

1961

PERFORMANCE TRIALS

of

FIELD CROP VARIETIES

By CHARLES R. GRAVES



1900

1961

LAND GRANT UNIVERSITY CENTENNIAL DEMONSTRATION PLOTS

at Highland Rim Experiment Station

(see inside front cover)

THE UNIVERSITY OF TENNESSEE
AGRICULTURAL EXPERIMENT STATION
JOHN A. EWING, DIRECTOR
KNOXVILLE

PROGRESS IN CORN PRODUCTION—The cover photo illustrates the progress that has been made in corn production during the last 50-60 years. The difference in yield between the two plots is the result of an improved variety, higher plant population and fertilization according to recommendations based on soil tests.

The variety on the left is Hickory King, an open pollinated variety in common use around 1900. The variety on the right is Dixie 29, a leading hybrid of today.

Demonstration plots similar to this one were set up during 1961 at each Branch Station and at the Main Station to illustrate changes in crop production during the last 100 years. These plots are being continued in 1962 as part of the University of Tennessee's observance of the Land Grant College and University Centennial celebration. The celebration commemorates President Abraham Lincoln's signing, in 1862, of the Federal Land Grant College Act (Morrill Act) which created America's system of land grant colleges and universities. The University of Tennessee joins 68 other land-grant institutions in this observance.

1961 PERFORMANCE TRIALS OF Field Crop Varieties

**CORN — COTTON — OATS — WHEAT — BARLEY
SOYBEANS — ALFALFA — GRAIN
SORGHUM — TOBACCO**

**Data for 1961 with Summaries of Results
from Previous Years**

Charles R. Graves
Assistant Professor of Agronomy

STATION HATCH PROJECT NO. 33

Evaluation of the Performance of Varieties of Field Crops.

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RECOMMENDED CROP VARIETIES

(Listed Alphabetically)

Corn Hybrids

White—A.E.S. 904W¹, DeKalb 925, Dixie 29, Dixie 33, Dixie 55¹, Dixie 77, Funk G-779W¹, P.A.G. 631W, P.A.G. 636W, Tenn. 501, Tenn. 503, U.S. 523W.

Yellow—Dixie 22, Funk G-710AA, Funk G-144, N.C. 288, Pioneer 309A, Pioneer 309B, Tenn. 604.

Cotton

Early—Cobal, Dixie King², Empire W.R.², Fox 4, Pope, Rex², Stardel, Stoneville 3202.¹

Late—Auburn 56², Coker 100A (WR)², Coker 124C, Deltapine 15¹, Deltapine Smooth Leaf, Plains ¹, ², Stoneville 7.

Oats

Fall-Seeded—Blount, Forkeddeer, LeConte, Victorgrain 48-93. (Recommended only for West Tennessee).

Spring-Seeded—Not generally recommended. See Tables 15 and 15A for performance of varieties tested.

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

²Recommended where fusarium wilt is prevalent.

Wheat—Dual, Knox, Seneca.

Barley—Dayton, Holston, Hudson, Kenbar.

Alfalfa—Atlantic, Buffalo, DuPuits, Narragansett, Williamsburg.

Soybeans—Dorman, Hill, Hood, Lee, Ogden.

Grain Sorghum—DeKalb E-56A, Frontier 400C, McCurdy Lot 70,
R.S. 610, Texas 601, Texas 620.

Burley Tobacco—Burley 1, Burley 2³, Burley 11A, Burley 11B,
Burley 21, Burley 37, Kentucky 16, Kentucky 41A³.

Dark Fired Tobacco—Broad Leaf Madole, Black Mammoth, DF-516.

Characteristics of Recommended Varieties

Corn Hybrids

White—Full Season

A.E.S. 904W³—Medium grain quality.

Dixie 29—Good grain quality.

Dixie 33—Fair to medium grain quality with a trace of
copper-coloring in the grain.

Dixie 55³—Medium to good grain quality.

Dixie 77—Medium to good grain quality.

Funk G-779W³—Medium grain quality.

White—Medium Season

DeKalb 925—Single-eared—medium to good grain quality.

P.A.G. 631W—Medium grain quality.

P.A.G. 636W—Medium grain quality.

Tenn. 501—Medium to good grain quality.

Tenn. 503—Good grain quality—Resistant to leaf blight.

U.S. 523W—Medium to good grain quality.

Yellow—Full Season

Dixie 22—Medium to good grain quality.

Funk G-710AA—Medium to good grain quality.

N.C. 288—Good grain quality.

Pioneer 309B—Good grain quality.

Yellow—Medium Season

Funk G-144—Single-eared—medium grain quality.

³Present plans indicate that these varieties will not be recommended after this year.

Pioneer 309A—Single-eared—medium to good grain quality.
Tenn. 604—Medium to good grain quality.

Cotton

(Cotton Varieties Within Each Group are Ranked According to
3-Year Average Yield 1958-60)

Early—Large bolls—Staple length 1-1/32 to 1-1/16—Lint percent 35 to 37:

Dixie King—Resistant to fusarium wilt.

Rex—Resistant to fusarium wilt and bacterial blight.

Cobal—Not resistant to fusarium wilt.

Empire W.R.—Resistant to fusarium wilt.

Early—Small bolls—Staple length 1-1/32 to 1-1/16—Lint percent 36 to 38:

Stoneville 3202⁴

Stardel

Fox 4

Lint percent 39 to 41:

Pope—A prolific, small-boll variety which performs best on upland soils where wilt is not a problem. Subject to lodging under conditions of high fertility.

Late—Medium bolls—Staple length 1-1/32 to 1-1/16—Lint percent 36 to 39:

Auburn 56—Resistant to fusarium wilt.

Coker 100A (WR)—Resistant to fusarium wilt.

Plains⁴—Resistant to fusarium wilt.

Coker 124C—Not resistant to fusarium wilt.

Late—Small bolls—Staple length 1-1/32 to 1-1/16—Lint percent 37 to 39:

Deltapine Smooth Leaf

Stoneville 7

Deltapine 15⁴

⁴Present plans indicate that these varieties will not be recommended after this year.

Oats

Fall-Seeded :

Blount—A short, stiff-strawed oat slightly less winter-hardy than Forkeddeer. Less lodging than LeConte and about equal in winter hardiness. Similar to LeConte in vegetative growth and appearance except that the panicle is slightly longer and more spreading. Has out-yielded most other varieties over a 5-year period. Maturity date falls between LeConte and Forkeddeer. Due to its lodging resistance, Blount is best suited for soils with high natural fertility with adequate fertilization.

Forkeddeer—A very winter-hardy variety with yellow grain. Has a tendency to lodge under conditions of high fertility. Medium tall; matures a few days later than Victorgrain 48-93. Susceptible to crown rust.

LeConte—A stiff-strawed oat slightly less winter-hardy than Forkeddeer. Stands better than Forkeddeer, is a few days later in maturing and is about the same height. Susceptible to crown rust.

