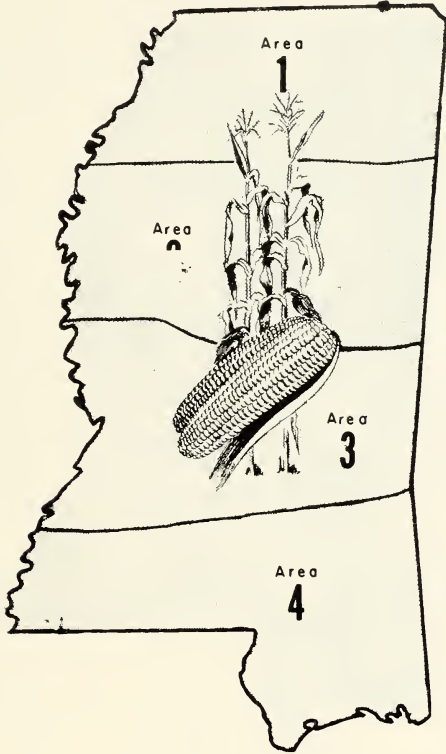


Mississippi Hybrid Corn

Performance Tests, 1968



Mississippi State University
 AGRICULTURAL EXPERIMENT STATION

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STATE COLLEGE

MISSISSIPPI

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Three of the tests reported were on private farms through the cooperation of M. A. Luter, Tylertown; Charles Huff, Holly Bluff; and R. J. Williams, Clarksdale.

The data on Southwestern corn borer was taken by C. A. Henderson and F. M. Davis, Entomologists, U.S.D.A., State College Mississippi.

MISSISSIPPI HYBRID CORN PERFORMANCE TESTS, 1968

By LLOYD R. NELSON AND GENE E. SCOTT¹

The purpose of the hybrid corn trials is to supply information on the relative performance of the hybrids entered when grown under similar environmental conditions.

Tests were conducted at 13 different locations in Mississippi in 1968. Three tests were not harvested.

The best guide to the desirability of a hybrid is its performance over a period of years at a number of locations. Therefore data are reported for Areas 1 through 4 both for 1968 and for a 3-year average.

Hybrid tests in Area 1 were at Clarksdale, Holly Springs, Pontotoc (Flatwoods and Ridge) and Verona. Tests in Area 2 were at Starkville, Brooksville and Stoneville. In Area 3 the tests were at Raymond, Holly Bluff and Newton. Area 4 tests were at Tylertown and Poplarville.

Early planting was delayed by excessive moisture in Central and Northern Mississippi. The test at Verona was not harvested due to an uneven stand caused by lack of moisture for germination. Lack of moisture during the growing season apparently reduced the yield at Holly Springs and Newton. Yields at Clarksdale, Stoneville, Pontotoc and Raymond were excellent due to adequate growing conditions.

Data from Holly Bluff were discarded because of inconsistencies caused by variability in soil and heavy rains. The hy-

brid test at Tylertown was not harvested due to a poor stand. The test at Poplarville was not harvested due to factors beyond the control of the experiment station. Therefore we have duplicated the 1967 and 1965 through 1967 data for Area 4.

A randomized complete block experimental design with five replications was used at all locations. All experiments were over planted and the seedlings thinned to a desired stand of 12,000 plants per acre. The ears were harvested by hand, weighed, and a moisture sample (grain only) was taken. Grain yields are reported in bushels of ear corn at 15.5% moisture.

Summary

Mississippi continues to be a corn deficient state. Thus, it should be a profitable location to produce corn. Correct cultural practices to maximize yields would include the following:

- Properly select your corn land
- Prepare land in fall where desirable
- Select best hybrid for your farm
- Plant as early as practical for your area
- Select appropriate plant spacing
- Apply correct fertilizer and weed control
- Observe crop during growing season for limiting production factors
- Harvest early.

