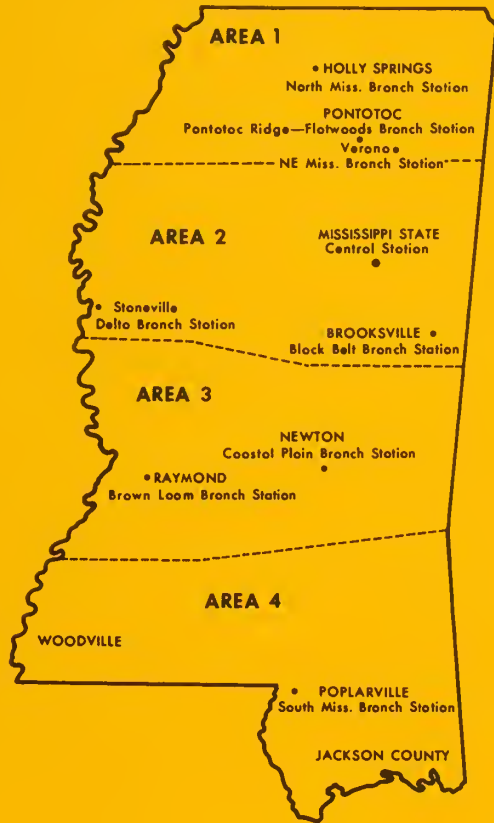
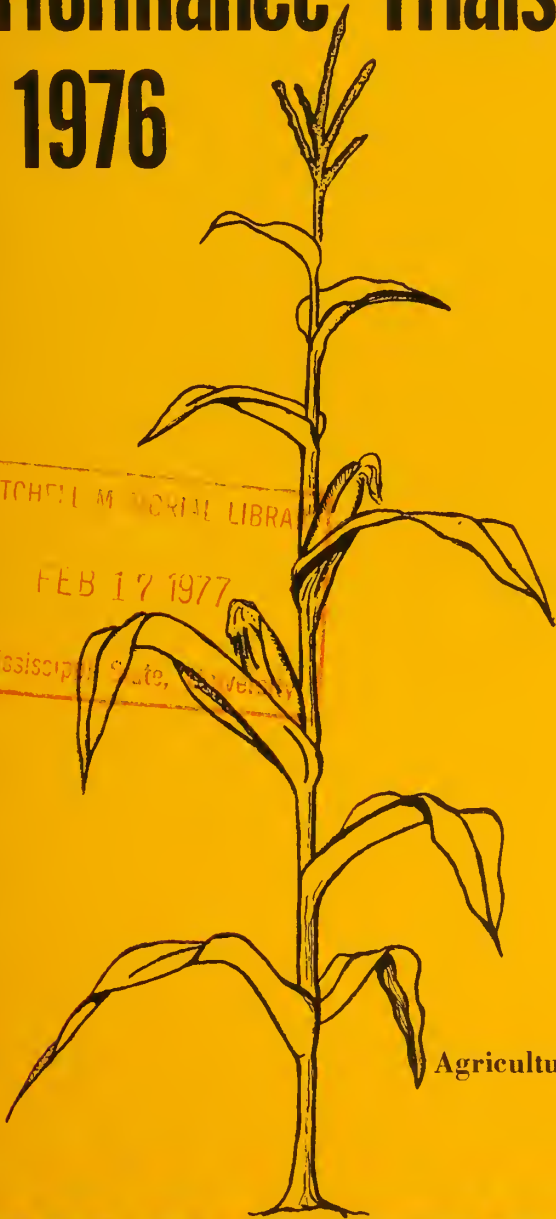


Mississippi Hybrid Corn Performance Trials in 1976



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 Mississippi State, Mississippi 39762

in cooperation with

MAFES MISSISSIPPI AGRICULTURAL & FORESTRY EXPERIMENT STATION

DIRECTOR JAMES H. ANDERSON MISSISSIPPI STATE MS 39762

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The test reported in Jackson County was on a private farm through the cooperation of James Clark, RFD 1, Pascagoula and M. P. Lewis, County Agent.

The test reported in Wilkinson County was on a private farm through the cooperation of T. O. Whitaker, RFD 4, Woodville and John Dale, County Agent.

