

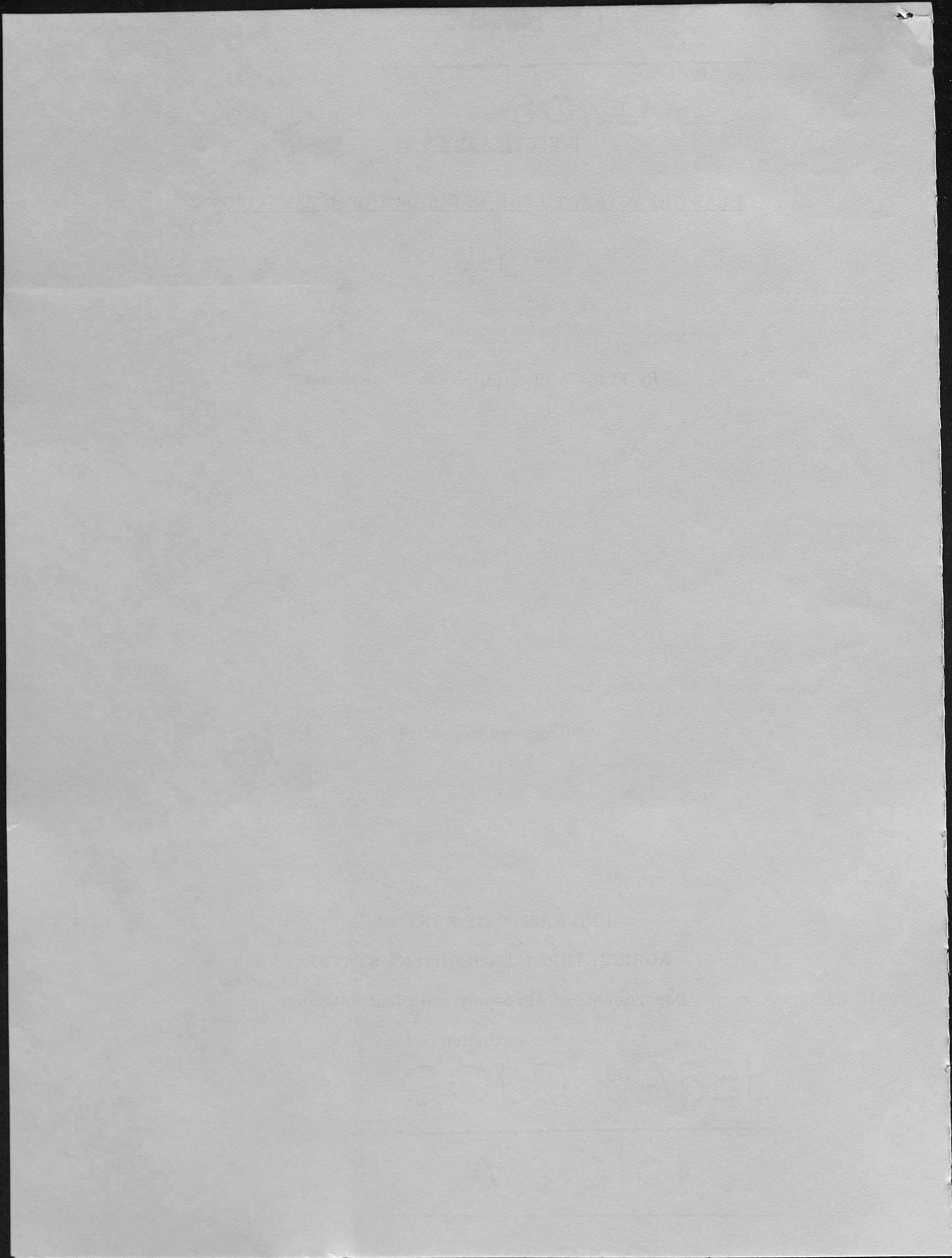
INVESTIGATIONS OF  
PLANT REACTION TO THE MAIZE DWARF MOSAIC VIRUS

1965

By Frank A. Loeffel and E. M. Johnson

Progress Report 160

UNIVERSITY OF KENTUCKY  
AGRICULTURAL EXPERIMENT STATION  
Departments of Agronomy and Plant Pathology  
Lexington