Area 1
THREE-YEAR SUMMARY PERFORMANCE, 1966-68 (AREA 1)

Pedigree	Acre Yield Bu.	Lodging		Ears Per Plant No.	Moisture		Earworm		Husk		P. C. W. 4/ Infest- ation %
		Root %	Stalk %		Ear Ht. Ft.	In Grain %	Pene- tra- tion In. %	Infest- ation %	Exten- sion In. %	Tight- ness In. %	
Miss. 6133 (Exp.)	74.6	1	21	3.9	1.4	15.6	.60	50	3.02	.51	15
Dixie 55	73.4	1	21	4.0	1.3	15.7	.47	55	3.03	.54	13
Pioneer 511A	69.3	1	15	3.6	1.3	15.8	.52	59	2.69	.60	28
McNair 440V	66.8	0	15	3.5	1.2	15.9	.62	70	4.60	.66	35
Funks G-711AA	65.7	3	20	3.8	1.0	16.0	1.00	78	1.99	.79	48
Pioneer 309B	64.8	2	15	3.4	1.1	15.9	.76	63	2.28	.72	35
McNair 340V	64.5	3	14	3.4	1.1	15.8	.87	70	2.26	.76	45
McCurdy M97	59.0	3	21	3.5	1.0	15.2	1.05	84	2.31	.74	38
Embros Jarvis E-1	57.3	2	17	3.1	1.0	15.7	1.19	85	2.69	.62	35
MEAN	66.2	2	18	3.6	1.2	15.7	.90	68	2.76	.66	32

1/ Inches from tip of ear. 2/ Inches beyond tip of ear. 3/ Diameter of silk channel at tip of ear. 4/ Pink Corn Worm.

MISSISSIPPI HYBRID CORN PERFORMANCE TESTS

AREA 1, RESULTS OF HYBRID TEST AT PONTIOTOC RIDGE, PONTIOTOC FLATWOODS, HOLLY SPRINGS, CLARKSDALE, 1968.

Pedigree	Acres Yield Bu.	Lodging		Ears		Moisture		Earworm		Husk	
		Root %	Stalk %	Ear Ht. Ft.	Per Plant No.	In %	Stand %	Penetration In.	Infestation %	Extension In.	Tightness In.
Miss. 6133 (Exp)	88.7	1	19	4.3	1.6	16.2	100	0.75	58	3.07	0.51
Pioneer 3185	87.9	0	9	3.7	1.1	17.0	94	1.32	93	2.75	0.62
Dixie 55	87.1	1	17	4.4	1.4	16.2	100	0.42	55	3.02	0.53
Funks G795W-1	87.1	0	13	3.8	1.3	16.4	100	0.65	70	2.62	0.64
McNair 6501	86.1	0	14	4.2	1.6	16.6	99	0.35	60	2.67	0.60
Coker S48	85.3	0	10	3.5	1.4	16.4	94	0.82	75	2.15	0.76
Taylor-Evans 6703 (Exp)	84.3	1	12	4.3	1.3	16.6	95	0.40	50	2.72	0.61
Funks G-711AA	83.7	1	16	4.2	1.2	16.3	97	0.82	73	2.07	0.74
Miss. 0002 (Exp)	83.4	0	16	4.1	1.4	16.7	98	0.32	33	3.17	0.53
AKC 66	82.7	1	15	4.1	1.4	16.9	93	0.70	73	2.60	0.63
Pioneer 511A	82.5	1	14	4.0	1.3	16.6	94	0.22	45	2.80	0.57
Agrow ATC 450	82.3	1	13	4.0	1.1	17.0	95	0.42	53	3.12	0.56
Funks G-4877	82.2	0	10	4.0	1.2	17.5	95	0.52	55	3.32	0.54
Coker 912	82.0	0	15	3.9	1.3	16.2	97	0.65	75	2.40	0.70
McNair 340V	81.7	1	13	3.7	1.2	16.8	98	0.77	68	2.42	0.75
McNair 440V	81.7	0	12	3.8	1.4	17.0	97	0.57	68	2.50	0.64
Pioneer 309B	79.2	0	13	3.7	1.2	16.8	98	0.65	63	2.35	0.66
Funks G-5757	78.6	1	13	3.5	1.2	16.3	94	1.17	98	2.07	0.82
Pioneer 309C	78.2	1	13	3.6	1.2	16.5	96	0.85	83	2.25	0.72
McCurdy M-97	78.0	1	18	3.8	1.2	16.4	97	0.75	75	2.62	0.69
Funks G-4761	77.7	0	10	3.7	1.1	16.5	95	0.60	68	2.95	0.59
Dixie 18	77.6	1	17	4.4	1.3	17.0	99	0.70	45	2.82	0.60
Taylor-Evans 6704 (Exp)	74.0	0	16	4.1	1.4	16.9	93	0.37	38	3.15	0.51
Embro Jarvis T	73.5	1	15	3.5	1.3	16.4	96	0.65	63	2.47	0.67
McCurdy 49X3	72.6	0	14	3.7	1.2	16.7	96	1.40	95	1.97	0.88
Embro Jarvis E-1	59.2	1	19	3.5	1.1	16.7	91	1.00	73	2.45	0.66
Mean	80.6	1	14	3.9	1.3	16.6	96	0.69	66	2.64	0.65
L.S.D. (.05)	7.9										