Victorgrain 48-93—A stiff-strawed, semi-hardy type with high yield potential under mild winter conditions. Has a high degree of resistance to crown rust but is susceptible to *Helminthosporium* blight. Should be planted early to reduce winter injury. Recommended only for West Tennessee. Slightly shorter and a few days earlier in maturity than Forkeddeer.

Wheat

Dual—A late variety with medium height. Yields as well as Seneca and is more rust resistant. A winter-hardy variety that has good standing ability. Resistant to Hessian fly and thus can be seeded earlier in the fall.

Knox—A very early winter-hardy variety with short straw. Due to its tendency to stool during warm spells in the early spring, it may be injured by late spring freezes. Should be grazed to delay maturity. Semi-upright type growth with fair standing ability. Yields slightly higher than Seneca. Resistant to leaf rust.

Seneca—A red-chaffed variety of medium height and fair standing ability. Has a higher test weight and slight yield

advantage over Thorne, but yields slightly less than Knox. Susceptible to leaf rust.

Barley

Dayton—A winter-hardy, semi-rough-awned early variety with good standing ability. Medium tall; one of the highest yielders in the state variety test. Susceptible to mildew and scald.

Holston—A winter-hardy, semi-smooth-awned, late variety which stands better than Kenbar and similar to Hudson in yield. Good resistance to mildew and scald.

Hudson—A winter-hardy, rough-awned variety with fair standing ability. It is 2 to 3 days earlier than Holston. Yields as well as Holston. Good resistance to mildew and scald.

Kenbar—A winter-hardy variety of medium height. About the same maturity as Dayton. Yields slightly less than Dayton and Holston in the state variety test. Does not stand as well as Dayton or Holston. Good resistance to mildew and fair resistance to scald.

Alfalfa

Atlantic—A variegated variety developed from selections having a wide genetic background. It has yielded well all over the state. Atlantic is somewhat tolerant, but not resistant to bacterial wilt.

Buffalo—Selected out of an old Kansas common strain that is resistant to bacterial wilt. Buffalo is well adapted to Tennessee conditions and is one of the leading varieties sold in the state.

DuPuits—A variety that has great eye appeal because of the tall growth and fast recovery after clipping. DuPuits has been one of the best producers in the state variety tests. It matures faster and should be cut earlier than other recommended varieties. DuPuits is stemmier and not as long-lived as other recommended varieties.

Narragansett—A synthetic variety of very diverse origin. It recovers somewhat slower than other adapted varieties after cutting. Narragansett is fine-stemmed and yields as well as Atlantic. This variety has been the top yielder at

the Plateau Experiment Station, Crossville. Seed is in short supply in Tennessee.

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

Soybeans

Dorman—A variety having large yellow beans. Matures about 2 weeks before Ogden and has about the same oil content as Ogden.

Lee—A yellow-seeded variety which matures a few days later than Ogden and shatters somewhat less than Ogden.

Hill—A yellow-seeded variety. Similar maturity to Dorman.

Hood—A yellow-seeded variety with similar maturity to Ogden.

Ogden—A high-yielding variety of mid-season maturity and has olive-colored beans.

Grain Sorghum

DeKalb E-56A—A few days later than Martin Milo. The hybrid has deep red seed on large open heads. Good standing ability.

Frontier 400C—A variety of medium maturity with heads tight in compactness.

McCurdy Lot 70—A variety of medium maturity. Red seed on heads of tight compactness.

R. S. 610—An early-maturing hybrid with heads tight in compactness.

Texas 601—A hybrid with medium maturity. Red seed on heads of medium compactness.

Texas 620—An early maturing hybrid with red seed. Tends to lodge.

Burley Tobacco

Burley 1—A high-yielding, high-quality, high leaf number, "stand-up" variety that is highly resistant to black root rot and somewhat resistant to brown root rot. It performs best when topped early and kept suckered.

Burley 2—A “stand-up” variety with resistance to black root rot. Produces high yields and quality under a variety of soil conditions.

Burley 11A—Has moderate resistance to black shank and fusarium wilt and high resistance to black root rot. A brittle, drooping leaf variety that may yield less than some varieties because of loss of bottom leaves due to earliness.

Burley 11B—Has more resistance to black shank and fusarium wilt and is of lower quality than 11A. Similar to 11A in all other characteristics.

Burley 21—A very upright-leafed, high-yielding variety. Highly resistant to wildfire and mosaic and moderately resistant to black root rot and brown root rot. Plants are more vigorous and grow off faster in plant bed than other varieties.

Burley 37—A “stand-up” type variety, with resistance to black shank, wildfire, fusarium wilt, and black root rot. Higher yielder than Burley 11A and 11B. Later maturing variety than Burley 11A.

Ky. 16—A widely adapted “semi-stand-up” variety with moderate resistance to black root rot.

Ky. 41A—A drooping leaf variety with moderate resistance to black root rot. Similar to Ky. 16 in yield and quality.

Dark Fire-Cured Tobacco

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

Black Mammoth—Black Mammoth produces a leaf somewhat darker and broader than Madole. It does not droop quite as much as Madole. Susceptible to mosaic and wildfire.

DF 516—A broad-leaved, open-growing, dark-green tobacco that is resistant to both mosaic and wildfire. Because of the large, broad leaves this variety is perhaps best suited to the production of cutting and wrapping tobacco. The leaf spacing of DF516 is about the same as that of Madole.

PERFORMANCE TRIALS
OF
CORN — COTTON — OATS — WHEAT — BURLEY
SOYBEANS — ALFALFA — GRAIN
SORGHUM — TOBACCO

Data for 1961 with summaries of results from previous years

INTRODUCTION

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

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 teaching, and extension staffs of the University of Tennessee College of Agriculture study the performance data and determine varieties to be recommended.

In order for a variety to be recommended, it must yield well and have other characteristics that are 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 being 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.

The least significant difference (L.S.D.) values at the 5% level for the 1961 tests are shown at the bottom of each table. The yields of any two varieties being compared must differ by at

least this amount in order for the varieties to be considered different in yielding ability. At each location where tests were conducted in 1961, the soil types are reported at the end of the table.

CORN

The 1961 corn growing season was generally good in the locations of these tests. The test at Fort Pillow was not planted until June 1 due to flooding of the test area. The other tests were planted during the months of April and May.

Amounts of fertilizer applied to each test were considered sufficient for corn to yield over 100 bushels per acre. The tests were planted at a rate to give a stand of 14,000 plants per acre.

Seed of commercially available hybrids for the tests were bought from supplies being sold to farmers in Tennessee. Dixie 29, Pioneer 309A, and Coker 616 were included in both the full-season and the early tests to provide some measure of relative performance of the two groups.

Data are presented in Tables 1 through 6. Yields are expressed in bushels per acre, adjusted to 15.5% moisture.