# INVESTIGATIONS OF PLANT REACTION TO THE MAIZE DWARF MOSAIC VIRUS - 1965

By Frank A. Loeffel and E. M. Johnson

Five groups of material were evaluated in 1965 for plant reaction to the maize dwarf mosaic virus (MDM) at three testing locations in Kentucky where the virus was present. Two of the locations, Augusta and Vanceburg, are in the Ohio river valley. The Frankfort location is in the Kentucky river valley. Severe disease conditions were present naturally at each evaluation site in 1965 as well as in the two previous years. Heavy infestations of Johnsongrass were present at each location. Visual symptoms of virus were evident in the Johnsongrass at Frankfort when the trials were planted and within two weeks of planting at Augusta and Vanceburg. The cooperating farmers, the fertilizer used, and the dates of planting, virus rating, and harvest were as follows:

Location	Cooperator	Fertilizer	Planting	Date	
				Virus Rating	Harvest
Augusta	George and Paul Gearhart	320# $\text{NH}_4\text{NO}_3$ 133# Superphosphate 133# Muriate of potash	5/17	8/19	10/16
Vanceburg	Alex Waters, Jr.	1000# 5-10-10	5/18	8/18	11/1
Frankfort	Mason and Ralph Bates	300# $\text{NH}_4\text{NO}_3$ 100# Muriate of potash	5/14	8/23	-----

Evaluation of MDM virus reaction was made on:

1. Commercial hybrids being compared in the Kentucky Hybrid Corn Performance test,
2. Experimental single- and double-cross hybrids from the University of Kentucky,
3. Commercial and experimental hybrids from industry,
4. A 10-line diallel of yellow single-cross hybrids, and
5. 144 inbred lines from state and federal sources.

The four groups of hybrids were compared in replicated trials in 2 x 5 hill plots at a population of 15,680 plants per acre. Data were recorded in respect to yield, root and stalk lodging, ear height, harvest moisture and harvest stand in addition to MDM virus ratings. The harvest stand of extremely susceptible hybrids tends to be low owing to the total disintegration of prematurely killed plants by harvest. Comparable stands were present at thinning. Only MDM virus ratings were recorded on the inbred line study which was grown at Vanceburg and Frankfort in two replications per location.

A scale of 1 to 9 was used in rating plants. A rating of 1 indicates no injury and a rating of 9 complete susceptibility. Ratings were taken on a plot basis.

The distribution of MDM virus in Kentucky as confirmed by mechanical transmission studies appears in Fig. 1. Samples of diseased corn having symptoms of virus injury, received by the Plant Diagnostic Laboratory, Department of Plant Pathology, from

corn producers and county extension agents, were the source for the mechanical transmission studies. All mechanical transmission tests on wheat were negative. No estimates of disease severity, extent of affected area in each county, or loss in production can be made.

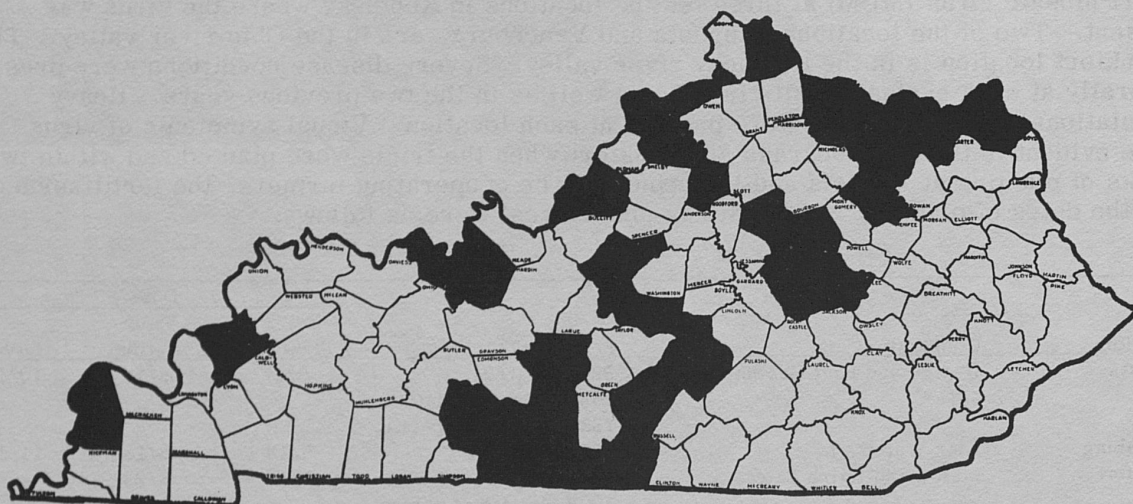


FIG. 1.--DISTRIBUTION OF MDM VIRUS IN KENTUCKY IN 1965, CONFIRMED BY MECHANICAL TRANSMISSION.

