

1-1-1946

Tests of corn hybrids and varieties in Mississippi

R. C. Eckhardt

Follow this and additional works at: <https://scholarsjunction.msstate.edu/mafes-bulletins>

Recommended Citation

Eckhardt, R. C., "Tests of corn hybrids and varieties in Mississippi" (1946). *Bulletins*. 799.
<https://scholarsjunction.msstate.edu/mafes-bulletins/799>

This Article is brought to you for free and open access by the Mississippi Agricultural and Forestry Experiment Station (MAFES) at Scholars Junction. It has been accepted for inclusion in Bulletins by an authorized administrator of Scholars Junction. For more information, please contact scholcomm@msstate.libanswers.com.

Tests of
Corn Hybrids and Varieties
IN MISSISSIPPI
1945

By
ROBERT C. ECKHARDT, W. A. DOUGLAS,
and A. L. HAMNER

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION

CORN HYBRIDS AND VARIETIES IN MISSISSIPPI^{1/}

By ROBERT C. ECKHARDT, W. A. DOUGLAS.
and A. L. HAMNER^{2/}

Main Hybrid and Variety Tests

Corn performance tests designed to determine the most desirable strains, were continued in 1945 on five experiment stations in Mississippi. The most promising new hybrids from neighboring states were tested with the best open-pollinated varieties and older hybrids.

It is well recognized that open-pollinated varieties of corn differ greatly in adaptation and performance, but many farmers do not realize that some hybrids may be unsuited for planting in Mississippi, particularly hybrids that have been bred for conditions differing from those existing in the South. The performance tests of previous years have proven clearly that most northern hybrids are unsuited for use as full-season corns in the South because of poor husk extension and soft grain which makes them subject to serious insect damage. Only one northern hybrid, Pioneer 300, was included in the 1945 comparisons. It was included because a large amount of seed of it was offered for sale in the Delta in the spring of 1945.

Each test contained 25 entries arranged in a balance lattice square design with six replications. Each plot was 2 rows wide and 10 hills long with rows and hills usually spaced 40 inches apart. Four seeds were planted per hill and later thin-

^{1/} Project AC-1 and PH-3 of the Mississippi Agricultural Experiment Station in cooperation with the Division of Cereal Crops and Diseases, Bureau of Plant Industry, Soils and Agricultural Engineering, and the Division of Cereal and Forage Insects, Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, U. S. Department of Agriculture.

^{2/} Agronomist, Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Mississippi Agricultural Experiment Station; Entomologist, Bureau of Entomology and Plant Quarantine; and Associate Entomologist, Mississippi Agricultural Experiment Station, respectively.

ned to two plants per hill, except at Stoneville. Stand percent at Stoneville is based on three plants per hill as a perfect stand. Some of these tests had fertilizer applied before planting and all tests received at least 32 pounds of nitrogen per acre.

Seasonal Conditions

The season of 1945 was an excellent one for corn, the State yield of corn in Mississippi averaging 20 bushels per acre, a 25 percent increase over 1944 and a 32 percent increase over the 10-year average, 1934-1943. Acre yields in all tests are high, but are indicative of what Mississippi can do in corn production when climate, cultural conditions, seed, and fertilizer are favorable.

Explanation of the Data Reported

Yields are based on 70 pounds of husked earcorn per bushel. Any two kinds of corn should differ by at least the number of bushels shown opposite the notation "Least significant difference (5 percent level)" before any great confidence can be placed on the two entries being really different in yielding ability.

The percentages of plants lodged are based on actual counts, all plants broken below the top ear-bearing node (joint) were classified as stalk lodged, while all plants leaning 30 degrees or more from the vertical were classified as root lodged. Husk length is reported as the estimated husk extension beyond the ear tip, in inches. Earworm damage ratings were made on the basis of the amount of feeding done by the insect, 0 indicating no feeding and 5 extreme feeding. All other notes are self explanatory.

