1.8 | 17.6 | |
| L.S.D. (.05) | | 18.4 | | | | | | | |
| C.V. % | | 18.7 | | | | | | | |
| Avg. | | 69.8 | | | | | | | |

¹The distance in inches from the flag leaf to the base of the head.

²A rating of 1 to 3 with 1 being tight and 3 open.

Table 72. Grain Sorghum: Yield and other characteristics of varieties evaluated at Spring Hill in 1991.

| Brand | Variety | Yield | Head Ext. ¹ | Plant Ht. | Grain Moisture at Harvest | Bird Damage |
|---------------|----------|-------|------------------------|-----------|---------------------------|----------------------------|
| | | Bu/A | In. | In. | % | Rating (0-10) ² |
| Northrup King | KS 710 | 77 | 3.2 | 45 | 13.6 | 4.2 |
| Northrup King | 2660 | 75 | 3.5 | 47 | 13.3 | 5.0 |
| Deltapine | G-1711 | 74 | 4.0 | 53 | 13.6 | 4.2 |
| DeKalb | DK 40Y | 73 | 5.5 | 49 | 13.6 | 4.5 |
| Cargill | 6670 | 73 | 3.2 | 50 | 13.6 | 4.5 |
| DeKalb | DK 60 | 70 | 4.0 | 50 | 13.7 | 2.5 |
| Deltapine | G-522DR | 69 | 3.5 | 48 | 13.6 | 5.2 |
| FFR | 321 | 67 | 3.7 | 44 | 13.6 | 4.7 |
| HyPerformer | Cherokee | 67 | 4.2 | 51 | 13.8 | 3.2 |
| DeKalb | DK 56 | 67 | 5.7 | 52 | 13.8 | 4.2 |
| Deltapine | G-522A | 65 | 4.5 | 45 | 13.6 | 5.2 |
| HyPerformer | 1225DR | 65 | 5.0 | 49 | 13.7 | 5.0 |
| DeKalb | M-565 | 65 | 4.0 | 47 | 13.6 | 5.0 |
| Pioneer | 8333 | 64 | 4.2 | 49 | 13.7 | 5.5 |
| HyPerformer | Wings | 62 | 2.7 | 50 | 13.4 | 5.2 |
| Cargill | 70 | 61 | 5.2 | 46 | 13.5 | 5.0 |
| Pioneer | 8230 | 58 | 4.7 | 49 | 13.8 | 5.0 |
| DeKalb | X-967 | 57 | 1.5 | 45 | 13.8 | 5.0 |
| Cargill | 837 | 56 | 5.2 | 46 | 13.8 | 5.7 |
| Cargill | 757 | 52 | 7.0 | 51 | 13.6 | 5.2 |
| Northrup King | KS 555Y | 49 | 5.2 | 56 | 13.3 | 5.2 |
| Deltapine | 1552 | 49 | 1.8 | 49 | 13.9 | 5.7 |
| DeKalb | DK 37 | 47 | 6.5 | 53 | 13.6 | 5.7 |
| Northrup King | S 9740Y | 47 | 7.2 | 57 | 13.8 | 5.7 |
| Northrup King | KS 737 | 44 | 6.5 | 52 | 13.7 | 6.7 |
| FFR | 331 | 40 | 3.7 | 56 | 13.5 | 7.0 |
| L.S.D. (.05) | | 16.2 | | | | |
| C.V. % | | 18.7 | | | | |
| Avg. | | 61.4 | | | | |

¹The distance in inches from the flag leaf to the base of the head.

²Rating based on a scale of 0 to 10 with 0 being no injury and 10 severe.