1/ Inches from tip of ear. 2/ Inches beyond tip of ear. 3/ Diameter of silk channel at tip of ear.

Area 2

THREE-YEAR SUMMARY PERFORMANCE, 1966-68 (AREA II)

Pedigree	Acre Yield Bu.	Lodging		Ear Ht. Ft.	Ears Per Plant No.	Moisture		Earworm		Husk		P.C.W. ⁴ / Infest- ation %
		Root %	Stalk %			In Grain %	Penet- ration In.	Infest- ation %	Exten- sion In.	Tight- ness In.		
Funks G-4949	87.2	5	12	3.6	1.3	17.8	1.28	84	2.41	.73	99	
Funks G-795 W-1	86.7	1	8	3.3	1.2	15.7	1.12	87	2.94	.58	88	
Pioneer 511A	86.1	1	10	3.4	1.1	14.2	.98	84	2.97	.56	71	
Dixie 18	85.5	1	15	4.5	1.3	15.9	.70	67	3.24	.52	89	
McNair 440V	84.5	1	12	3.4	1.4	16.3	.95	85	2.59	.59	88	
Funks G-732A	83.6	2	9	3.6	1.1	16.5	1.02	84	2.59	.69	93	
Pioneer 309B	83.0	1	18	3.1	1.2	16.0	1.22	90	2.83	.63	89	
Miss. 0002 (Exp)	82.7	1	22	4.0	1.2	15.9	.99	79	3.54	.52	94	
Pioneer 3048	81.7	1	11	3.6	1.1	16.1	1.16	89	3.03	.58	99	
Funks G-711AA	80.9	2	17	3.6	1.0	16.0	1.20	90	2.49	.68	91	
Dixie 55	77.4	1	16	3.5	1.2	16.1	1.12	83	3.02	.58	98	
Coker 52	76.5	1	6	3.2	1.2	15.9	.75	75	2.75	.56	79	
McNair 340V	68.9	1	14	3.0	1.0	16.0	1.14	85	2.63	.66	92	
McCurdy M306	67.9	1	16	3.5	1.2	16.4	1.02	82	3.07	.57	80	
MEAN	80.9	1.4	13	3.5	1.2	16.1	1.05	83	2.86	.60	89	

1/ Inches from tip of ear. 2/ Inches beyond tip of ear. 3/ Diameter of silk channel at tip of ear. 4/ Pink Corn Worm