State-Wide Results—Hybrids

Seventeen of the 25 entries were planted at all locations. The five station averages for these entries are reported in table 1. The top nine entries in yield were hybrids and the next to lowest was

Table 1. Summary of data from the main hybrid tests at Holly Springs, West Point, Stoneville, Natchez and Poplarville, 1945

Entry	Plants		Lodging		Weevil ears ^{1/}	Ear- worm	Ear ht. ^{2/}	Ears per plant	Husk length	Stand
	Acre yield	erect at harvest	Root	Stalk						
Miss. Exp. Hyb. 5111	bu.	pct	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
La. 468	71.1	52	36	12	22	1.4	5.2	1.7	2.2	92
La. 1030	65.7	57	30	13	26	1.6	5.0	1.7	2.1	87
N. C. 5001	64.8	72	17	11	16	1.0	5.9	1.4	2.0	92
N. C. 5001	64.4	72	15	13	30	1.7	5.3	1.4	2.1	89
La. 502	63.3	48	36	16	15	1.3	5.6	1.8	2.5	78
N. C. 4003	63.0	67	11	22	37	1.5	5.0	1.6	2.0	90
Funk G714	62.3	61	9	30	46	2.1	5.3	1.5	2.2	90
Tenn. 10	62.1	70	18	12	50	2.5	4.9	1.5	1.9	98
N. C. 1028	60.5	68	10	22	51	1.7	4.8	1.5	1.9	87
*Station Mosby	58.7	61	25	14	35	1.9	5.7	1.1	2.1	94
*Jellicorse	57.8	60	24	16	39	2.1	4.5	1.4	2.0	90
*Station Laguna	57.2	62	20	18	42	1.9	5.9	1.1	2.0	92
N. C. 1032	57.1	74	8	18	39	1.6	4.8	1.5	1.9	87
N. C. 4004	55.4	68	17	15	38	1.6	4.9	1.3	1.9	80
N. C. 4026	53.8	73	9	18	30	1.5	4.5	1.5	2.0	82
Funk G708	51.4	56	15	29	47	2.2	4.8	1.2	2.0	89
*Jarvis (Sewell)	50.7	63	19	18	31	1.8	4.5	1.3	2.0	94

^{1/} Four-station av., West Point, Stoneville, Poplarville, and Natchez.

^{2/} Three-station av., Holly Springs, Stoneville, and Natchez.

* Open-pollinated varieties.

a hybrid. Mississippi Experimental Hybrid 5111 developed by the Mississippi Agricultural Experiment Station in co-operation with the U. S. Department of Agriculture was outstanding in yield, with an average of 71.1 bushels. Mississippi Experimental Hybrid 5111 also had good husk extension which gave good protection from weevils, and had less damage from corn earworms than most of the entries. Its main fault is its lack of lodging resistance. Mississippi Experimental Hybrid 5111 is closely related to Louisiana 468, since three of the four parental inbred lines are identical.

Louisiana 468 was second in yield. This hybrid has done well over a period of years and is adapted to the entire State. It has the same virtues and weaknesses as Mississippi Experimental Hybrid 5111.

Louisiana 1030 is a hybrid of mixed kernel color which is adapted to the southern half of Mississippi. It is the most earworm resistant hybrid we have tested, yields well, and stands well.

Of the North Carolina hybrids tested,

N. C. 5001 seems most promising. It yields about 10 percent more than Station Mosby, stands better and has more resistance to rice weevils. N. C. 4003 also yields well, stands well, and is much lower eared than Mosby.

Two Funk hybrids were tested at all locations. Funk G714 is by far the better of the two, but it was no better than 7th in yield, stood no better than Mosby, and had the most stalk lodging of any entry. Funk G708 was exceeded in yield by all entries except Jarvis and had much stalk lodging. There seems little to recommend this hybrid, which was out-yielded 14 percent by Station Mosby and 38 percent by Mississippi Experimental Hybrid 5111.