A summary of agronomic data recorded on commercial hybrids entered in the Kentucky Hybrid Corn Performance Test and evaluated under MDM virus conditions is in Table 1. The hybrids are ranked in order of increasing susceptibility within endosperm color groups. Data on experimental hybrids from the University of Kentucky and from industry are summarized in Tables 2 and 4. The pedigrees of the University of Kentucky experimental hybrids are listed in Table 3. The relationship of the MDM virus rating and the yield in pounds per acre in each of the seven replicated virus experiments is summarized in Table 5. A striking relationship exists between the MDM virus rating and yield. A similar relation exists between virus rating and standing ability.

Agronomic data from a diallel set of yellow single crosses is summarized in Tables 6, 7 and 8. With the exception of inbred Ky 36-11 a close relationship exists between the rating of inbred lines per se and in single cross combinations.

Average MDM virus ratings of inbred lines evaluated at Vanceburg and Frankfort, Ky., are summarized in Table 9.



Table 1. — Summary of Agronomic Data Recorded on Commercial Hybrids Compared Under Maize Dwarf Mosaic Conditions Near Augusta and Vanceburg, Kentucky in 1965

Entry Number	Hybrid	M. D. M. Virus Rating	Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Vance	Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
				Aug	Vance	Aug	Vance						
20	YELLOW												
49	Ky 105	1.6	4,777	2.2	1.0	5,063	4,491	14.0	7.0	4.0	22.9	89.2	
21	P. A. G. SX19	2.4	4,484	3.8	1.0	4,359	4,609	3.8	18.8	3.2	19.2	86.7	
3	Hagan H-9	2.9	4,105	2.8	3.0	4,465	3,745	3.1	24.2	3.0	21.2	80.8	
71	Pioneer 309A	2.9	3,806	3.4	2.3	3,886	3,725	15.0	13.3	3.3	23.8	97.1	
	Dekalb 1006	3.1	3,621	3.5	2.7	4,069	3,172	14.1	26.8	3.7	23.8	91.7	
12	Meacham M-33YB	3.5	3,664	3.0	4.0	3,981	3,346	7.7	21.6	3.0	21.6	80.8	
7	Pioneer X1001	3.9	3,543	3.5	4.3	4,202	2,883	0.5	34.7	2.0	19.0	90.0	
35	Pioneer 3306	4.2	2,795	3.9	4.4	3,321	2,268	7.5	62.0	2.7	20.0	88.7	
39	Princeton SX804	4.4	2,598	4.0	4.7	2,897	2,299	8.2	58.5	2.7	20.9	81.3	
65	S. S. 979	4.5	3,751	4.3	4.6	4,318	3,184	9.0	24.9	3.8	23.2	92.1	
41	S. S. Catawba	4.8	3,078	4.8	4.7	3,143	3,012	5.9	40.5	2.7	21.9	85.4	
33	Burgdorf B-846	5.0	2,963	4.9	5.0	3,046	2,879	11.0	46.1	2.8	21.5	79.6	
16	Princeton SX806	5.0	3,022	3.6	6.3	4,044	1,999	8.8	47.8	3.0	20.6	85.4	
60	P. A. G. SX59	5.2	2,993	3.9	6.4	3,783	2,203	0.0	35.5	2.8	21.0	91.7	
72	Stokes 200	5.3	2,563	5.5	5.0	2,782	2,344	8.5	56.1	2.8	22.1	88.3	
44	Crib Filler 116	5.4	2,451	5.5	5.3	2,305	2,596	3.4	42.5	2.5	20.2	74.6	
61	Pioneer 310	5.4	3,509	5.8	5.0	3,793	3,225	3.7	28.0	3.2	20.6	90.8	
70	Princeton 890-AA	5.4	2,284	4.4	6.3	3,077	1,491	0.5	51.7	2.3	19.8	87.9	
17	S. S. 909E	5.6	3,127	6.2	5.0	3,407	2,846	10.9	39.8	2.8	21.3	83.7	
26	P. A. G. SX29	5.7	2,375	5.3	6.0	2,519	2,230	0.0	22.4	2.3	19.0	87.5	
37	Pioneer 3366	5.7	3,437	5.6	5.7	4,030	2,844	3.7	42.0	2.3	19.0	91.2	
1	S. S. Matoaka	5.8	2,848	5.9	5.7	2,848	2,847	5.6	35.4	2.5	20.4	82.5	
45	Stull 101YB	6.0	2,499	5.7	6.3	2,861	2,136	5.2	51.0	2.8	21.2	80.8	
64	AES 809	6.1	2,137	5.4	6.7	2,637	1,636	3.8	41.0	2.5	20.0	87.5	
34	Dekalb XL-385	6.2	2,819	6.3	6.0	3,406	2,231	9.9	29.7	2.5	19.5	92.5	
4	Dixie's 99Y	6.2	1,860	6.4	6.0	1,921	1,799	10.9	65.6	2.5	23.3	80.0	
25	S. S. 860	6.5	2,495	6.2	6.7	2,874	2,116	4.3	20.1	2.5	21.1	87.1	
15	T-E E20YB	6.5	2,435	6.7	6.3	2,583	2,283	2.9	53.1	2.5	21.8	86.2	
6	Schenk S-73A	6.8	2,370	6.8	6.7	2,524	2,215	6.7	46.6	2.7	20.7	86.7	
22	T-E Cropmaster	7.0	1,675	6.9	7.0	1,737	1,612	9.8	56.0	2.8	20.9	76.7	