MISSISSIPPI HYBRID CORN PERFORMANCE TESTS

Pedigree	Acres	Yield Bu.	Lodging		Ears		Moisture		Stand		Earworm		Husk	
			Root %	Stalk %	Per Plant	In Grain %	%	Penetration In.	Infestation %	Extension In.	Tightness In.			
Miss. 6133 (Exp)	95.5		1	21	3.7	1.6	17.2	95	95	1.50	95	3.60		.52
McNair 6501	94.6		1	13	3.7	1.4	13.6	98	98	1.07	93	2.50		.63
Dixie 55	93.3		1	20	3.8	1.4	17.0	94	94	.97	80	3.07		.53
Funks G-795W-1	92.5		0	11	3.2	1.2	17.2	97	97	1.40	93	3.17		.58
Funks G-5945	89.9		1	9	3.5	1.2	16.8	93	93	1.17	93	2.77		.62
Pioneer 3185	89.9		1	8	3.1	1.0	17.0	98	98	1.72	93	2.80		.62
Funks G-4761	89.4		0	4	2.8	1.1	16.7	96	96	1.00	95	2.70		.60
Pioneer 511A	89.4		0	10	3.2	1.2	16.8	94	94	1.17	88	3.20		.55
Pioneer 3048	89.3		1	11	3.6	1.1	17.3	98	98	1.05	90	3.10		.56
McNair 440V	88.4		0	14	3.2	1.4	17.5	88	88	1.22	98	2.62		.58
Miss. 0002 (Exp)	88.3		0	21	4.0	1.3	17.0	95	95	1.15	83	3.75		.51
Taylor-Evans 6703 (Exp)	87.8		1	15	4.0	1.1	17.9	94	94	1.05	95	2.77		.61
Dixie 18	86.2		1	16	4.6	1.3	17.1	97	97	.72	70	3.15		.52
Funks G-732A	86.1		1	11	3.5	1.1	17.3	95	95	1.22	88	2.67		.69
Taylor-Evans 6704 (Exp)	84.8		0	22	4.2	1.3	17.4	94	94	.80	83	3.25		.50
Coker S48	84.4		1	6	3.0	1.1	16.7	98	98	1.22	100	2.57		.63
Pioneer 309C	84.2		0	13	3.1	1.1	17.1	96	96	1.60	100	2.32		.73
Funks G-4877	86.1		0	5	3.6	1.0	17.8	100	100	1.07	95	2.57		.61
Funks G-711AA	83.0		1	21	3.6	.9	16.9	93	93	1.37	95	2.47		.68
Funks G-4949	82.8		1	9	3.6	1.1	17.6	98	98	.92	73	2.60		.69
Asgrow ATC 450	82.6		0	7	3.6	1.0	18.1	98	98	1.05	88	3.07		.64
Coker 912	82.3		1	11	3.3	1.1	17.0	96	96	1.20	93	2.77		.63
Pioneer 309B	80.1		1	20	2.8	1.2	17.1	94	94	1.30	93	2.85		.68
Coker 52	79.9		1	9	3.0	1.2	17.0	95	95	.70	73	2.92		.51
McCurdy M306	78.3		0	18	3.0	1.2	17.6	91	91	1.17	88	3.00		.56
McNair 340V	74.6		1	15	2.9	1.0	17.0	93	93	1.35	93	2.87		.63
McCurdy 67X21	71.5		1	16	3.3	1.1	16.4	95	95	1.30	90	2.75		.61
Mean	85.7		1	13	3.5	1.2	17.1	95	95	1.17	90	2.88		.60

L.S.D. (.05) 10.9 $\frac{1}{2}$ / Inches from tip of ear. $\frac{3}{2}$ / Diameter of silk channel at tip of ear.

Area 3

THREE-YEAR SUMMARY PERFORMANCE, 1966-68 (AREA III)

Pedigree	Acre Yield Bu.	Lodging		Ear Ht. Ft.	Ears Per Plant No.	Moisture		Earworm		Husk		P.C.W./4/ Infest- ation %
		Root %	Stalk %			In Grain %	Penet- ration In.	Infest- ation %	Exten- sion In.	Tight- ness In.		
Pioneer 511A	76.1	1	14	3.6	1.3	14.8	.80	72	2.52	.65	35	
Pioneer 3009	75.2	1	10	3.6	1.1	15.2	.82	70	2.98	.58	32	
McNair 440V	73.7	1	12	3.6	1.3	14.7	.79	68	2.44	.67	75	
Dixie 55	73.6	1	17	4.3	1.3	14.3	.96	71	3.04	.59	27	
Pioneer 3048	71.5	0	14	3.8	1.1	14.4	.99	73	3.00	.74	28	
Funks G-795 W-1	70.7	1	24	3.3	1.2	13.7	.91	70	2.74	.61	29	
Funks G-4949	70.5	1	10	3.6	1.2	14.9	.97	76	2.29	.73	30	
Funks G-5945	68.9	1	10	3.8	1.2	15.1	.83	65	2.61	.66	73	
Pioneer 309B	68.6	1	19	3.4	1.2	14.4	1.05	79	2.97	.70	76	
Miss. 0002 (Exp)	67.8	1	23	4.2	1.3	14.6	.79	63	3.01	.55	32	
Funks G-732A	64.6	1	10	4.0	1.1	14.7	.99	76	2.20	.79	37	
McCurdy M306	63.7	0	16	4.3	1.2	15.6	.76	61	2.90	.61	33	
Dixie 18	61.3	1	23	4.6	1.1	15.8	.78	53	3.25	.51	20	
Coker 52	59.7	1	9	3.5	1.2	14.5	.59	55	2.64	.64	29	
MEAN	69.0	1	15	3.8	1.2	14.8	.86	68	2.76	.65	40	

1/ Inches from tip of ear. 2/Inches beyond tip of ear. 3/ Diameter of silk channel at tip of ear. 4/ Pink Corn Worm.