Open-Pollinated Varieties

Station Mosby, Station Laguna, and Jellicorse were very similar in performance, yielding well and standing better than some hybrids and poorer than others. It is apparent that these three varieties are better than poor hybrids, and the planter should be sure he buys seed of

Table 2. Summary of data from the main hybrid tests at Holly Springs, West Point, and Stoneville, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears ^{2/}	Ear-worm	Ear ht. ^{1/}	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Tx61M x L10 ^{3/}	84.3	64	25	11	14	1.6	5.2	1.6	2.2	87
Miss. Exp. Hyb. 5111	80.0	59	31	10	6	2.2	5.3	1.7	2.1	90
La. 468.....	74.7	63	24	13	9	2.4	5.0	1.7	1.9	87
N. C. 5001.....	73.5	82	11	7	12	2.6	5.6	1.4	2.1	92
La. 1030.....	72.6	79	15	6	4	1.6	5.9	1.4	2.1	93
N. C. 4003.....	72.3	80	6	14	15	2.3	5.2	1.6	1.9	91
La. 502.....	72.0	53	32	15	5	2.0	5.6	1.8	2.3	79
Funk G714.....	71.2	72	5	23	27	3.2	5.4	1.5	2.3	93
Tenn. 10.....	70.6	76	13	11	28	3.8	5.0	1.7	2.0	95
N. C. 1028.....	68.7	76	8	16	31	2.8	4.9	1.5	1.8	88
*Station Mosby.....	68.0	68	20	12	19	3.0	6.0	1.2	2.0	93
*Jellicorse.....	66.2	28	57	15	16	3.2	4.6	1.4	1.9	92
*Neal Paymaster.....	65.5	65	21	14	23	2.3	5.2	1.4	1.7	94
*Station Laguna.....	64.1	71	16	13	24	3.0	6.2	1.1	1.9	95
N. C. 1032.....	63.7	81	6	13	20	2.4	4.9	1.5	1.8	88
Tenn. 4004.....	62.1	84	14	2	43	2.5	4.6	1.0	1.2	93
N. C. 4004.....	61.9	76	13	11	11	2.6	4.7	1.4	1.8	82
Funk G708.....	60.8	78	10	12	28	3.4	5.0	1.2	1.9	92
N. C. 4026.....	60.6	85	5	10	11	2.4	4.6	1.6	1.9	82
Tenn. 4003.....	60.5	77	16	7	28	2.6	4.7	1.0	1.4	90
*Jarvis (Sewell).....	58.7	69	21	10	8	2.6	4.6	1.4	1.9	97
*Deaton Corn.....	57.2	59	26	15	9	1.7	5.5	1.4	2.0	99
Pioneer 300 ^{1/}	53.8	97	0	3	58 ^{4/}	2.9	3.5	1.0	0.0	91

* Open-pollinated varieties.

^{1/} Two-station av., Holly Springs and Stoneville.^{2/} Two-station av., West Point and Stoneville.^{3/} Single-cross hybrid, female parent of Mississippi Experimental Hybrid 5111^{4/} Stoneville average only.

Table 3. Summary of data from the main hybrid tests at Natchez and Poplarville, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ear ht. ^{1/}	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Miss. Exp. Hyb. 5111	57.8	31	44	15	37	1.3	4.8	1.6	2.5	95
La. 1030.....	53.2	59	21	20	29	1.0	5.8	1.3	2.1	90
La. 468.....	52.2	48	40	12	44	1.6	4.8	1.6	2.4	86
N. C. 5001.....	50.8	58	20	22	47	1.7	4.8	1.4	2.2	84
La. 502.....	50.2	40	42	18	25	1.2	5.5	1.7	2.7	76
Tenn. 10.....	49.4	60	25	15	72	2.5	4.7	1.3	1.9	102
N. C. 4003.....	49.0	48	18	34	59	1.5	4.5	1.5	2.0	88
Funk G714.....	48.9	45	15	40	64	2.1	5.0	1.5	2.0	86
N. C. 1028.....	48.2	56	12	32	71	1.4	4.7	1.4	2.0	86
*Yellow Hastings.....	47.5	39	44	17	50	1.6	5.8	1.7	2.0	97
N. C. 1032.....	47.3	61	12	27	59	1.5	4.5	1.4	2.0	85
*Station Laguna.....	46.9	49	26	25	60	1.7	5.3	1.1	2.1	86
*Whatley Prolific.....	46.8	48	38	14	24	1.4	6.3	1.4	2.9	90
*Hastings Prolific.....	46.5	44	39	17	42	1.7	6.7	1.9	2.4	94
N. C. 4004.....	45.7	56	22	22	65	1.4	4.7	1.3	2.0	77
*Cockes Prolific.....	45.2	53	25	22	45	1.6	5.8	1.3	2.8	91
*Jellicorse.....	45.2	52	30	18	62	2.0	4.2	1.3	2.1	88
*Station Mosby.....	44.8	50	34	16	52	1.8	5.0	1.0	2.2	96
N. C. 4026.....	43.6	56	14	30	48	1.4	4.3	1.4	2.0	82
Jarvis (Sewell).....	38.8	54	17	29	55	1.8	4.2	1.3	2.0	90
*Yellow Whatley.....	37.4	46	41	13	18	1.5	5.3	1.1	2.8	76
Funk G708.....	37.4	24	22	54	66	2.2	4.3	1.1	2.1	84
*Stewarts Corn.....	37.0	52	33	15	23	1.5	5.5	0.9	2.9	92