(continued)

Table 1 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating	Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodgings, %	Stalk Lodgings, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
				Aug	Vance	Aug	Vance					
46	P. A. G. SX63	7.1	1,836	6.1	8.0	2,873	798	0.0	87.1	2.0	20.7	87.5
27	Ken-Bred E20YA	7.4	1,537	7.7	7.0	1,940	1,134	2.0	70.2	2.5	21.8	82.5
59	Pioneer 321	7.4	1,946	7.4	7.3	2,639	1,253	4.2	57.1	2.3	22.5	88.3
48	Princeton 81A	7.5	1,546	8.0	7.0	1,853	1,238	3.0	56.0	2.2	20.1	83.3
58	Dekalb XL-65	7.6	1,945	7.5	7.6	2,364	1,525	1.4	62.1	2.7	21.4	91.2
66	Dekalb 824	7.6	1,377	7.5	7.6	1,419	1,334	6.3	49.8	2.2	18.7	85.4
54	Princeton 8-A	7.6	1,903	7.8	7.3	2,228	1,577	7.4	65.4	3.0	21.8	78.3
53	Schenk SS-88	7.6	1,583	8.2	7.0	1,500	1,666	7.0	71.4	2.5	20.3	82.9
62	T-E 6416	7.6	1,982	7.8	7.3	2,342	1,622	5.3	61.7	2.5	20.6	85.8
11	Crib Filler 78	7.7	1,558	7.6	7.7	2,303	812	1.3	74.9	2.5	20.5	92.9
19	S. S. 820S	7.7	1,504	7.6	7.7	1,800	1,208	1.5	67.8	2.7	20.2	84.2
2	Crib Filler 66	7.8	1,329	7.8	7.7	1,714	943	4.2	72.9	2.2	20.5	89.2
31	S. S. Munsee	7.8	1,832	7.8	7.7	2,065	1,598	1.9	65.9	2.3	22.3	87.9
32	Crib Filler 123	7.9	1,323	8.1	7.7	1,800	845	6.8	70.5	2.2	20.3	79.2
18	Dekalb XL-45	8.0	1,779	7.0	9.0	2,889	669	1.5	60.5	2.0	19.1	85.4
52	Meacham MX-30Y	8.1	1,573	8.2	8.0	2,041	1,104	4.0	73.4	2.0	19.4	82.9
68	Dekalb XL-362	8.2	1,079	7.6	8.7	1,633	524	5.3	77.0	2.0	18.9	77.9
38	Dekalb 805	8.2	921	8.3	8.0	1,157	684	6.1	78.6	2.3	20.2	81.7
10	Ken-Bred SX20Y	8.2	1,585	8.7	7.7	2,176	993	1.4	66.2	2.5	18.7	86.2
29	Stull 100YB	8.2	1,503	8.4	8.0	2,178	828	1.0	60.9	2.3	18.7	84.2
69	Stull 807Y	8.3	1,321	8.3	8.3	1,770	871	3.8	75.2	2.5	20.7	87.5
51	Oliver BB-25	8.4	1,206	8.5	8.3	1,846	566	6.7	66.5	2.0	19.3	87.1
9	S. S. 755	8.4	1,749	8.7	8.0	2,418	1,079	0.0	73.2	2.0	18.6	82.5
	Yellow Average	6.2	2,377	6.2	6.2	2,770	1,984	5.3	51.1	2.6	20.7	85.6
	WHITE											
28	Pioneer 511	1.9	4,772	1.7	2.0	4,852	4,692	13.2	6.8	4.0	24.1	91.2
5	Stull 800W	2.0	4,448	1.2	2.7	4,800	4,095	9.3	6.7	3.5	22.5	93.8
24	Dekalb 999	2.3	4,307	1.2	3.4	4,493	4,121	3.5	13.9	3.0	22.5	96.2
30	Princeton 790-AA	2.7	3,589	2.7	2.6	3,773	3,405	6.2	15.3	2.5	21.2	87.1
67	Ky 5921W	2.8	4,074	2.9	2.7	4,021	4,127	1.4	31.7	2.8	21.7	90.8