MISSISSIPPI HYBRID CORN PERFORMANCE TESTS

Pedigree	Acre Yield Bu.	Lodging Root Stalk %	Ear Ht. Ft.	Ears		Moisture		Stand %	Earworm		Husk	
				Per Plant No.	In Grain %	Pene- tra- tion In.	Infest- ation %		Exten- sion In.	Tight- ness In.		
Miss. 6133 (Exp)	87.1	0	4.3	1.6	15.7	97	0.98	75	30	3.29	0.55	
Pioneer 3009	82.1	0	7	1.1	17.6	95	0.85	79	32	2.94	0.61	
McNair 440V	81.8	0	3.9	1.4	16.9	95	1.03	84	33	2.41	0.69	
Pioneer 511A	81.1	0	3.7	1.3	17.7	97	0.80	88	35	2.32	0.68	
Dixie 55	80.7	0	4.6	1.4	16.6	99	0.76	66	27	3.28	0.59	
Pioneer 3048	79.2	0	4.1	1.2	16.5	96	1.01	79	28	3.02	0.60	
Funks G-4949	78.6	0	3.9	1.3	16.5	97	0.93	87	30	2.81	0.63	
Funks G-5945	77.0	1	7	3.9	17.7	96	1.05	81	25	2.70	0.69	
Funks G-795 W-1	76.8	0	3.6	1.2	14.9	91	0.88	78	29	2.77	0.62	
Miss. 0002 (Exp)	76.4	1	16	4.4	16.6	97	1.05	80	32	3.24	0.56	
Coker S48	76.0	0	3.5	1.2	14.6	95	1.51	93	35	2.09	0.82	
McNair 6501	75.9	0	4.1	1.4	17.6	96	0.86	83	42	2.41	0.69	
Funks G-732A	75.8	0	3.9	1.2	16.8	97	1.10	88	37	2.47	0.75	
Taylor-Evans 6703 (Exp)	75.2	0	4.4	1.1	17.8	94	1.04	88	48	2.70	0.67	
Coker 912	74.2	0	3.8	1.2	17.1	95	0.88	77	30	2.25	0.72	
Pioneer 309C	73.1	0	3.6	1.1	14.9	97	1.40	91	37	1.79	0.96	
Funks G-4877	73.0	0	4.1	1.1	19.0	93	0.91	82	34	3.01	0.61	
Funks G-5940	70.8	0	4.0	1.1	16.5	97	0.75	74	28	3.12	0.61	
Taylor-Evans 6704 (Exp)	70.2	0	4.5	1.3	17.8	93	1.00	87	29	3.63	0.52	
Fla. 200A	68.3	1	10	4.3	15.2	95	1.05	78	33	3.13	0.54	
Coker 52	68.1	0	3.5	1.2	16.9	95	0.70	69	29	2.75	0.63	
Pioneer 309B	68.0	0	26	3.5	16.2	91	1.08	84	38	2.49	0.71	
McCurdy M306	67.4	0	10	4.3	18.2	96	1.05	77	33	3.04	0.58	
Dixie 18	67.3	0	15	4.8	18.4	96	0.94	67	20	3.48	0.52	
McCurdy M307	65.2	0	11	4.5	18.6	97	0.87	78	15	3.25	0.57	
Funks G-4761	63.4	0	3.2	1.0	15.6	93	0.94	83	34	2.01	0.80	
Mean	74.3	0	4.0	1.2	16.8	95	0.98	81	32	2.78	0.65	

L.S.D. (.05)

$\frac{1}{2}$ / Inches from tip of ear.
 $\frac{2}{4}$ / Pink Corn Worm

$\frac{3}{4}$ / Inches beyond tip of ear.
 $\frac{4}{4}$ / Diameter of silk channel at tip of ear.