* Open-pollinated varieties.

^{1/} Natchez average only.

Table 4. Main hybrid corn test, Holly Springs, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk					
	bu.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Miss. Exp. Hyb. 5111	69.6	88	1	11	2.0	5.0	1.7	2.0	96
La. 468	68.1	87	0	13	2.1	4.8	1.7	1.8	95
Tx61M x L10	67.6	82	0	18	2.2	5.8	1.5	2.0	93
N. C. 5001	64.6	92	0	8	2.1	5.0	1.3	1.8	94
*Station Mosby	61.9	94	0	6	2.4	5.2	1.2	2.0	89
Tenn. 4004	61.3	97	0	3	2.6	4.2	1.0	0.8	96
La. 502	60.5	82	2	16	1.9	5.3	1.8	2.0	80
N. C. 4003	60.4	91	0	9	2.0	4.7	1.5	1.8	95
Tenn. 4003	60.0	92	0	8	2.6	4.5	1.0	1.3	98
*Neal Paymaster	59.4	95	0	5	2.5	4.7	1.3	1.5	97
Tenn. 10	59.0	94	0	6	2.6	4.8	1.3	1.7	96
*Jellicorse	58.7	95	0	5	2.2	4.2	1.4	1.7	92
*Jarvis (Sewell)	57.5	91	0	9	1.9	4.3	1.5	1.8	97
N. C. 1028	57.4	88	0	12	2.4	4.8	1.4	1.7	88
N. C. 1032	57.1	95	0	5	2.2	4.7	1.4	1.7	95
La. 1030	56.8	96	0	4	1.7	5.3	1.3	2.0	93
N. C. 4026	55.2	93	0	7	2.2	4.3	1.5	1.8	85
Funk G708	54.9	88	0	12	2.4	4.8	1.1	1.8	95
Funk G714	54.6	75	0	25	2.7	5.0	1.5	2.0	88
N. C. 4004	53.2	90	0	10	2.3	4.7	1.2	1.5	83
*Deaton Corn	52.0	85	2	13	2.1	5.0	1.4	1.8	97
Pioneer 300	51.7	97	0	3	2.9	3.0	1.0	0.0	94
*Station Laguna	51.3	89	0	11	2.7	5.3	1.1	1.8	95

Least sig. dif. (5% level) 5.4

*Open-pollinated varieties.