Table 73. Grain Sorghum: Yield and other characteristics of varieties evaluated at Milan in 1991.

| Brand | Variety | Yield | Headed | Head ¹ | | Grain Moisture |
|---------------|----------|-------|--------|-------------------|--------------------|----------------|
| | | | | Ext. | Type | |
| | | Bu/A | Date | In. | (1-3) ² | % |
| Deltapine | G-522A | 108 | 7-21 | 7.5 | 2.5 | 15.3 |
| Pioneer | 8230 | 107 | 7-22 | 4.5 | 1.5 | 15.8 |
| Northrup King | 2660 | 103 | 7-23 | 4.5 | 1.5 | 15.0 |
| HyPerformer | Wings | 102 | 7-21 | 9.0 | 1.0 | 15.5 |
| Deltapine | G-522DR | 101 | 7-26 | 6.0 | 1.0 | 15.3 |
| HyPerformer | Cherokee | 101 | 7-23 | 6.0 | 2.5 | 15.4 |
| Cargill | 70 | 97 | 7-27 | 7.0 | 2.0 | 15.7 |
| DeKalb | X-967 | 96 | 7-26 | 5.5 | 2.0 | 14.9 |
| Northrup King | KS 710 | 95 | 7-25 | 5.0 | 3.0 | 16.0 |
| FFR | 331 | 94 | 7-26 | 5.5 | 2.0 | 14.9 |
| Pioneer | 8333 | 93 | 7-24 | 7.5 | 1.5 | 16.8 |
| Cargill | 837 | 93 | 7-24 | 8.0 | 2.0 | 16.5 |
| Cargill | 6670 | 92 | 7-28 | 5.5 | 1.0 | 16.7 |
| Deltapine | G-1711 | 87 | 7-28 | 5.5 | 1.0 | 15.7 |
| DeKalb | M-565 | 84 | 7-27 | 6.0 | 1.5 | 15.0 |
| Northrup King | S 9740Y | 83 | 7-21 | 10.5 | 2.0 | 15.9 |
| FFR | 321 | 83 | 7-30 | 4.0 | 2.0 | 15.2 |
| DeKalb | DK 37 | 81 | 7-21 | 4.5 | 2.0 | 15.9 |
| DeKalb | DK 40Y | 81 | 7-24 | 4.0 | 2.5 | 14.9 |
| Northrup King | KS 737 | 78 | 7-22 | 4.5 | 3.0 | 15.3 |
| Deltapine | 1552 | 77 | 7-20 | 6.5 | 3.0 | 16.3 |
| DeKalb | DK 60 | 76 | 7-31 | 4.0 | 1.0 | 16.6 |
| Northrup King | KS 555Y | 76 | 7-20 | 6.5 | 1.5 | 15.0 |
| Cargill | 757 | 76 | 7-25 | 6.0 | 2.0 | 17.3 |
| HyPerformer | 1225DR | 73 | 7-31 | 4.0 | 2.0 | 15.1 |
| DeKalb | DK 56 | 66 | 7-31 | 4.0 | 3.0 | 16.1 |
| L.S.D. (.05) | | 20.3 | | | | |
| C.V. % | | 14.0 | | | | |
| Avg. | | 88.6 | | | | |

¹The distance in inches from the flag leaf to the base of the head.

²A rating of 1 to 3 with 1 being tight and 3 open.

Table 74. Grain Sorghum: Yield and other characteristics of varieties evaluated at Ames Plantation in 1991.