**Table 1. Corn: Yields of 32 Early-Maturing Hybrids of
Each of Five Locations in 1961.**

Six Replications at Each Location

Color	Hybrid	State Av.	Greene- ville ¹	Knox- ville ²	Cross- ville ³	Jack- son ⁴	Spring Hill ⁵	Spring- field ⁶
Commercially available:		Bushels per acre						
Y	Riemers 302	122	119	138	128	102	83	162
W	Dixie 29*	120	133	125	115	103	93	151
W	Funk G-509W	118	130	120	117	102	91	146
Y	DeKalb 805	113	124	99	127	102	92	136
W	P.A.G. 633W	112	122	112	118	103	84	134
Y	Ky. 105	112	126	107	121	84	84	149
W	Tenn. 501	112	122	112	118	96	83	137
W	Coker 616*	112	122	105	125	89	83	145
W	DeKalb 925	111	117	111	118	98	88	135
W	Stull 500W	110	117	107	114	99	85	138
Y	Stull 108Y	110	127	108	123	92	78	131
Y	Pioneer 309A*	109	121	111	112	96	88	127
W	Princeton 990	109	120	103	117	97	84	133
W	Indiana 909	109	127	101	114	88	92	132
Y	Tenn. 604	109	115	109	115	96	80	137
W	Tenn. 503	108	124	109	115	82	82	136
Y	Stull 100YA	108	124	100	118	91	85	133
Y	Funk G-702	105	118	99	110	92	82	129
Y	Funk G-144	104	122	94	110	96	78	127
Y	P.A.G. 434	104	119	88	113	92	90	120
Y	Pioneer 312A	103	116	102	112	85	84	120
Y	Princeton 870	101	115	87	108	97	77	121
Y	Hilligoss 62	99	106	96	108	83	75	128
Y	DeKalb 803A	98	108	88	110	87	84	114
Y	Funk G-83	95	107	81	106	85	80	113
Y	Schlessman SS110	91	104	79	100	70	77	114
Experimentals:								
W	T9111	120	140	127	121	92	84	158
W	T7110	115	132	112	124	95	87	144
Y	T0044	115	125	122	123	94	83	142
Y	T0048	114	127	110	121	98	87	145
Y	T9051	114	122	113	125	94	85	144
Y	U.S. 658	103	113	107	111	84	81	121
Average		109	121	106	116	93	84	134
L.S.D. (.05)		—	10.7	9.5	10.0	16.8	7.7	11.0

*Also included in tests of full-season hybrids.

¹Waynesboro loam, eroded (5% to 12% slopes).

²Sequatchie silt loam (0% to 2% slopes).

³Hartsells loam, eroded (2% to 5% slopes).

⁴Loring silt loam, (0% to 2% slopes).

⁵Maury silt loam, (0% to 2% slopes).

⁶Ennis silt loam, local alluvium phase.

**Table 2. Corn: Characteristics of 32 Early-Maturing Hybrids
Tested at Six Locations in 1961.**

Color	Hybrid	State Av.	Erect plants	Ears/ 100 plants	Grain quality	Husk cover	Ear ht.	Grain moisture at harvest
	Commercially available:	Bu./A.	%	No.			In.	%
Y	Riemers 302	122	78	167	Med.-Good	Good-Exc.	66	26.4
W	Dixie 29*	120	74	153	Good	Good	52	21.6
W	Funk G-509W	118	91	124	Med.-Good	Med.	51	22.1
Y	DeKalb 805	113	87	99	Good	Med.	45	18.0
W	P.A.G. 633W	112	85	150	Med.-Good	Med.-Good	49	19.6
Y	Ky. 105	112	77	118	Med.	Fair	56	19.6
W	Tenn. 501	112	80	137	Med.-Good	Med.	48	20.3
W	Coker 616*	112	90	128	Good	Good	48	23.6
W	DeKalb 925	111	72	120	Med.-Good	Med.	48	18.7
W	Stull 500W	110	74	110	Med.-Good	Med.-Good	50	20.0
Y	Stull 108Y	110	85	116	Fair.-Med.	Poor-Fair	54	18.6
Y	Pioneer 309A*	109	91	115	Med.-Good	Med.	52	21.1
W	Princeton 990	109	81	102	Med.	Fair.-Med.	50	17.4
W	Indiana 909	109	75	105	Med.	Fair	51	18.4
Y	Tenn. 604	109	75	141	Med.-Good	Med.	48	18.2
W	Tenn. 503	108	89	114	Good	Med.-Good	48	21.5
Y	Stull 100YA	108	79	107	Med.	Fair	53	18.4
Y	Funk G-702	105	88	111	Med.-Good	Fair-Med.	48	18.9
Y	Funk G-144	104	90	112	Med.	Fair-Med.	42	18.3
Y	P.A.G. 434	104	89	106	Fair-Med.	Poor-Fair	47	18.7
Y	Pioneer 312A	103	89	107	Med.	Fair-Med.	43	19.7
Y	Princeton 870	101	77	100	Med.	Fair	48	16.7
Y	Hilligoss 62	99	82	104	Fair-Med.	Fair-Med.	50	19.1
Y	DeKalb 803A	98	81	102	Med.-Good	Fair	46	19.3
Y	Funk G-83	95	94	107	Fair-Med.	Poor-Fair	41	16.6
Y	Schlessman SS110 ..	91	83	100	Fair-Med.	Poor	42	17.0
Experimentals:								
W	T9111	120	78	160	Good	Good	49	19.4
W	T7110	115	83	125	Med.	Med.	49	19.1
Y	T0044	115	76	147	Med.-Good	Med.	47	18.5
Y	T0048	114	75	138	Med.	Med.	45	19.8
Y	T9051	114	66	119	Fair-Med.	Fair	52	20.1
Y	U.S. 658	103	75	116	Med.-Good	Fair	48	18.3

*Also included in tests of full-season hybrids.

Table 3. Corn: Yield and Other Characteristics of Early-Maturing Hybrids Tested for 2 or 3 Years.

Color	Hybrid	3 Yr. Aver. 1959- 1961	2 Yr. Aver. 1960- 1961	Erect plants	Ears/ 100 plants	Grain quality	Husk cover	Ear ht.	Grain moisture at harvest
Commercially avail.		Bu./A.	Bu./A.	%	No.			In.	%
W	Dixie 29*	120	120	73	144	Good	Med.-Good	56	21.7
W	Coker 616	114	114	84	128	Good	Med.-Good	52	22.1
W	Tenn. 501	112	110	77	131	Med.-Good	Med.-Good	49	20.0
Y	Ky. 105	110	110	79	115	Fair-Med.	Fair	59	19.5
W	DeKalb 925	109	110	69	114	Med.-Good	Med.	50	19.2
W	Tenn. 503	108	108	90	113	Good	Med.-Good	48	20.4
Y	Pioneer 309A* ..	107	106	88	112	Med.-Good	Med.-Good	54	21.2
Y	Funk G-144	105	103	84	108	Med.	Fair-Med.	44	18.9
Y	DeKalb 803A	100	98	77	100	Med.	Fair-Med.	44	19.4
W	Funk G-509W ..	—	114	84	126	Med.-Good	Med.-Good	55	21.2
Y	Stull 108Y	—	111	85	114	Fair-Med.	Poor-Fair	58	18.4
W	P.A.G. 633W	—	110	82	142	Med.-Good	Med.-Good	52	19.0
W	Stull 500W	—	108	74	114	Med.-Good	Med.-Good	52	19.4
Y	Tenn. 604	—	108	75	144	Med.-Good	Med.	52	17.9
Y	Funk G-702	—	106	86	112	Med.-Good	Fair-Med.	51	19.0
Y	P.A.G. 434	—	102	88	107	Fair-Med.	Fair	50	18.1
Y	Pioneer 312A	—	101	82	106	Med.	Fair-Med.	46	18.8
Experimentals:									
W	T7110	113	110	81	118	Med.	Med.	53	18.8
Y	U.S. 658	104	102	76	113	Med.-Good	Fair	48	18.4
W	T9111	—	117	76	152	Med.-Good	Good	51	18.8
Y	T9051	—	112	70	118	Fair-Med.	Fair	55	19.6

*Also included in test of full-season hybrids.