Table 5. Main hybrid corn test, West Point, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ears per plant	Husk length	Stand
			Root	Stalk					
	bu.	pct.	pct.	pct.	pct.	grade	no.	in.	pct.
Tx61M x L10	73.1	26	70	40	6	1.4	1.8	2.5	92
Miss. Exp. Hyb. 5111	69.4	28	68	4	4	1.4	1.8	2.2	97
La. 468	63.9	36	59	6	10	1.5	1.7	2.0	95
N. C. 5001	62.7	67	30	3	6	1.7	1.6	2.5	95
La. 502	62.7	22	76	2	4	1.4	1.8	2.8	88
Funk G714	62.4	74	11	15	14	2.0	1.7	2.7	92
N. C. 4003	60.8	77	16	7	18	1.6	1.6	2.0	90
La. 1030	60.2	56	42	2	2	1.0	1.4	2.3	98
Tenn. 10	58.7	62	35	3	32	2.6	1.5	2.2	97
N. C. 1028	58.3	68	21	11	34	1.8	1.6	2.0	95
*Station Laguna	55.6	58	34	8	14	1.7	1.1	2.0	99
N. C. 4026	55.1	78	15	7	14	1.6	1.5	2.0	95
*Neal Paymaster	54.5	35	56	9	14	2.4	1.4	1.8	93
N. C. 1032	52.6	73	17	10	14	1.5	1.5	2.0	89
*Jellicorse	52.2	26	55	9	11	2.3	1.4	2.0	93
N. C. 4004	51.1	57	37	6	8	1.7	1.4	2.0	91
Tenn. 4004	51.1	57	42	1	43	2.9	1.0	1.8	95
*Station Mosby	50.5	27	54	9	12	2.2	1.1	2.0	94
Tenn. 4003	50.0	51	47	2	21	3.0	1.0	1.3	90
Funk G708	46.8	67	28	5	25	2.3	1.2	2.2	91
*Jarvis (Sewell)	43.1	34	60	6	3	1.7	1.3	2.0	94
*Deaton Corn	42.2	27	61	12	5	1.8	1.3	2.2	97

Least sig. dif. (5% level) 5.7

*Open-pollinated varieties.

Table 6. Main hybrid corn test, Stoneville, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Tx61M x L10.....	112.2	85	4	11	22	1.2	5.5	1.7	2.0	76
Miss. Exp. Hyb. 5111	100.9	59	25	16	8	1.0	5.7	1.8	2.0	78
La. 1030	100.7	86	3	11	6	0.4	6.5	1.5	2.0	88
Funk G714	96.5	69	3	28	40	1.8	5.8	1.5	2.2	100
N. C. 4003	95.6	74	1	25	12	1.0	5.7	1.6	2.0	87
Tenn. 10	94.2	74	3	23	24	2.5	5.3	1.5	2.0	92
N. C. 5001.....	93.1	88	2	10	19	1.3	6.2	1.4	2.0	86
La. 502	92.9	54	19	27	6	0.7	6.0	1.8	2.2	70
La. 468	92.0	69	12	19	8	1.2	5.3	1.8	2.0	70
*Station Mosby.....	91.6	75	5	20	26	1.4	6.8	1.3	2.0	96
N. C. 1028	90.4	72	4	24	29	1.3	5.0	1.6	1.7	82
*Jellicorse	87.6	66	3	31	21	1.8	5.0	1.5	2.0	90
*Station Laguna ..	85.5	69	12	19	34	1.5	7.2	1.2	1.8	92
*Neal Paymaster ..	82.7	66	7	27	33	2.0	5.7	1.4	1.8	92
N. C. 1032	81.4	76	1	23	26	1.2	5.2	1.5	1.8	81
N. C. 4004	81.3	80	3	17	14	1.2	5.3	1.4	1.8	72
Funk G708	80.7	78	2	20	32	2.1	5.3	1.2	1.8	90
*Deaton Corn	77.5	65	14	21	14	1.2	6.0	1.4	2.0	103
*Jarvis (Sewell) ..	75.5	81	3	16	13	1.6	5.0	1.3	2.0	100
Tenn. 4004	74.0	96	1	3	43	2.2	5.0	1.1	1.0	87
Tenn. 4003	71.6	89	1	10	36	2.1	5.0	1.1	1.5	81
N. C. 4026	71.6	85	0	15	8	1.0	5.0	1.7	2.0	66
Pioneer 300	56.0	93	0	7	58	2.8	4.0	1.0	0.0	89

Least sig. dif. (5% level) 5.7

*Open-pollinated varieties.