(continued)



Table 1 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating		Acres Yield, Lb	M. D. M. Virus Rating		Acres Yield, Lb		Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
		Rating	Rating		Aug	Vance	Aug	Vance					
13	Stull 444W	2.8	2.8	4,260	2.7	2.7	4,431	4,088	4.9	8.4	3.0	22.4	84.6
57	Princeton 920A	2.9	3.5	4,512	2.3	2.3	4,839	4,185	9.6	14.6	3.3	23.4	91.2
43	Princeton 990A	3.9	4.0	3,701	3.7	3.7	3,695	3,706	1.9	13.9	2.7	20.0	90.0
56	Crib Filler 183W	3.8	3.5	3,576	4.0	4.0	4,015	3,136	12.0	23.1	2.8	21.8	90.0
14	Ken-Bred M20W	4.1	2.9	3,772	5.3	5.3	4,085	3,459	6.4	33.5	3.0	20.5	90.8
36	Schenk S-96W	4.1	4.4	4,020	3.7	3.7	4,263	3,777	13.0	24.7	2.8	21.8	92.9
55	Pioneer 509	4.1	3.4	3,335	4.7	4.7	3,990	2,680	8.1	18.6	3.3	21.0	92.1
23	Burgdorf B-92-W	4.4	4.2	3,569	4.6	4.6	3,887	3,250	7.8	14.1	2.7	22.5	85.8
8	Hagan H-2	4.5	4.6	3,733	4.3	4.3	4,254	3,211	4.3	14.8	3.2	21.7	87.1
63	Kamp 910K	4.7	5.0	3,775	4.3	4.3	4,046	3,503	7.4	33.6	2.8	21.6	95.4
50	Kamp 913 BRK	5.6	5.5	3,038	5.6	5.6	3,035	3,040	5.4	22.2	3.2	22.5	92.1
42	Meacham MX-50W	6.7	5.7	1,811	7.7	7.7	2,162	1,459	4.9	49.2	2.8	22.6	76.2
40	Meacham M-5	6.9	7.1	1,974	6.7	6.7	2,395	1,553	6.9	69.7	3.0	19.8	78.3
47	U. S. 523W	8.5	7.9	1,000	9.0	9.0	1,769	231	0.5	57.1	2.2	21.1	81.7
	White Average	4.1	3.9	3,540	4.3	4.3	3,832	3,248	6.7	24.8	3.0	21.8	88.8
	GRAND AVERAGE	5.6	5.6	2,684	5.7	5.7	3,050	2,317	5.7	44.2	2.7	21.0	86.5
	L. S. D. .05		1.7		1.5	1.5	1,148	679					

Table 2. — Summary of Agronomic Data Recorded on Kentucky Experimental Hybrids Compared Under Maize Dwarf Mosaic Conditions Near Augusta and Vanceburg, Kentucky in 1965