| Brand | Variety | Yield | Plant | Head | Head Grain Moisture | |
|---------------|----------|-------|-------|-------------------|---------------------|------------|
| | | | Ht. | Ext. ¹ | Type | at Harvest |
| | | BU/A | In. | In. | (1-3) ² | % |
| DeKalb | DK 40Y | 96 | 44.7 | 5.0 | 1.8 | 19.2 |
| Pioneer | 8230 | 88 | 48.0 | 5.5 | 1.3 | 22.7 |
| Deltapine | G-522A | 87 | 42.7 | 4.7 | 2.0 | 18.9 |
| DeKalb | DK 37 | 85 | 47.7 | 4.5 | 1.0 | 17.6 |
| Northrup King | KS 710 | 83 | 39.0 | 3.7 | 2.0 | 20.5 |
| Northrup King | S 9740Y | 83 | 44.7 | 8.3 | 2.0 | 19.1 |
| Northrup King | KS 555Y | 83 | 46.2 | 6.0 | 1.5 | 17.5 |
| Northrup King | KS 737 | 81 | 44.0 | 6.0 | 2.0 | 18.9 |
| Cargill | 757 | 81 | 45.7 | 5.7 | 2.0 | 20.3 |
| Cargill | 6670 | 81 | 45.2 | 5.2 | 1.0 | 21.4 |
| Pioneer | 8333 | 81 | 42.5 | 5.0 | 2.0 | 22.6 |
| HyPerformer | Wings | 80 | 47.2 | 5.5 | 1.3 | 21.0 |
| Deltapine | 1552 | 80 | 49.0 | 5.2 | 1.8 | 25.9 |
| Cargill | 837 | 78 | 45.2 | 5.2 | 1.5 | 20.2 |
| HyPerformer | Cherokee | 77 | 46.5 | 5.7 | 1.0 | 20.2 |
| FFR | 321 | 76 | 44.2 | 6.2 | 1.0 | 20.8 |
| Deltapine | G-1711 | 76 | 47.7 | 4.7 | 1.5 | 22.8 |
| DeKalb | DK 56 | 76 | 49.0 | 6.2 | 1.5 | 21.3 |
| DeKalb | M-565 | 75 | 43.0 | 4.7 | 1.3 | 20.6 |
| Deltapine | G-522DR | 75 | 42.5 | 5.5 | 1.5 | 19.7 |
| DeKalb | X-967 | 75 | 42.0 | 4.7 | 1.0 | 20.1 |
| FFR | 331 | 75 | 51.0 | 5.7 | 1.0 | 19.8 |
| HyPerformer | 1225DR | 74 | 44.7 | 4.0 | 1.0 | 21.6 |
| Cargill | 70 | 74 | 36.0 | 5.0 | 1.8 | 21.2 |
| Northrup King | 2660 | 74 | 44.0 | 5.7 | 1.0 | 22.4 |
| DeKalb | DK 60 | 72 | 46.7 | 5.2 | 1.0 | 26.1 |
| L.S.D. (.05) | | 15.0 | | | | |
| C.V. % | | 13.4 | | | | |
| Avg. | | 79.5 | | | | |

¹The distance in inches from the flag leaf to the base of the head.

²A rating of 1 to 3 with 1 being tight and 3 open.

Performance of Alfalfa

Alfalfa results are from tests grown at Knoxville, Springfield, Jackson, and Spring Hill (Tables 75-78). Newer varieties were seeded in the fall of 1991 at Knoxville, Crossville, and Springfield. Some of the varieties included were Alfagraze, Apollo Supreme, Aggressor, Pioneer brand 5373, Legacy, Multistar, Belmont, Crockett and Multi King 1.

No Red clover data are reported because of poor stands in the second year of production. Nine red clover varieties were seeded at seven locations in the fall of 1991.