Table 7. Main hybrid corn test, Natchez, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Miss. Exp. Hyb. 5111	68.7	85	4	11	22	1.1	4.8	1.6	2.7	102
Tenn. 10	58.9	90	1	9	58	2.3	4.7	1.3	2.0	115
La. 468	58.1	89	3	8	24	1.4	4.8	1.6	2.7	87
La. 1030	57.1	92	2	6	10	0.5	5.8	1.2	2.2	93
N. C. 1028.....	56.8	84	0	16	56	1.1	4.7	1.5	2.0	90
La. 502	56.4	78	5	17	11	0.9	5.5	1.7	3.2	71
N. C. 5001.....	56.1	93	0	7	25	1.4	4.8	1.4	2.3	84
Funk G714	55.4	73	4	23	39	1.7	5.0	1.5	2.3	82
*Station Laguna ..	54.6	87	2	11	38	1.5	5.3	1.1	2.2	89
N. C. 1032	53.9	93	0	7	34	1.3	4.5	1.4	2.0	87
*Yellow Hastings ..	53.8	77	5	18	42	1.3	5.8	1.7	2.0	104
*Hastings Prolific ..	53.6	83	3	14	24	1.3	6.7	1.9	2.5	104
*Jellicorse	53.5	88	1	11	55	1.7	4.2	1.3	2.0	88
*Whatley Prolific.....	51.5	89	4	7	2	1.0	6.3	1.3	3.0	98
N. C. 4004	50.5	91	0	9	49	1.2	4.7	1.3	2.0	72
N. C. 4003	50.5	84	1	15	41	1.3	4.5	1.4	2.2	87
*Cokes Prolific.....	50.4	91	3	6	21	1.2	5.8	1.1	3.0	97
*Station Mosby.....	49.8	90	4	6	24	1.8	5.0	0.9	2.3	98
N. C. 4026.....	46.0	88	0	12	31	1.2	4.3	1.5	2.0	80
*Jarvis (Sewell).....	44.1	78	3	19	34	1.3	4.2	1.2	2.0	96
Funk G708	42.2	60	1	39	50	1.7	4.3	1.2	2.2	84
*Yellow Whatley.....	40.5	82	7	11	6	1.2	5.3	1.0	3.0	75
*Stewarts Corn	38.3	90	2	8	5	1.3	5.5	0.8	3.2	93

Least sig. dif. (5% level) 7.4

*Open-pollinated varieties.

a superior hybrid before he discontinues growing a good adapted variety.

Jarvis, as in years past, was the lowest yielding entry tested. It did best, relatively, at Holly Springs.

Performance data at the individual locations are shown in tables 4 to 8.

Varieties Planted only in South Mississippi

In addition to the entries planted at

all stations, several varieties of corn were planted at Natchez and Poplarville (tables 2, 7, and 8), Cokes Prolific (N. E. La. Station), Hastings, Yellow Hastings and Whatley Prolific all yielded about the same as Station Mosby.

Varieties Planted in North Mississippi

A few hybrids and varieties were planted at Holly Springs, West Point, and Stoneville, in addition to those planted at