Mississippi Hybrid Corn Performance Trials in 1976

Trials are conducted annually in Mississippi to provide farmers, seedsmen, county agents, and other interested persons with information on the performance of commercially available corn hybrids. These results are provided for use by corn producers in selecting hybrids suited to their area. New hybrids may be compared with familiar hybrids and with check hybrids (Dixie 18, Dixie 55, Miss. 0002, and Miss. 6131) that are included in all tests. Seed of the two Dixie hybrids may or may not be commercially available. Seed of Miss. 0002 and Miss. 6131 are not commercially available.

The best guide to the desirability of a hybrid is its performance over a period of years at a number of locations. Therefore, 3-year sum-

maries are reported for all areas.

Corn hybrids respond differently to variations in environment and a given hybrid is not always the best under all conditions. Therefore, it is suggested that corn producers grow two or more *good* hybrids each year. This practice also reduces the chances for spread of a disease or insect infestation through the total corn acreage.

The yield of harvestable good-quality grain (or silage) determines the desirability of corn hybrids. However, attributes other than yield may be extremely important in some instances. For example, resistance to a particular disease should be the prime consideration in areas where the disease occurs. That is, selection should be among hybrids that are known to have

resistance to diseases associated with geographic areas.

All producers and distributors of seed corn are eligible to enter hybrids in these tests. The producers designate which hybrids they want entered in each area. Hybrids must be submitted for entry to the Mississippi Agricultural and Forestry Experiment Station by February 15. A nominal fee is charged for each hybrid tested in each area to help defray costs of the tests.

Two or more tests are located in each area. Trials were conducted at 11 locations in 1976 (Table 1).

Materials and Methods

A randomized complete-block experimental design with five replications was used at all locations. Each plot consisted of two rows, 40 inches apart and 200 inches long. All tests were overplanted and later thinned to 16,000 plants per acre (plants 10 inches apart within the row), except at Verona where plots were seeded at a rate to give 23,000 plants per acre and were not thinned. Fertilizer was applied by each cooperator as he thought necessary and weeds were controlled by cultivation and herbicides.

Days from planting to 50% silk were taken only at Stoneville. Data on number of ears per 100 plants were not collected at Mississippi State, because a mechanical harvester was used. All other trials were hand-picked.

Ear corn from each plot was weighed separately and moisture was determined for samples taken from two replications in each test.

Table 1. Number of entries and date of planting and harvest, hybrid corn performance trials by locations of trials, Mississippi, 1976.

County	Location	No. of entries	Planting date	Harvest date
Area I				
Marshall	Holly Springs	35	April 22	Sept. 30
Pontotoc	Pontotoc	35	April 14	Sept. 16
Lee	Verona	35	April 20	Sept. 28
Area II				
Noxubee	Brooksville	39	May 14	---
Oktober	Mississippi State	39	May 20	Oct. 14
Washington	Stoneville	39	April 5	Sept. 7
Area III				
Newton	Newton	35	March 24	Aug. 10
Hinds	Raymond	35	April 15	Sept. 23
Area IV				
Wilkinson	Woodville	30	April 6	Aug. 31
Pearl River	Poplarville	30	March 1	Aug. 16-17
Jackson	Pascagoula	30	March 15	Aug. 18