Table 75. Alfalfa: Yield of varieties seeded in Knoxville September 3, 1985¹

| Brand | Variety | Avg. Yield | 1991 | 1990 | 1989 | 1988 | 1987 | 1986 |
|---------------|------------|------------|------|------|------|------|------|------|
| Tons per acre | | | | | | | | |
| AgriPro | Dart | 4.27 | 5.24 | 4.45 | 5.71 | 3.31 | 3.64 | 3.24 |
| Lovelock | Milkmaker | 4.24 | 4.89 | 4.53 | 5.79 | 3.20 | 3.76 | 3.28 |
| Public | Liberty | 4.22 | 4.98 | 4.14 | 5.96 | 3.32 | 3.53 | 3.36 |
| Great Plains | Shenandoah | 4.21 | 4.87 | 4.19 | 5.69 | 3.32 | 3.66 | 3.52 |
| AgriPro | Arrow | 4.20 | 5.04 | 4.06 | 5.88 | 3.28 | 3.71 | 3.24 |
| Northrup King | Raidor | 4.19 | 4.73 | 4.35 | 5.80 | 3.20 | 3.78 | 3.27 |
| Stanford | Mohawk | 4.19 | 4.95 | 4.22 | 5.61 | 3.34 | 3.83 | 3.21 |
| Great Plains | Cimarron | 4.18 | 4.92 | 4.20 | 5.64 | 3.40 | 3.58 | 3.35 |
| Funk | G-7808 | 4.15 | 4.89 | 3.91 | 5.55 | 3.52 | 3.73 | 3.28 |
| Lovelock | Husky | 4.15 | 5.19 | 3.96 | 5.76 | 3.22 | 3.64 | 3.11 |
| WL | 320 | 4.12 | 4.60 | 4.41 | 5.35 | 3.40 | 3.70 | 3.28 |
| Northrup King | Vancor | 4.09 | 5.31 | 4.01 | 5.44 | 3.10 | 3.53 | 3.17 |
| AgriPro | N-17 | 4.08 | 4.89 | 3.96 | 5.68 | 3.14 | 3.56 | 3.23 |
| | Agate | 4.05 | 4.78 | 4.10 | 5.51 | 3.19 | 3.66 | 3.04 |
| | Advantage | 4.03 | 4.87 | 4.17 | 5.41 | 3.18 | 3.53 | 3.04 |
| Stanford | Medistan | 4.01 | 4.93 | 4.08 | 5.46 | 3.16 | 3.37 | 3.04 |
| | Pike | 3.97 | 4.90 | 3.77 | 5.22 | 3.26 | 3.52 | 3.17 |
| DeKalb | DK135 | 3.95 | 4.31 | 3.73 | 5.49 | 3.14 | 3.59 | 3.42 |
| Asgrow | Eagle | 3.92 | 4.86 | 3.92 | 5.46 | 3.03 | 3.24 | 3.02 |
| | SpreadorII | 3.41 | 4.32 | 2.91 | 4.66 | 3.07 | 3.28 | 2.24 |
| L.S.D. (.05%) | | 0.51 | 0.68 | 0.65 | 0.41 | 0.35 | N.S. | 0.43 |
| C.V. % | | 8.42 | 9.9 | 11.3 | 5.20 | 7.60 | 6.90 | 9.60 |
| Avg. | | 4.08 | 4.87 | 4.05 | 5.60 | 3.24 | 3.58 | 3.16 |

¹Etowah silt loam (2% to 5% slopes).

Table 76. Alfalfa: Yield of varieties seeded in the fall of 1989 at Spring Hill¹

| Brand | Variety | Avg. | Tons per acre ² | |
|----------------|--------------------|------|----------------------------|------|
| | | | 1991 | 1990 |
| Garst | 636 | 4.3 | 5.1 | 3.5 |
| DeKalb | DK 135 | 4.3 | 5.1 | 3.5 |
| Vista | 639 | 4.2 | 5.1 | 3.4 |
| WL | 320 | 4.2 | 5.2 | 3.3 |
| Asgrow | Eagle | 4.2 | 5.2 | 3.2 |
| Allied | Asset ³ | 4.1 | 4.7 | 3.5 |
| Stanford | Medistan | 4.1 | 4.9 | 3.3 |
| FFR | Wamper | 4.1 | 4.9 | 3.3 |
| Jacques | Chief | 4.1 | 4.9 | 3.3 |
| Stanford | Lancaster | 4.1 | 4.9 | 3.3 |
| Vista | VS 622 | 4.1 | 5.1 | 3.1 |
| Great Plains | Shenandoah | 4.0 | 4.6 | 3.5 |
| Agri Pro | Apollo II | 4.0 | 4.8 | 3.3 |
| Ga. | Plains | 4.0 | 5.1 | 2.9 |
| Great Plains | Cimarron VR | 3.9 | 4.7 | 3.2 |
| Garst | 630 | 3.9 | 4.8 | 3.0 |
| Plant Genetics | Husky | 3.8 | 4.5 | 3.1 |
| Great Plains | Liberty | 3.8 | 4.5 | 3.0 |
| Plant Genetics | Milkmaker | 3.8 | 4.6 | 3.0 |
| Agri Pro | 8640 | 3.8 | 4.7 | 2.9 |
| Pioneer | 5432 | 3.8 | 4.7 | 2.9 |
| Great Plains | Cimarron | 3.8 | 4.7 | 2.9 |
| Pioneer | 531 | 3.8 | 4.8 | 2.8 |
| Stanford | Mohawk | 3.8 | 4.9 | 2.7 |
| FFR | Anstar | 3.6 | 4.5 | 2.7 |
| AgriPro | 8650 | 3.6 | 4.5 | 2.6 |
| L.S.D. (.05) | | | 0.49 | 0.40 |
| C.V. % | | | 7.3 | 19.9 |
| AVG. | | | 4.8 | 4.8 |