Table 8. Main hybrid corn test, Poplarville, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ears per plant	Husk length	Stand
			Root	Stalk					
	bu.	pct.	pct.	pct.	pct.	grade	no.	in.	pct.
La. 1030.....	49.2	27	40	33	48	1.4	1.4	2.0	88
N. C. 4003.....	47.5	11	36	53	77	1.7	1.6	1.8	90
Miss. Exp. Hyb. 5111.....	46.8	0	82	18	53	1.5	1.6	2.3	88
La. 468.....	46.2	7	76	17	64	1.8	1.5	2.0	86
N. C. 5001.....	45.4	21	41	38	70	2.0	1.4	2.0	84
La. 502.....	43.9	1	79	20	40	1.5	1.7	2.2	80
Funk G714.....	42.4	17	26	57	90	2.5	1.4	1.8	90
*Whatley Prolific.....	42.0	7	72	21	46	1.7	1.6	2.8	82
N. C. 4026.....	41.2	24	28	48	66	1.7	1.4	2.0	85
*Yellow Hastings.....	41.2	2	82	16	58	1.9	1.8	2.0	90
N. C. 4004.....	40.9	22	43	35	82	1.6	1.3	2.0	82
N. C. 1032.....	40.7	30	23	47	84	1.7	1.5	2.0	83
*Cokes Prolific.....	40.0	14	47	39	69	1.9	1.4	2.5	85
*Station Mosby.....	39.9	9	64	27	80	1.9	1.1	2.0	94
Tenn. 10.....	39.8	29	50	21	86	2.7	1.4	1.8	89
N. C. 1028.....	39.5	26	25	49	86	1.8	1.4	2.0	81
*Hastings Prolific.....	39.4	5	75	20	61	2.1	1.9	2.3	85
*Station Laguna.....	39.2	10	51	39	83	1.9	1.1	2.0	83
*Jellicorse.....	36.9	14	60	26	70	2.4	1.2	2.2	87
*Stewart Corn.....	35.8	13	65	22	41	1.8	1.0	2.5	90
*Yellow Whatley.....	34.2	10	75	15	30	1.7	1.2	2.5	78
*Jarvis (Sewell).....	33.5	30	31	39	76	2.2	1.3	2.0	84
Funk G708.....	32.5	0	44	68	83	2.6	1.1	2.0	85

Least sig. dif. (5% level) 4.5

*Open-pollinated varieties.

Table 9. Summary of variety tests at Holly Springs, Stoneville and Natchez, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil Ears ^{1/}	Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.	
Station Mosby.....	67.1	85	4	11	25	1.9	5.7	1.1	1.9	96
Graham Mosby.....	57.8	85	5	10	23	1.9	5.0	1.0	1.9	97
Sewell Jarvis.....	54.3	78	3	19	11	1.5	4.3	1.2	1.9	100
Johnston Jarvis.....	52.7	87	3	10	6	1.6	4.1	1.1	2.1	98
Carraway Prolific.....	52.5	74	5	21	5	1.5	4.8	1.1	2.5	98
Butler Mosby.....	52.3	75	13	12	6	1.5	5.9	0.9	2.5	97
Suttle Mosby.....	51.3	75	10	15	11	1.5	5.1	1.1	2.0	93
Gray Mosby.....	49.9	81	2	17	14	2.1	3.2	1.0	1.9	91
Holloman Cribfiller.....	44.8	64	3	33	10	2.0	2.5	1.2	2.0	85

^{1/} Two-station average, Stoneville and Natchez.

all stations (tables 3, 4, 5, and 6). Pioneer 300, a northern hybrid, was widely sold in the Delta and was tested at Stoneville and Holly Springs. It was by far the lowest yielding entry at Stoneville, hybrid or open-pollinated, and was next to lowest in yield at Holly Springs. Pioneer 300 is a single-eared hybrid of Corn-

Belt type with no husk protection against birds or weevils. When the corn was harvested at Stoneville, over 50 percent of the kernels were weevily or rotten. Corn-Belt strains of this type have no place in Mississippi except for possible use as early feed.

Neal Paymaster, a good open-pollinat-

Table 10. Variety test, Holly Springs, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk					
	bu.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Station Mosby.....	56.2	95	0	5	2.6	5.0	1.2	2.2	88
Sewell Jarvis.....	56.2	93	0	7	1.7	4.0	1.5	1.8	96
Graham Mosby.....	55.3	94	1	5	2.5	4.6	1.1	1.6	96
Gray Mosby.....	54.9	95	0	5	2.1	3.2	1.1	1.8	96
Johnston Jarvis.....	54.3	97	0	3	1.6	4.0	1.3	2.0	95
Suttle Mosby.....	52.4	90	1	9	2.0	5.0	1.3	2.0	90
Carraway Prolific.....	47.8	89	0	11	2.0	4.8	1.2	2.4	92
Butler Mosby.....	47.3	86	4	10	2.0	5.2	1.0	2.6	92
Holloman Cribfiller.....	46.8	89	0	11	2.2	2.4	1.3	1.4	83
Jarvis Jarvis.....	44.7	95	0	5	1.8	3.0	1.3	1.6	92