Table 4. Corn: Yields of 27 Full-Season Hybrids at Each of Three Locations in 1961.

Six Replications at Each Location

Color	Hybrid	State Av.	Knoxville ¹	Fort Pillow ²	Jackson ³
Commercially available:		Bushels per acre			
W	Dixie 29*	103	114	91	104
Y	Dixie 22	100	112	95	94
W	Dixie 33	99	116	88	93
Y	N.C. 270	99	114	82	101
W	Riemers 305	98	116	87	93
Y	N.C. 288	98	115	91	87
W	Dixie 77	97	112	97	82
W	Funk G-770W	96	113	83	93
Y	Funk G-710AA	96	104	89	94
Y	Ga. 102	93	94	95	89
Y	McCurdy 999	92	95	85	96
Y	Pioneer 309B	92	102	89	85
Y	Pioneer 309A*	91	95	89	90
Y	P.A.G. 488	91	98	86	89
Y	Funk G-711AA	90	103	78	90
Y	Coker 15	90	98	81	90
W	Ga. 105	89	98	83	85
Y	P.A.G. 486	86	94	77	88
W	Coker 616*	85	86	79	89
Experimentals:					
W	T9104	103	120	93	97
W	T9106	103	118	98	92
Y	T6003	101	117	93	92
W	T8103	99	119	84	94
W	T1112	98	115	87	93
Y	T9020	94	103	93	87
Y	T0016	90	104	81	85
Average		95	107	88	91
L.S.D. (.05)		—	10.2	12.7	10.5

*Also included in test of early-maturing hybrids.

¹Sequatchie silt loam (0% to 2% slopes).

²Collins silt loam (2% to 5% slopes).

³Loring silt loam (0% to 2% slopes).

**Table 5. Corn: Characteristics of 27 Full-Season Hybrids
Tested at Three Locations 1961.**

		State	Erect	Ears/ 100	Grain	Husk	Ear	Grain
Color	Hybrid	Av.	plants	plants	quality	cover	ht.	moisture at harvest
Commercially available:		Bu./A.	%	No.			In.	%
W	Dixie 29*	103	54	136	Good	Good	54	20.1
Y	Dixie 22	100	52	128	Med.-Good	Good	61	19.6
W	Dixie 33	99	51	129	Med.	Good	57	18.0
Y	N.C. 270	99	63	104	Good	Good-Exc.	61	24.5
W	Riemers 305	98	57	152	Med.	Good-Exc.	56	20.2
Y	N.C. 288	98	66	121	Med.-Good	Good	60	21.5
W	Dixie 77	97	53	127	Good	Good	52	20.2
W	Funk G-770W	96	63	112	Med.-Good	Good	52	19.6
Y	Funk G-710AA	96	54	120	Med.	Med.-Good	54	21.0
Y	Ga. 102	93	59	122	Good	Good-Exc.	50	19.6
Y	McCurdy 999	92	74	105	Med.-Good	Good	49	18.1
Y	Pioneer 309B	92	72	116	Good	Med.-Good	46	19.7
Y	Pioneer 309A*	91	83	105	Med.-Good	Good	49	19.3
Y	P.A.G. 488	91	61	115	Med.-Good	Med.-Good	48	22.6
Y	Funk G-711AA	90	68	111	Med.	Med.-Good	53	21.5
Y	Coker 15	90	70	122	Good	Med.-Good	45	17.4
W	Ga. 105	89	63	112	Med.-Good	Good	53	21.8
Y	P.A.G. 486	86	68	136	Good	Med.-Good	52	20.0
W	Coker 616*	85	65	104	Good	Med.-Good	48	20.2
Experimentals:								
W	T9104	103	59	140	Med.-Good	Good-Exc.	56	18.9
W	T9106	103	58	148	Good	Good	52	18.2
Y	T6003	101	54	142	Good	Good-Exc.	58	19.9
W	T8103	99	62	137	Good	Good-Exc.	52	19.2
W	T1112	98	60	151	Med.-Good	Med.-Good	48	17.5
Y	T9020	94	63	128	Good	Good	46	17.5
Y	T0016	90	61	134	Med.	Good	49	18.6

*Also included in test of early-maturing hybrids.

Table 6. Corn: Yield and Other Characteristics of Full-Season Hybrids Tested for 2 or 3 Years.

Color	Hybrid	3 Yr.	2 Yr.	Erect plants	Ears/ 100 plants	Grain quality	Husk cover	Grain moisture	
		Aver. 1959- 1961	Aver. 1960- 1961					Ear ht.	at harvest
	Commercially avail.	Bu./A.	Bu./A.	%	No.			In.	%
W	Dixie 29*	101	98	64	133	Good	Med.	54	19.7
W	Dixie 33	101	94	59	135	Fair-Med.	Med.	62	18.2
W	Dixie 77	99	94	56	137	Med.-Good	Med.-Good	52	19.3
Y	N.C. 288	95	92	68	121	Good	Good	60	20.3
Y	Dixie 22	94	92	54	122	Med.-Good	Med.-Good	61	18.9
Y	Funk G-710AA	93	92	69	119	Med.-Good	Med.	56	19.9
Y	Pioneer 309B	93	92	75	116	Good	Med.-Good	43	18.5
Y	Ga. 102	89	86	66	117	Med.-Good	Med.-Good	49	18.8
Y	Pioneer 309A*	89	88	81	102	Med.-Good	Med.	50	18.1
Y	P.A.G. 488	88	86	65	117	Med.-Good	Med.	48	20.8
W	Funk G-770W	—	90	62	106	Med.-Good	Med.-Good	54	19.2
Y	McCurdy 999	—	90	66	104	Med.-Good	Med.-Good	52	17.5
Y	Funk G-711AA	—	86	62	106	Med.	Med.	55	20.2
Y	P.A.G. 486	—	82	62	129	Med.-Good	Med.	52	19.1
Experimentals:									
Y	T6003	103	100	65	138	Good	Good	60	19.5
W	T8103	96	96	64	136	Med.-Good	Med.-Good	56	18.5
W	T9106	—	100	58	150	Good	Med.-Good	56	18.0

*Also included in test of early-maturing hybrids.