¹Maury silt loam (2% to 5% slopes).²Oven dry forage.³Evaluated in previous years as Vista VS 655.

Table 77. Alfalfa: Yield of varieties seeded at Springfield in 1989¹

| Brand | Variety | 1991 Yield | Brand | Variety | 1991 Yield |
|---------------|-------------|---------------|----------------|------------------|---------------|
| | | T/Acre | | | T/Acre |
| Jacques | Chief | 4.03 | NAPB (ABI) | Dart | 3.79 |
| VA | Shenandoah | 4.00 | W.L. | Southern Special | 3.78 |
| FFR | WAMRR | 4.00 | Plant Genetics | Husky | 3.78 |
| Northrup King | Vancor | 3.96 | | Raidor | 3.77 |
| Stanford | Lancaster | 3.94 | Garst | 636 | 3.73 |
| Great Plains | Cimarron | 3.90 | Pioneer | 531 | 3.72 |
| Great Plains | Cimarron VR | 3.88 | Lovelock | Milkmaker | 3.72 |
| Stanford | Medistan | 3.86 | Stanford | Mohawk | 3.71 |
| FFR | Anstar | 3.85 | Asgrow | Eagle | 3.71 |
| Pioneer | 526 | 3.83 | DeKalb | DK 135 | 3.63 |
| FFR | Haymark | 3.79 | Great Plains | Liberty | 3.62 |
| W.L. | 320 | 3.79 | Pioneer | 5432 | 3.55 |
| Garst | 630 | 3.79 | NAPB (ABI) | Arrow | 3.52 |
| L.S.D. (.05) | | N.S. | | | N.S. |
| C.V. % | | 7.6 | | | 7.6 |
| AVG. | | 3.79 | | | 3.79 |

¹No yield were reported for 1990.

Table 78. Alfalfa: Yield of varieties seeded in the fall of 1989 at Jackson¹

| Variety | 1991 Yield | Variety | 1991 Yield |
|------------------|---------------|---------------|---------------|
| | T/A | | T/A |
| Dart | 5.0 | Mohawk | 4.5 |
| Medistan | 5.0 | Vancor | 4.5 |
| Liberty | 4.9 | Lancaster | 4.5 |
| Chief | 4.8 | Anstar | 4.5 |
| Milkmaker | 4.8 | Pioneer 5432 | 4.4 |
| Garst 636 | 4.8 | Garst 630 | 4.4 |
| Cimarron | 4.7 | Eagle | 4.4 |
| Husky | 4.6 | Cimarron VR | 4.4 |
| WAMPR | 4.6 | Haymaker | 4.4 |
| Arrow | 4.6 | WL 320 | 4.3 |
| Raidor | 4.6 | Pioneer 531 | 4.2 |
| Southern Special | 4.6 | DeKalb DK 135 | 4.1 |
| Shenandoah | 4.5 | Pioneer 526 | 4.1 |
| L.S.D. (.05) | 0.44 | | 0.44 |
| C.V. % | 6.9 | | 6.9 |
| Avg. | 4.5 | | 4.5 |

¹1990 yield not reported.

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