Least sig. dif. (5% level) 5.3

Table 11. Variety test, Stoneville, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Station Mosby.....	95.1	83	4	13	38	1.3	6.2	1.1	2.0	106
Graham Mosby.....	74.1	68	13	19	34	1.4	5.4	1.0	2.0	102
Butler Mosby.....	69.9	58	28	14	10	1.1	6.2	0.9	2.4	98
Sewell Jarvis.....	63.8	63	5	32	7	1.4	4.2	1.1	2.0	98
Gray Mosby.....	62.4	64	6	30	10	1.8	3.4	1.0	2.0	96
Suttle Mosby.....	61.4	62	24	14	18	1.3	5.4	1.1	2.0	94
Carraway Prolific.....	61.3	55	15	30	5	1.2	4.4	1.1	2.4	101
Johnston Jarvis.....	61.2	76	7	17	4	1.6	4.0	1.0	2.0	93
Holloman Cribfiller.....	50.8	44	8	48	5	1.8	2.2	1.1	2.0	88

Least sig. dif. (5% level) 6.0

Table 12. Variety test, Natchez, 1945.

Entry	Acre yield	Plants erect at harvest	Lodging		Weevil ears	Ear-worm	Ear ht.	Ears per plant	Husk length	Stand
			Root	Stalk						
	bu.	pct.	pct.	pct.	pct.	grade	ft.	no.	in.	pct.
Station Mosby.....	50.0	79	7	14	12	1.8	5.8	1.0	1.6	94
Carraway Prolific.....	48.3	78	0	22	6	1.4	5.2	1.2	2.6	100
Graham Mosby.....	44.0	92	1	7	13	1.7	5.0	0.9	2.0	92
Sewell Jarvis.....	42.8	78	3	19	16	1.5	4.6	1.1	1.8	107
Johnston Jarvis.....	42.7	89	2	9	9	1.7	4.4	1.0	2.2	106
Suttle Mosby.....	40.2	72	5	23	4	1.3	5.0	1.0	2.0	96
Butler Mosby.....	39.7	81	7	12	2	1.2	6.4	0.8	2.6	100
Holloman Cribfiller.....	36.7	59	2	39	16	1.9	2.8	1.2	2.0	83
Gray Mosby.....	32.4	83	1	16	19	2.4	3.0	0.9	1.8	81

Least sig. dif. (5% level) 6.8

ed variety, yielded with the other good open-pollinated varieties, and 32 percent more than Pioneer Hybrid 300.

Variety Test

A number of open-pollinated varieties are being certified in Mississippi without regard to performance. In order to evaluate these and certain other open-pollinated varieties, tests composed entirely of open-pollinated varieties were grown at Holly Springs, Stoneville, and Natchez. The data are presented in tables 9, 10, 11, and 12.

Six strains of Mosby were grown. The data on one are omitted because of poor germination. Station Mosby was first in all three tests, and was 21 bushels better than the next strain of Mosby at Stoneville. Graham Mosby, used as the official Mosby by the Alabama Experiment Station, was next in yield. Gray Mosby was entirely different in plant type from any of the other Mosby's, being short and low eared.

Two strains of Jarvis were tested in the three tests and an additional strain

tested at Holly Springs. Sewell Jarvis has been selected in Mississippi for a number of years and has lost much of the hard flinty characteristics of the original Jarvis. Johnston Jarvis also has been selected in the State for a number of years but still retains much of the Jarvis ear type. The Jarvis strain of Jarvis was purchased from Mr. Jarvis recently.

The Sewell and Johnston strains of Jarvis were very similar in yield while the Jarvis strain of Jarvis was much lower in yield. Both Sewell and Johnston Jarvis did relatively best at Holly Springs.

Carraway Prolific, a yellow Louisiana variety, did well at Natchez, and may be well adapted to South Mississippi.

Holloman Cribfiller is a white variety with very short plants and low ears. It is also short in yield.

It is apparent from these data that the strain or source of a variety is very important, and the general name Mosby or Jarvis, or any other varietal name means little unless one knows what strain is meant.