COTTON

The 1961 cotton variety tests were conducted in cooperation with the U. S. Department of Agriculture. Tests were conducted at four locations with six replications at each location. The Ames Plantation and Fort Pillow data are not reported in 1961 due to inadequate stand, late planting and other adverse factors.

The upper half mean length, micronaire fineness readings and the fibre strength readings (T_1) are presented in tables 9 through 11. Upper half mean length is measured on the Fibrograph and is closely correlated with staple length.

The micronaire reading is a relative measure of the fineness of the fiber. Higher readings indicate coarse fiber and low readings indicate fine fiber.

The fiber strength (T_1) is measured on the Stelometer and is presented for the first time in 1961. Higher readings indicate fibers of greater strength and low readings indicate fiber of lesser strength.

Detailed laboratory analysis of the gin fiber properties of these cottons may be obtained on request from the Department of Agronomy, University of Tennessee.

Data are presented in tables 7 through 11.

Table 7. Cotton: Yields of Lint Per Acre of Varieties Tested in 1961.

Variety	State Av.	Jackson ¹	Knoxville ²
Commercially available:		Lint pounds per acre	
Auburn 56	695	1024	366
Cobal	693	1020	367
DeKalb 108	692	1071	314
Dixie King	689	1084	294
Stardel	683	1096	270
Rex	682	969	396
Pope	676	1006	346
DeKalb 220	652	1011	293
Fox 4	623	942	304
Empire W.R.	617	917	316
Stoneville 7	617	962	272
Delta Queen	607	925	290
Plains	592	923	261
Acala 4-42	589	920	258
Coker 100A(WR) ..	583	956	210
Deltapine Smooth Leaf	576	949	203
Deltapine 15	554	873	235
Lankart 57	476	746	205
Stoneville 3202	—	—	415
Coker 124C	—	—	317
Experimentals:			
Tenn. 56-312	775	1131	419
Tenn. 56-210	722	1080	364
Mix 10-H	693	1010	377
Mix 11-F	629	970	288
Average	642	981	308
L.S.D. (.05)	—	98.1	65.0

¹Five replications on Memphis silt loam (0% to 2% slopes) and one replication on Grenada silt loam (0% to 2% slopes).

²Cumberland clay loam, eroded (5% to 8% slopes).

Table 8. Cotton: Average Yield and Other Characteristics of Varieties Tested for 2 or More Years.

Variety	Lint Lb./A.		Percent lint 1958-61	Bolls per lb. 1958-61	Percent total	Staple length 1958-61
	4 Yr. Av.	2 Yr. Av.			yield at	
	1958-61	1960-61			1st picking 1959-61	
	Lb.	Lb.	%	No.	%	32nd inches
Pope	880	806	38.8	68	59	34
Stardel	854	822	37.0	72	59	34
Auburn 56	844	820	35.4	66	56	34
Dixie King	840	798	36.5	57	60	34
Fox 4	824	758	36.0	68	57	34
Rex	816	779	36.4	60	62	34
Coker 100A (WR)	813	749	36.8	68	50	35
Stoneville 7	806	771	37.4	68	56	34
Plains	802	751	35.9	62	54	34
Deltapine Smooth Leaf	801	738	38.2	74	54	34
Cobal	778	761	35.5	58	67	35
Empire W.R.	758	732	35.8	54	62	34
Deltapine 15	748	714	37.7	72	57	34
DeKalb 108*	—	822	35.3	58	57	35
Acala 4-42*	—	718	35.8	56	53	35
Lankart 57*	—	671	35.9	50	56	34

*Two years data only.

Table 9. Cotton: Upper Half Mean (UHM) Fiber Length (in inches) of 19 Varieties Tested in 1959 and 1960.

Variety	State Av.	Jackson	Knoxville	Fort Pillow
Commercially available:				
Deltapine Smooth Leaf	1.16	1.18	1.16	1.12
Coker 100A (WR)	1.15	1.18	1.14	1.14
Cobal	1.15	1.15	1.16	1.15
Coker 124C	1.15	1.16	1.16	1.14
DeKalb 108*	1.15	1.15	1.15	1.15
Empire W.R.	1.14	1.14	1.14	1.14
Rex	1.14	1.14	1.16	1.12
Stardel	1.13	1.12	1.14	1.12
Stoneville 7	1.13	1.12	1.15	1.10
Auburn 56	1.13	1.14	1.12	1.13

Table 9—Continued

Variety	State Av.	Jackson	Knoxville	Fort Pillow
Fox 4	1.13	1.14	1.14	1.12
Deltapine 15	1.13	1.12	1.12	1.14
Acala 4-42*	1.13	1.10	1.15	1.14
Plains	1.12	1.14	1.08	1.12
Dixie King	1.12	1.15	1.11	1.10
Lankart 57*	1.07	1.11	1.03	1.07
Pope	1.06	1.07	1.06	1.04
Stoneville 3202	1.06	1.06	1.06	1.07
Experimentals:				
Tenn. 56-210*	1.11	1.13	1.11	1.03

*One year data only.

Table 10. Cotton: Fiber Fineness of 19 Varieties Tested at Three Locations in 1959 and 1960. (Micronaire Reading)

Variety	State Av.	Jackson	Knoxville	Fort Pillow
Commercially available:				
Lankart 57*	4.82	4.74	4.74	4.93
Fox 4	4.67	4.78	4.50	4.72
Deltapine Smooth Leaf	4.42	4.42	4.21	4.62
Stardel	4.37	4.53	4.24	4.34
Stoneville 3202	4.29	4.45	4.16	4.27
Deltapine 15	4.28	4.46	4.04	4.34
DeKalb 108*	4.24	4.05	4.26	4.40
Dixie King	4.21	4.36	4.03	4.24
Stoneville 7	4.21	4.52	4.21	3.89
Coker 124C	4.20	4.26	4.10	4.20
Coker 100A (WR)	4.19	4.30	4.06	4.20
Auburn 56	4.18	4.21	4.08	4.26
Pope	4.15	4.15	4.28	4.03
Plains	4.09	4.08	4.03	4.17
Cobal	4.05	4.19	4.02	3.95
Acala 4-42*	4.05	3.80	3.99	4.36
Empire W.R.	4.01	3.92	4.24	3.86
Rex	4.01	4.01	3.96	4.06
Experimentals:				
Tenn. 56-210*	4.05	4.28	3.98	3.90

*One year data only.

Table 11. Cotton: Fiber Strength, T_1 , as measured on the Stelometer of 19 Varieties Tested in 1959 and 1960.