Table 2. Performance of 34 hybrids in Mississippi hybrid corn performance trials, Area I, average of three locations (Holly Springs, Pontotoc and Verona), 1976.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
Funks G-4848	125.9	1	5	137	97	22.9	106
Pioneer Brand 3145	122.2	0	3	140	107	19.4	106
Funks G-4776	119.6	0	13	153	99	21.5	105
Funks G-4747W	116.1	0	8	154	97	21.2	107
Pioneer Brand 3009	115.2	3	20	153	97	22.9	106
Funks G-4611	115.2	0	7	129	99	16.1	105
McCurdy 72-44A	114.2	0	11	134	97	18.9	105
DeKalb XL394	112.8	0	3	169	103	18.9	109
Funks G-4864	110.6	0	3	136	98	19.1	106
Pioneer Brand 3147	109.3	0	6	136	101	18.8	106
Wilstar 9990	109.3	1	9	127	102	20.6	100
Pioneer Brand 511A	108.5	1	11	157	113	19.5	105
Wilstar 9997	107.1	1	11	129	94	22.9	101
Miss. 6131	106.9	2	24	172	124	18.7	102
Funks G-4810	105.4	1	9	132	101	20.7	102
Coker 18	104.9	0	12	131	96	18.2	107
McNair 508	104.5	1	5	174	130	23.6	108
Ring Around RA3602	104.0	1	4	147	107	18.4	108
DeKalb XL72B	103.8	1	7	113	102	18.7	103
Funks G-5757	103.4	1	8	131	102	19.5	107
Funks G-4850	101.0	2	10	146	97	20.9	104
Wilstar 7676	100.5	1	7	121	105	20.5	102
Wilstar 6663	99.4	1	6	131	101	16.9	102
DeKalb XL 390A	99.4	0	11	143	97	19.9	108
Funks G-795W-1	97.8	1	21	146	111	19.8	100
Funks G-4880W	96.8	2	6	149	98	21.5	104
Funks G-4525	96.2	0	13	118	97	16.0	106
Wilstar 7774	95.2	1	9	124	101	19.3	100
Coker 56	94.5	0	8	145	104	21.0	103
Miss 0002	94.3	1	16	181	105	21.2	106
Wilstar 7770	93.4	1	7	119	95	17.1	102
Dixie 55	93.3	1	27	168	110	19.7	99
Ring Around RA2601	92.9	1	9	128	94	23.0	94
Dixie 18	82.6	1	11	201	105	21.9	103
MEAN	104.0	1	10	145	102	20.0	104

CV = 12.77%

LSD (.05) = 9.5 bu/A

Test Results Area I

Yields of hybrids tested ranged from 58 to 105, 80 to 128 and 88 to 153 at Pontotoc, Holly Springs and Verona, respectively. Averaged over the three locations, yields ranged from 83 bushels per acre for Dixie 18 to 126 bushels for Funks G-4848 (Table 2).

Plants grew taller and ear height was greater at Verona than at the other locations---a result that we

attribute in part to the higher plant population in the Verona test.

Stalk lodging was highest at Pontotoc---ranging from 2 to 61 percent.

Severe damage by maize dwarf mosaic was observed at Pontotoc. Yield of susceptible hybrids was reduced by this disease.

Performance of hybrids that have been tested in Area I for the last three years is given in Table 3.

Table 3. Performance of 12 hybrids in Mississippi hybrid corn performance trials, Area I, 1974-76 average.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
Pioneer Brand 3147	106.9	0	7	133	104	20.4	99
Miss 6131	100.4	1	17	158	124	19.0	96
Pioneer Brand 3009	98.3	1	10	137	96	22.1	96
Dixie 55	92.2	0	16	149	111	19.4	95
Funks G-4864	88.3	0	8	123	93	19.7	98
Funks G-4810	88.2	0	13	118	95	20.7	93
Pioneer Brand 511A	84.3	1	13	132	110	19.4	91
Coker 56	80.9	0	10	123	102	21.5	96
Funks G-5757	80.0	1	11	111	95	20.0	95
Dixie 18	75.6	0	11	169	107	21.4	93
Funks G-795W-1	74.4	1	18	123	99	20.4	94
Miss 0002	71.7	1	20	151	100	20.8	95
MEAN	86.8	1	13	136	103	20.4	95

Table 4. Performance of 39 hybrids in Mississippi hybrid corn performance trials, Area II, average of two locations (Mississippi State and Stoneville), 1976.