Area 4

THREE-YEAR SUMMARY PERFORMANCE, 1965-67 (AREA 4)

Pedigree	Acre Yield Bu.	Lodging		Ears Per Plant No.	Moisture		Earworm		Husk	
		Root %	Stalk %		Ear Ht. Ft.	In Grain %	Pene- tration In.	Infest- ation %	Exten- sion In.	Tight- ness In.
McCurdy M306	63.2	14	20	1.3	16.3	3.9	0.79	72	2.91	0.65
Coker 71	62.9	18	15	1.3	16.5	3.5	0.48	63	2.86	0.63
Coker 67	62.7	13	23	1.3	16.7	3.5	0.50	61	2.84	0.69
Pioneer 3009	62.3	11	23	0.9	16.7	3.1	0.39	69	3.19	0.62
Dixie 18	61.7	5	27	1.1	16.5	3.9	0.58	69	2.69	0.69
Dixie 55	61.6	10	27	1.2	14.7	3.8	0.67	76	3.13	0.67
Coker 74	59.5	10	12	1.2	20.9	3.2	0.72	54	1.90	0.87
Funks G-740	58.8	9	32	1.1	16.3	3.7	0.59	72	2.84	0.67
Funks G-4949	57.1	16	10	1.1	16.9	3.4	1.30	86	1.48	1.09
Embro Jarvis 260	56.8	10	23	1.1	16.8	3.6	0.54	69	2.95	0.66
Coker 52	55.2	10	22	1.1	16.1	3.0	0.45	70	2.30	0.78
Coker 811A	52.3	10	21	1.2	17.8	3.3	0.42	65	2.97	0.65
Pioneer 3048	52.0	7	31	1.0	15.7	3.2	0.56	71	2.95	0.65
Mean	58.9	11	22	1.1	16.8	3.5	0.61	69	2.69	0.72

1/ Inches from tip of ear. 2/ Inches beyond tip of ear. 3/ Diameter of silk channel at tip of ear. 4/

MISSISSIPPI HYBRID CORN PERFORMANCE TESTS

AREA 4, RESULTS OF HYBRID TEST AT TYLERTOWN, 1967

Pedigree	Acre Yield Bu.	Lodging		Ear Ht. Ft.	Ears Per Plant No.	Moisture		Stand % %
		Root %	Stalk %			In Grain %	Plant %	
Coker 71	72.1	0	13	3.6	1.5	14.6	98	
Taylor-Evans 6704 (Exp)	72.0	1	32	4.1	1.0	16.8	99	
Pioneer 3009	71.0	0	43	3.3	0.9	14.7	94	
McCurdy M306	70.0	0	17	4.1	1.3	14.8	97	
Coker 74	68.9	0	13	3.3	1.2	15.8	94	
Dixie 18	66.3	0	21	4.6	1.1	15.3	101	
McCurdy M307	66.0	1	28	4.2	1.1	15.5	100	
Greenwood 471	65.9	0	25	3.4	1.2	15.2	97	
Miss. 6133 (Exp)	65.0	0	30	3.8	1.5	14.1	99	
Coker 67	64.1	0	21	3.6	1.3	13.8	97	
Embro 260	63.9	0	20	3.7	1.1	14.5	101	
Dixie 55	62.5	0	29	3.7	1.2	14.4	98	
Funks G-740	62.3	0	34	3.8	1.0	14.2	99	
Coker 811A	61.2	1	18	3.8	1.3	16.3	93	
Miss. 0002 (Exp)	60.7	0	18	3.6	1.2	14.2	98	
Funks G-4949	60.6	1	13	3.5	1.2	13.9	96	
Greenwood 61	59.3	0	15	3.5	1.2	15.0	96	
Taylor-Evans 6703 (Exp)	59.3	0	8	3.6	1.1	14.3	100	
Dixie 22	58.0	0	25	3.8	1.2	14.0	95	
Funks G-5945	57.4	0	27	3.3	1.2	14.1	96	
Coker 52	49.1	0	32	3.2	1.0	14.5	98	
Pioneer 3048	44.9	0	46	3.1	0.8	13.9	96	
Pioneer 3059	37.7	0	58	2.9	0.8	15.4	91	
McNair 440V	35.6	0	51	3.3	0.9	14.4	96	
Mean	60.6	0	27	3.6	1.1	14.7	97	

L.S.D. (.05)

C.V. = 15.2%