Variety	State Av.	Jackson	Knoxville	Fort Pillow
Commercially available:				
Acala 4-42*	2.30	2.34	2.16	2.39
DeKalb 108*	1.93	1.90	1.86	2.04
Stardel	1.90	1.91	1.98	1.82
Deltapine 15	1.85	1.90	1.81	1.84
Cobal	1.84	1.92	1.79	1.82
Fox 4	1.84	1.81	1.88	1.84
Deltapine Smooth Leaf	1.83	1.85	1.84	1.80
Pope	1.81	1.86	1.84	1.73
Empire W.R.	1.80	1.81	1.78	1.80
Coker 124C	1.80	1.82	1.77	1.82
Dixie King	1.78	1.82	1.69	1.84
Stoneville 7	1.72	1.74	1.74	1.68
Auburn 56	1.72	1.72	1.72	1.72
Plains	1.71	1.72	1.74	1.68
Coker 100A (WR)	1.71	1.70	1.65	1.78
Rex	1.66	1.74	1.62	1.62
Stoneville 3202	1.61	1.60	1.57	1.65
Lankart 57*	1.59	1.62	1.46	1.69
Experimentals:				
Tenn. 56-210*	1.67	1.69	1.66	1.67

*One year data only.

FALL-SEEDED SMALL GRAIN

Generally good yields of small grain were obtained over the state in 1961. At Knoxville the oat varieties were affected by the disease Barley Yellow Dwarf. All varieties seemed to be affected with the same degree of severity.

Fall-seeded small grain data are presented in tables 12 through 14.

**Table 12. Fall-Seeded Oats: Yield Summary of Varieties Tested.
Average of Four Replications at Each Location**

Variety	State Av. 1959-61	State Av. 1961	Greene- ville 1961 ¹	Knox- ville 1961 ²	Spring- field 1961 ³	Jack- son 1961 ⁴	Spring Hill 1961 ⁵	Cross- ville 1961 ⁶
Commercially available:			Yields in bushels per acre					
Blount	83	93	78	82	102	151	56	88
LeConte	77	88	89	79	97	113	53	96
Victorgrain 48-93 ..	74	88	77	65	105	171	58	49
Forkedeer	74	81	90	71	95	93	63	75
Experimentals:								
Tenn. 59-6	—	99	95	92	109	140	61	96
Tenn. 59-21	—	98	84	91	104	137	64	107
Tenn. 59-20	—	97	99	80	117	141	58	88
Tenn. 59-25	—	95	90	84	103	146	60	89
Tenn. 59-19	—	91	94	76	103	142	54	78
Tenn. 59-7	—	86	96	78	94	110	60	76
Average			89	80	94	134	59	84
L.S.D. (.05)			N.S.	11.6	8.0	16.9	6.2	18.4

¹Cumberland silt loam, eroded (2% to 5% slopes).

²Cumberland silt loam, eroded (2% to 5% slopes).

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

⁴Memphis silt loam, (0% to 2% slopes).

⁵Maury silt loam, eroded (2% to 5% slopes).

⁶Hartsells loam, eroded (2% to 5% slopes).

Table 12A. Fall-Seeded Oats: Characteristics of Varieties.

Variety	Winter hardiness	Standing ability	Relative maturity	Plant height in inches
Commercially available:				
Blount	Good	Good	Med.-Late	36
LeConte	Good	Good	Late	40
Victorgrain 48-93	Fair	Good	Early	38
Forkedeer	Good	Poor	Med.	41

**Table 13. Wheat: Yield Summary of Varieties Tested.
Four Replications at Each Location**

Variety	State Av. 1959-61	State Av. 1961	Greene- ville 1961 ¹	Knox- ville 1961 ²	Spring- field 1961 ³	Jack- son 1961 ⁴	Spring Hill 1961 ⁵	Cross- ville 1961 ⁶
Commercially available:			Yields in bushels per acre					
Knox	55	58	80	43	55	72	53	46
Dual	50	55	64	47	53	65	53	47
Seneca	49	50	56	43	53	52	40	55
Monon	—	56	70	41	58	78	56	34
Avon	—	55	67	44	51	59	53	54
Redcoat	—	53	68	33	44	71	50	51
Triumph*	—	—	—	—	52	—	—	—
Experimentals:								
Tenn. 60-23	—	57	65	48	62	69	51	49
Tenn. 59-17	—	56	66	44	58	70	53	46
Tenn. 60-6	—	53	61	47	61	64	51	38
Tenn. 59-9	—	52	61	41	50	70	46	42
Average			66	43	54	67	51	46
L.S.D. (.05)	—	—	N.S.	4.0	4.3	7.4	3.7	8.8

*Hard red wheat included for comparison.

¹Cumberland silt loam, eroded (2% to 5% slopes).

²Cumberland silt loam, eroded (2% to 5% slopes).

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

⁴Memphis silt loam, (0% to 2% slopes).

⁵Maury silt loam, eroded (2% to 5% slopes).

⁶Hartsells loam, eroded (2% to 5% slopes).

Table 13A. Wheat: Characteristics of Varieties.

Variety	Winter hardiness	Standing ability	Relative maturity	Plant height in inches
Knox*	Good	Fair	V. Early	44
Dual	Good	Good	Late	44
Seneca	Good	Fair-Good	Medium	46
Monon*	Good	Good	V. Early	42
Avon**	Good	Good	Late	44
Redcoat**	Good	Good	Late	40

*May be subject to spring freezes.

**One year data only.

Table 14. Barley: Yield Summary of Varieties Tested.
Average of Four Replications at Each Location

Variety	State Av. 1959-61	State Av. 1961	Greene- ville 1961 ¹	Knox- ville 1961 ²	Spring- field 1961 ³	Jack- son 1961 ⁴	Spring Hill 1961 ⁵	Cross- ville 1961 ⁶
Commercially available:			Yields in bushels per acre					
Dayton	77	74	66	67	82	95	78	53
Hudson	71	77	75	58	78	91	87	73
Holston	71	76	78	56	77	76	92	76
Kenbar	70	72	74	53	82	79	76	70
Experimentals:								
Tenn. 59-15	—	81	67	66	91	105	89	68
Tenn. 60-37	—	77	69	63	88	103	87	55
Tenn. 60-38	—	73	68	67	76	98	83	49
Tenn. 59-20	—	73	68	63	74	93	77	62
Ky. 51-5752	—	71	68	49	77	85	79	68
Tenn. 60-32	—	69	73	53	74	87	71	58
Tenn. 60-34	—	68	66	54	68	93	68	58
Average			70	59	79	91	81	63
L.S.D. (.05)		—	N.S.	6.8	6.4	21.2	8.9	10.6

¹Cumberland silt loam, eroded (2% to 5% slopes).

²Cumberland silt loam, eroded (2% to 5% slopes).

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

⁴Grenada silt loam (0% to 2% slopes).

⁵Maury silt loam, eroded (2% to 5% slopes).

⁶Hartsells loam, eroded (2% to 5% slopes).

Table 14A. Barley: Characteristics of Varieties

Variety	Winter hardiness	Standing ability	Relative maturity	Plant height in inches	Awn or beard character
Dayton	Good	Good	Early	40	Semi-rough
Hudson	Good	Fair	Late	42	Rough
Holston	Good	Good	Late	42	Semi-smooth
Kenbar	Good	Poor	Early	38	Semi-smooth

SPRING-SEEDED OATS

Spring-seeding of oats is not generally recommended for Tennessee. Fall seedings give higher yields and compete more favorably with weeds than do spring seedings. They also provide winter cover and may be grazed to advantage.