Hybrid	Yield	Lodging stalk	Ear height	Ears/100 ¹ plants	Mid ¹ silk	Mois- ture	Stand
	bu/A	%	cm.	No.	days	%	%
Coker 77	130.5	6	147	182	83	18.9	92
P-A-G 751	129.7	7	148	189	86	18.5	85
Funks G-795W-1	125.8	8	128	156	80	17.1	87
Dixie 18	125.2	8	169	193	82	18.4	85
Dixie 55	124.4	11	147	175	82	18.4	87
McCurdy 72-24	121.8	7	152	190	81	16.9	83
Funks G-5945	120.9	6	143	143	85	19.2	90
Funks G-4776	120.6	9	138	100	81	19.1	91
Funks G-4747W	120.3	7	135	106	82	19.4	90
McNair 508	117.7	7	147	203	86	19.4	90
DeKalb XL 394	117.2	6	137	172	81	19.1	88
Funks G-4850	116.1	9	138	121	80	17.9	88
Pioneer Brand 3147	115.7	7	130	119	87	17.6	85
DeKalb XL 395	114.8	6	145	156	85	19.0	90
Pioneer Brand 3145	114.3	6	131	118	78	19.9	91
Funks G-4848	113.8	4	117	103	84	20.4	88
McCurdy 75-15	113.1	9	153	163	86	18.8	91
DeKalb XL 390A	112.4	6	124	165	81	17.1	87
Coker 56	111.0	6	125	162	83	18.5	86
Miss 6131	110.4	13	143	171	82	16.7	94
McCurdy 73-47A	108.6	6	145	152	82	18.6	86
Funks G-4949A	108.1	8	136	143	82	19.3	87
Funks G-4525	108.0	5	116	123	75	16.1	92
Funks G-4864	107.9	5	128	113	80	16.8	86
Pioneer Brand 511A	107.9	8	128	160	80	17.6	89
Funks G-4880W	107.7	7	136	131	84	18.7	89
P-A-G 644W	107.3	7	139	126	82	17.1	88
Miss 0002	106.0	7	144	181	85	16.7	89
Wilstar 9997	104.4	4	122	119	78	19.5	83
Funks G-4810	102.6	5	127	127	78	17.7	94
Pioneer Brand 3009	100.5	8	137	107	82	19.8	83
Ring Around RA3602	98.7	5	133	141	78	18.1	89
Coker 18	96.6	6	124	103	77	17.0	89
Wilstar 7676	96.0	8	108	120	77	18.0	79
Funks G-5757	94.1	5	117	109	77	18.3	85
Funks G-4611	91.7	7	123	103	75	16.6	84
Wilstar 9990	90.6	8	108	106	78	16.4	83
Wilstar 6663	89.3	5	116	110	76	16.1	78
Ring Around RA 2601	82.5	4	117	110	79	19.2	81
MEAN	108.5	7	130	140	81	18.2	87

CV = 17.58%

LSD (.05) = 16.5 bu/A

¹Data taken only at Stoneville.

Test Results Area II

We replanted the tests at Brooksville and Mississippi State because stands from the initial plantings were extremely poor. However, stands at Brooksville still were not adequate and this test was not harvested.

Yields averaged 137 bushels per

acre at Stoneville and 77 bushels at Mississippi State. The average for the two locations was 108.5 bushels (Table 4).

Performance of hybrids that have been tested in Area II for the last three years is given in Table 5.

Table 5. Performance of 16 hybrids in Mississippi hybrid corn performance trials, Area II, 1974-76 average.

Hybrid	Yield bu/A	Lodging stalk %	Ear height cm.	Ears/100 plants no.	Mois- ture %	Mid- silk days	Stand %
McCurdy 72-24	121.7	10	145	151	17.8	74	95
Funks G-795W-1	120.2	13	117	141	17.8	73	93
Dixie 55	115.4	13	137	154	18.2	74	94
Pioneer Brand 3147	114.4	7	120	117	18.5	73	94
Miss 6131	112.2	18	132	156	17.1	74	98
McCurdy 73-47A	112.2	10	133	144	18.4	73	92
Funks G-5945	111.7	7	129	129	19.4	76	98
Dixie 18	105.7	9	156	152	18.9	78	95
Miss 0002	105.5	14	137	153	18.0	77	95
Funks G-4864	104.0	4	116	108	17.6	73	94
Pioneer Brand 511A	104.0	10	116	141	17.9	73	93
Coker 56	104.0	6	117	138	19.1	74	95
P-A-G 644W	103.9	7	129	111	17.8	74	96
Pioneer Brand 3009	100.9	8	124	106	19.9	75	92
Funks G-4810	100.5	6	118	117	18.1	70	98
Funks G-4949A	97.0	6	125	126	19.3	74	90
MEAN	108.3	9	128	134	18.4	74	95

Table 6. Performance of 33 hybrids in Mississippi hybrid corn performance trials, Area III, average of two locations (Newton and Raymond), 1976.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
Wilstar 9990	112.2	0	7	117	99	15.4	99
Pioneer Brand 3009	110.7	1	14	140	100	17.2	99
Pioneer Brand 3147	110.3	1	5	117	103	15.0	100
Pioneer Brand 3145	108.5	0	6	120	102	15.4	101
Funks G-4776	107.5	0	8	138	96	16.2	99
Pioneer Brand 3368A	105.5	0	5	113	102	15.6	99
DeKalb XL394	105.0	0	4	146	112	15.5	98
Pioneer Brand 511A	105.0	1	16	119	115	15.8	99
Pioneer Brand 3369A	104.8	0	8	110	103	14.2	99
Coker 77	104.8	0	10	153	115	15.7	97
Funks G-4810	104.3	0	5	119	102	15.3	100
Funks G-4864	104.2	0	5	128	98	14.5	99
Funks G-5945	104.2	0	9	146	100	15.9	99
Funks G-4949A	103.9	0	4	137	111	16.5	98
Funks G-4747W	103.6	0	12	140	100	15.1	95
Wilstar 6663	102.1	0	2	119	103	14.2	95
Dixie 55	99.8	2	35	154	119	15.5	98
Ring Around RA2601	99.7	0	5	119	92	15.4	93
Funks G-795W-1	99.6	1	29	127	108	15.1	98
Funks G-4850	99.3	1	7	125	100	16.5	97
Coker 56	99.1	0	15	128	106	16.3	101
P-A-G 6444W	99.1	0	17	144	96	14.8	99
Wilstar 9997	98.9	1	12	127	100	17.7	98
Ring Around RA3602	98.9	0	4	134	103	14.8	99
McNair 508	98.0	0	8	142	140	17.4	98
DeKalb XL395	96.8	1	11	146	99	16.2	99
Pioneer Brand 3030	96.5	1	13	131	110	17.4	96
Miss. 6131	96.3	3	39	141	121	15.8	98
P-A-G 751	95.6	1	24	148	123	16.6	98
Funks G-4880W	94.8	0	8	129	99	16.0	100
Miss. 0002	94.1	0	21	156	118	15.6	96
Coker 54	91.2	0	8	129	108	16.0	100
Dixie 18	78.2	1	14	172	106	16.5	96
MEAN	100.6	1	12	134	106	15.8	98

CV = 8.28%

LSD (.05) = 7.3 bu/A

Test Results Area III

Yields at Raymond and Newton averaged 116 and 85 bushels per acre, respectively, with a combined average of 101 bushels (Table 6). Stalk lodging was less than 10 percent for 18 of the 33 hybrids

tested. Ear height was lowest for Pioneer Brand 3369A, highest for Dixie 18.

Performance of the hybrids that have been tested in Area III for the last three years is given in Table 7.

Table 7. Performance of 17 hybrids in Mississippi hybrid corn performance trials, Area III, 1974-76 average.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
Pioneer Brand 3147	97.6	2	8	107	98	13.8	96
Pioneer Brand 3009	95.9	2	13	116	95	15.7	92
Pioneer Brand 511A	95.4	2	11	113	106	14.6	93
Funks G-5945	92.4	1	9	126	101	15.3	93
Funks G-795W-1	92.2	2	18	111	104	14.1	93
Miss. 6131	91.9	5	24	127	121	14.1	94
Dixie 55	91.9	3	18	135	112	14.3	94
P-A-G 751	90.5	2	14	128	118	15.0	96
Funks G-4949A	90.0	1	8	121	103	15.2	95
Pioneer Brand 3030	89.8	2	11	114	104	15.7	92
Miss. 0002	88.8	2	18	134	111	14.3	93
DeKalb XL395	87.9	1	8	125	93	15.4	95
Funks G-4864	86.5	1	9	107	91	13.8	94
McNair 508	86.0	1	9	120	124	16.5	96
Coker 54	85.8	1	9	113	105	15.4	95
Funks G-4810	84.9	1	8	108	99	16.1	91
Dixie 18	78.0	2	12	150	109	15.3	91
MEAN	89.7	2	12	121	106	15.0	94