The spring-seeded oat plots were divided and one-half harvested for hay and one-half for grain. The data are presented in tables 15 and 15A.

Table 15. Spring-Seeded Oats: Grain Yield Summary of Varieties Tested.
Average of Four Replications at Each Location

Variety	State 3-Yr. Av. 1959-61	State Av. 1961	Jackson ¹ 1961	Knoxville ² 1961
Yield in bushels per acre				
Newton	39	48	66	29
Mo-O-205	37	44	65	23
Clintland	32	41	60	23
Forkedeer*	29	44	72	15
Clintland 60	—	42	63	20
Nodaway	—	42	57	27
L.S.D. (.05)	—	—	N.S.	N.S.

*Forkedeer, a winter type, included as check.

¹Memphis silt loam (0% to 2% slopes).

²Cumberland loam (2% to 5% slopes).

Table 15A. Spring-Seeded Oats Cut for Hay: Yield Summary of Varieties Tested.
Average of Four Replications at Each Location

Variety	State 3-Yr. Av. 1959-61	State Av. 1961	Jackson ¹ 1961	Knoxville ² 1961
Tons of air-dry hay per acre				
Newton	2.18	2.38	3.34	2.43
Forkedeer*	2.10	2.56	3.06	2.07
Clintland	2.07	2.67	2.96	2.39
Mo-O-205	2.02	2.44	2.77	2.11
Nodaway	—	2.60	3.09	2.10
Clintland 60	—	2.57	2.82	2.33
L.S.D.	—	—	N.S.	N.S.

*Forkedeer, a winter type, included as check.

¹Memphis silt loam (0% to 2% slopes).

²Cumberland loam (2% to 5% slopes).

ALFALFA

Results summarized here are from tests seeded in 1958 at Jackson and 1960 at other locations. The 1960-61 growing season was not very favorable for alfalfa production at many locations where the tests were conducted.

At Crossville, Vernal, Zia, and Lahontan were severely damaged by leaf spot disease in the fall of 1960. This resulted in stand

reduction of all three varieties but especially of Zia and Lahontan. Leaf spot disease was observed to be quite severe on Zia at Knoxville but the other two varieties were not damaged.

The first cuttings at Knoxville and Springfield were discarded because they contained a high percentage of volunteer oats. No yields were obtained from Nomad and Teton at Jackson due to inadequate stands. At Jackson, DuPuits, Socheville, and Narragansett were not harvested at the last cutting in 1961 due to severe grass infestation. At all stations, yields were adjusted for weed content where this was a problem. Data are presented in table 16.

**Table 16. Alfalfa: Summary of Yields at Five Locations for 1961.
Four Replications at Each Location**

Variety	State Av.	Knox- ville ¹	Cross- ville ²	Spring- field ³	Spring Hill ⁴	Jack- son ⁵
Tons of air-dry hay per acre						
Williamsburg	3.97	2.88	4.73	2.48	3.33	6.43
Buffalo	3.70	3.10	4.26	2.05	2.53	6.55
DuPuits	3.59	2.90	4.48	2.48	3.63	4.44
Narragansett	3.45	3.22	4.12	2.11	3.27	4.55
Socheville	3.43	3.10	3.88	2.50	3.32	4.36
Vernal	3.38	2.40	3.36	1.94	3.08	6.14
Lahontan	2.64	2.52	0.94	1.99	2.32	5.41
FD-100	—	3.24	4.19	2.52	3.46	—
Maliani	—	2.71	—	2.15	2.98	—
Zia	—	1.97	1.00	1.91	1.97	—
Orchies	—	—	—	2.30	3.19	—
Atlantic	—	—	—	—	—	6.00
Teton	—	—	—	—	—	0.00
Nomad	—	—	—	—	—	0.00
Experimentals						
N.C. Syn. G(57)3	—	3.46	—	—	—	—
Rhizoma F.C. 34035	—	3.14	—	—	—	—
N.C. Syn. G(57)2	—	2.96	—	—	—	—
N.C. Syn. E(58)	—	2.87	—	—	—	—
N.C. Syn. F(56)1	—	2.82	—	—	—	—
Ranger F.C. 34628	—	2.44	—	—	—	—
L.S.D. (.05)	—	0.67	0.67	0.30	0.41	0.63

¹Cumberland loam (2% to 5% slopes).

²Hartsells loam (2% to 5% slopes).

³Bewleyville silty clay loam (5% to 12% slopes), severely eroded.

⁴Maury silt loam (2% to 5% slopes).

⁵Memphis silt loam (0% to 2% slopes).

SOYBEANS

Soybean varieties were tested at two locations in 1961. The 1961 growing season seemed to favor the early-maturing varieties. Data are presented in Table 17.

Table 17. Soybeans: Yield Summary of Varieties Tested At Two Locations in 1960 and 1961.

Variety	State 2 Yr. Av. 1960-61	State Av. 1961	Jack- son 1961 ¹	Spring Hill 1961 ²	Resistance to shattering	Approximate date of maturity	Date of maturity 1961
Hill	38	34	37	31	Good	Sept. 26	Sept. 26
Dorman	38	33	35	32	Medium	Sept. 28	Sept. 28
Hood	38	33	32	34	Medium	Oct. 15	Oct. 4
Ogden	36	31	30	32	Fair	Oct. 20	Oct. 8
Lee	34	28	30	27	Good	Oct. 25	Oct. 16
Hale 3	—	29	27	30	—	—	Oct. 9
Hale 7	—	23	23	24	—	—	Oct. 18
L.S.D. (.05)	—	—	4.9	2.4			

¹Grenada silt loam (0% to 2% slopes).

²Maury silt loam, eroded (2% to 5% slopes).

Table 17A. Soybeans: Seed Characteristics of Varieties.

Variety	Seed color	Hilum color	Flower color	Pubesence	Seed quality
Hill	Yellow	Light brown	White	Tawny	Good
Dorman	Yellow	Buff	White	Gray	Good
Hood	Yellow	Buff	Purple	Gray	Good
Ogden	Olive-green	Brownish-black	Purple	Gray	Good
Lee	Yellow	Black	Purple	Tawny	Good

GRAIN SORGHUM

The grain sorghum tests reported were conducted at Springfield and Spring Hill. The low yields at Spring Hill were probably partly due to the late planting date.

Data are presented in Table 18.

Table 18. Grain Sorghum: Yield and Characteristics of Varieties Tested in 1961.