Table 8. Performance of 29 hybrids in Mississippi hybrid corn performance trials, Area IV, average of three locations (Woodville, Poplarville and Pascagoula), 1976.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
Coker 77	130.6	0	2	123	123	18.2	99
McNair 508	127.8	0	5	120	138	19.1	96
DeKalb XL 395	122.7	0	1	119	107	17.4	96
P-A-G 751	117.2	1	15	120	127	17.9	97
Funks G-4810	117.0	0	4	104	100	17.4	99
Funks G-4776	116.9	0	5	112	98	17.5	99
Funks G-4850	116.5	0	2	105	106	16.7	98
Funks G-4949A	115.1	0	3	114	105	17.6	99
Funks G-4864	111.6	0	6	102	102	16.4	96
Funks G-4747W	111.7	0	7	109	99	17.6	98
Pioneer Brand 3009	110.0	0	5	104	98	18.9	98
Wilstar 9990	106.8	0	12	90	106	17.3	93
Funks G-5945	106.8	0	3	115	109	18.7	97
Pioneer Brand 3030	105.3	0	5	104	107	19.0	95
Dixie 55	104.8	0	21	119	118	17.2	97
Pioneer Brand 3145	104.7	0	5	97	103	17.0	96
DeKalb XL394	102.6	0	5	117	112	16.3	96
Miss 0002	102.4	0	22	120	120	18.0	94
Miss 6131	101.1	1	28	112	121	17.2	93
Wilstar 9997	99.2	0	8	100	96	18.9	96
Funks G-795W-1	98.8	1	20	105	111	17.6	94
Coker 54	98.3	0	9	106	106	18.7	93
Funks G-4880W	98.3	0	4	99	99	17.2	98
Pioneer Brand 3368A	97.8	0	3	88	102	16.0	95
Dixie 18	96.6	1	19	114	110	18.2	99
Pioneer Brand 3369A	96.2	0	5	86	103	15.6	94
Pioneer Brand 511A	95.4	0	5	99	110	17.2	94
Ring Around RA3602	88.1	0	4	103	102	15.6	91
Ring Around RA2601	79.6	0	4	93	102	18.1	84
MEAN	105.9	0	8	108	108	17.6	96

CV = 11.97%

LSD (.05) = 9.4 bu/A

Test Results Area IV

Yields in the southern part of Mississippi were above 100 bushels per acre for 17 of the 27 hybrids tested (Table 8). Average yield at Poplarville, Woodville and Pascagoula, respectively, was 96, 110 and 111 bushels. The test at Pascagoula received a higher rate of nitrogen than in previous tests and this,

coupled with good rainfall distribution, resulted in yields as high as 151 bushels at this location.

Stalk lodging ranged from 2 to 57 percent at Poplarville but was not a problem at the other locations.

Performance of hybrids that have been tested in Area IV for the last three years is given in Table 9.

Table 9. Performance of 15 hybrids in Mississippi hybrid corn performance trials, Area IV, 1974-1976 average.

Hybrid	Yield bu/A	Lodging		Ear height cm.	Ears/100 plants no.	Mois- ture %	Stand %
		root %	stalk %				
McNair 508	81.5	1	9	105	120	19.6	86
Funks G-5945	74.2	6	13	104	102	18.5	89
P-A-G 751	74.0	5	25	101	110	17.4	86
Pioneer Brand 3009	73.6	3	27	91	94	18.4	88
Funks G-4810	73.3	2	20	90	97	17.1	89
Funks G-4949A	73.2	2	20	104	95	18.5	88
Pioneer Brand 3030	72.6	2	20	94	103	18.0	90
Funks G-4864	71.8	1	19	90	98	16.5	89
Funks G-795W-1	70.3	4	27	97	104	17.3	88
Dixie 18	70.0	2	19	121	102	17.8	92
Miss 6131	69.4	7	36	100	111	17.0	86
Coker 54	68.9	3	25	95	101	17.4	87
Dixie 55	67.6	3	37	105	108	17.1	85
Miss 0003	67.0	4	30	107	107	17.0	85
Pioneer Brand 511A	66.5	2	26	91	101	17.8	84
MEAN	71.6	3	24	100	103	17.7	88

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