Variety	Yield State Av. 1961	Yield Spring- field 1961 ¹	Yield Spring Hill 1961 ²	Plant height	Lodg- ing	Plant uni- formity	Head type	Maturity
	Bushels per acre			in.	%			
Frontier 400C	86	119	54	58	50	Poor	Tight	Med.
R. S. 610	77	108	47	57	62	Fair-Poor	Tight	Med.
McCurdy Lot. 70	77	101	54	58	39	Poor	Tight	Early
Frontier 410C	77	99	54	56	22	Fair-Poor	Tight	Med.
DeKalb F-63	75	109	41	56	27	Fair	Med.	Med.
P.A.G. 425-S	74	94	53	54	9	Fair	Med.	Early
Texas 601	71	100	42	56	33	Fair	Med.	Med.
DeKalb E-56A	71	95	47	54	3	Good-Fair	Open	Early
P.A.G. 405-S	70	94	47	54	38	Poor	Med.	Early
Texas 620	69	96	42	56	5	Fair	Tight	Med.
McCurdy Lot. 77	62	79	46	53	9	Fair	Med.	Early
Red Rader A	60	74	46	46	23	Good-Fair	Med.	Med.
Martin	58	75	40	53	4	Good-Fair	Tight	Med.
N.K. 310	—	118	—	56	0.0	Good	Med.	Late
N.K. X3007	—	94	—	50	0.0	Good	Open	Late
L.S.D. (.05)	—	10.2	N.S.					

¹Ennis silt loam, local alluvium phase.

²Godwin silt loam, over wash phase (2% to 5% slopes).

TOBACCO

Data for burley tobacco were furnished by H. A. Skoog, Associate Professor of Plant Pathology (cooperative with the USDA), and J. Hugh Felts, Superintendent, Tobacco Experiment Station.

Since the 1961 variety results were not yet available, the data included in the bulletin are for 1960 and previous years. The burley varieties were tested at four locations and the dark-fired and dark air-cured tobacco at one location only. Data are presented in Tables 19 through 24.

Table 19. Burley Tobacco: Average Yield for 1960.

Variety	State Av.	Spring Hill ¹	Spring- field ²	Grainger Co.	Greene- ville
Yield in pounds per acre					
Ky. 9	2215	1779	2615	2405	2060
Ky. 10	2143	1951	2451	2271	1898
Burley 1	2142	1695	2564	2369	1938
Va. B-29	2080	1819	2476	2149	1874
Burley 21	2061	1821	2523	2136	1762
Ky. 16	2021	1638	2544	2156	1746
Burley 37	2000	1583	2368	2135	1914
Ky. 35	1975	1703	2301	2111	1786
Burley 2	1970	1593	2390	2193	1705
Burley 11-A	1831	1549	2291	2005	1473
Average	2044	1713	2452	2193	1816
L.S.D. (.05)	—	133	141	N.S.	184

¹Armour silt loam, eroded (2% to 5% slopes).²Bewleyville silt loam (2% to 5% slopes).

Table 20. Burley Tobacco: Acre Value for 1960.

Variety	State Av.	Spring Hill	Spring- field	Grainger Co.	Greene- ville
Dollars per acre value					
Ky. 9	1438	1166	1749	1610	1225
Burley 1	1433	1111	1717	1579	1324
Ky. 16	1415	1274	1645	1428	1311
Burley 21	1390	1218	1700	1428	1214
Va. B-29	1378	1147	1649	1422	1295
Ky. 10	1366	1058	1709	1509	1186
Burley 37	1347	1037	1601	1432	1319
Ky. 35	1339	1086	1544	1408	1319
Burley 2	1314	1059	1572	1455	1170
Burley 11A	1227	1006	1545	1352	1005
Average	1365	1116	1643	1462	1237
L.S.D. (.05)	—	100	105	N.S.	126

Table 21. Burley Tobacco: Average Yield for Years Indicated.

Variety	State Av. 1955-60	Spring Hill 1955-60	Spring- field 1955-60	Grainger Co. 1955-60	Greene- ville 1955-60
Average yields in pounds per acre					
Burley 1	2149	1985	2318	2389	1904
Burley 21	2088	1975	2217	2264	1895
Va. B-29	2084	1945	2211	2265	1916
Burley 2	2055	1914	2213	2276	1816
Ky. 16	2034	1834	2183	2244	1876
Ky. 35	1970	1722	2188	2158	1811
Burley 11-A	1813	1635	1976	1997	1645
Ky. 41-A*	1939	1775	2069	2159	1751
Burley 11-B*	1783	1595	1897	2009	1631
Ky. 58**	1981	2100	2000	2163	1660
Ky. 61***	2174	1709	2461	2340	2186
Ky. 9****	1971	1478	2155	2278	1973
Average	2003	1806	2157	2212	1839

*1955-59 data only.

**1955-56 data only.

***1957-58 data only.

****1959-60 data only.

Table 22. Burley Tobacco: Acre Value for Years Indicated.

Variety	State Av. 1955-60	Spring Hill 1955-60	Spring- field 1955-60	Grainger Co. 1955-60	Greene- ville 1955-60
Dollars per acre value					
Burley 1	1391	1268	1530	1531	1233
Burley 21	1347	1261	1451	1451	1226
Va. B-29	1334	1245	1436	1425	1231
Burley 2	1326	1232	1444	1448	1178
Ky. 16	1309	1163	1423	1420	1228
Ky. 35	1263	1088	1422	1374	1169
Burley 11-A	1167	1034	1287	1280	1068
Ky. 41-A*	1222	1113	1332	1333	1109
Burley 11-B*	1146	1013	1235	1285	1052
Ky. 58**	1211	1292	1248	1320	984
Ky. 61***	1396	1053	1596	1527	1409
Ky. 9****	1273	973	1448	1428	1243
Average	1282	1145	1404	1402	1178

*1955-59 data only.

**1955-56 data only.

***1957-58 data only.

****1959-60 data only.

Table 23. Dark Fire-Cured Tobacco: Average Yield and Acre Value of Varieties Grown on the Highland Rim Experiment Station, Springfield, Tennessee 1959 and 1960.

Variety	Acre Yield 1959-60	Acre Value* 1959-60	Acre Yield 1960 ¹	Acre Value* 1960
	Lb./A.	\$	Lb./A.	\$
Broadleaf Madole	2375	987	2238	1063
Black Mammoth	2354	967	2118	993
DF 516	2208	930	1900	817
Va. 312	2102	886	2092	1004
Ky. 151	2002	856	1949	941
Little Stalk Black Mammoth	2120	844	1798	829
Ky. 152	—	—	2017	952
L.S.D. (.05)	—	—	94	72

¹Sango silt loam (2% to 5% slopes).

*These values are based on the average value for the various grades on all type 22 markets, during the 5-year period, 1954-58.

Table 24. Dark Air-Cured Tobacco: Average Yield and Acre Value of Varieties Grown on the Highland Rim Experiment Station, Springfield, Tennessee 1959 and 1960.

Variety	Acre Yield 1959-60	Acre Value* 1959-60	Acre Yield 1960 ¹	Acre Value* 1960
	Lb./A.	\$	Lb./A.	\$
Va. Imp. Str. 2	1668	694	1669	703
Va. Imp. Str. 3	1634	684	1608	691
Johns	1720	674	1682	708
Narrow Leaf One Sucker	1616	660	1503	636
Ky. 160	1652	650	1639	662
Va. Sleek Stalk Strain 1	1448	574	1451	593
L.S.D. (.05)	—	—	126	53

¹Dickson silt loam (2% to 5% slopes).

*These values are based on the average value for the various grades on all type 22 markets, during the 5-year period, 1954-58.