Entry Number	Hybrid	M. D. M. Virus Rating		Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
		Aug	1.3		Aug	1.4	Aug	Vance					
	YELLOW												
01	Ky 105	1.3	1.3	4,691	1.4	1.4	4,851	4,531	9.3	4.0	3.8	24.2	93.8
49	Ky 6507	1.3	1.3	5,925	1.1	1.4	6,546	5,303	3.9	5.2	3.8	22.7	96.2
43	Ky 6501	1.5	1.5	4,465	1.5	1.4	4,790	4,139	5.3	10.0	3.8	22.6	87.1
46	Ky 6504	1.6	1.6	5,139	2.0	1.1	5,202	5,076	5.0	8.2	3.3	20.7	91.7
45	Ky 6503	2.0	2.0	4,429	1.7	2.3	4,681	4,177	7.0	16.4	3.7	21.6	88.7
47	Ky 6505	2.0	2.0	4,235	2.1	1.9	5,145	3,324	18.1	23.3	3.2	20.3	89.6
44	Ky 6502	2.3	2.3	4,197	2.5	2.1	4,582	3,812	5.7	19.6	3.3	22.7	95.8
48	Ky 6506	2.8	2.8	4,260	3.8	1.8	4,412	4,108	13.0	10.8	3.3	20.5	92.9
11	Ky 6314	2.9	2.9	3,725	2.1	3.7	3,974	3,476	20.6	12.4	3.2	21.9	90.8
06	Ky 5933	3.4	3.4	3,743	2.3	4.4	4,027	3,458	5.8	9.4	3.8	23.6	92.9
14	Ky 6321	3.6	3.6	3,280	3.8	3.3	3,354	3,206	4.0	30.0	3.2	21.2	92.9
13	Ky 6319	3.9	3.9	3,068	4.0	4.7	3,148	2,988	1.6	13.7	3.2	19.7	79.2
52	Ky 6510	4.9	4.9	3,350	4.0	5.7	3,801	2,898	10.4	31.6	3.3	23.3	96.2
12	Ky 6316	5.0	5.0	3,663	5.4	4.6	3,907	3,419	6.3	14.4	3.2	22.1	92.5
15	Ky 6323	5.2	5.2	2,918	4.1	6.3	3,070	2,765	6.9	24.7	3.2	21.2	96.2
16	Ky 6326	5.8	5.8	2,892	5.8	5.7	3,482	2,302	4.6	37.5	3.2	22.1	90.0
05	Ky 5924	5.8	5.8	2,705	5.2	6.3	3,136	2,273	2.8	28.7	3.3	22.0	90.0
54	Ky 6512	6.0	6.0	3,037	5.6	6.3	3,671	2,402	5.2	35.4	3.0	21.7	95.4
04	Ky 5708R	6.1	6.1	2,999	5.2	7.0	3,187	2,810	10.5	23.6	3.0	21.7	95.4
50	Ky 6508	6.2	6.2	3,435	5.8	6.6	4,456	2,414	6.5	40.7	3.2	21.6	89.2
09	Ky 6311	6.4	6.4	2,378	6.1	6.7	2,661	2,094	2.5	37.9	3.2	21.2	84.6
18	Ky 6335	6.4	6.4	3,207	6.0	6.7	3,858	2,555	7.8	45.2	2.7	21.7	90.4
51	Ky 6509	6.6	6.6	2,803	6.4	6.7	3,169	2,436	2.8	41.7	3.2	20.7	90.4
10	Ky 6313	6.8	6.8	2,395	6.9	6.6	2,760	2,030	2.6	31.9	2.7	21.5	95.4
08	Ky 6001	6.9	6.9	2,117	6.7	7.1	2,764	1,469	3.2	50.9	3.0	21.3	91.7
03	AES 809	7.0	7.0	2,709	6.3	7.6	3,254	2,163	2.4	40.2	2.7	18.8	87.1
53	Ky 6511	7.2	7.2	2,171	6.7	7.7	2,968	1,373	3.7	51.4	3.0	22.8	89.2
56	Ky 6514	7.2	7.2	1,993	6.3	8.1	2,975	1,010	1.4	64.3	2.8	20.7	87.5
20	Ky 6338	7.4	7.4	1,943	7.2	7.6	2,753	1,133	3.8	70.3	2.7	22.8	88.3
55	Ky 6513	7.5	7.5	2,399	7.3	7.6	3,167	1,630	0.4	55.7	3.0	22.6	95.0

(continued)



Table 2 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating		Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodgings, %	Stalk Lodgings, %	Ear Ht., Ft	Harvest Moist, %	Stand, %
		Rating	Vance		Aug	Vance	Aug	Vance					
17	Ky 6334	7.6	7.7	2,075	7.4	7.4	2,207	1,943	3.2	68.9	2.8	22.5	91.2
07	US 13	7.7	7.3	1,811	8.0	8.0	2,345	1,276	5.2	34.0	2.3	21.5	88.3
19	Ky 6337	7.9	8.0	2,255	7.8	7.8	2,885	1,624	1.8	63.6	2.3	22.5	90.4
02	AES 805	8.0	8.0	1,938	8.0	8.0	2,435	1,440	4.1	60.8	2.5	20.2	90.4
21	B37 x C103	8.1	8.0	1,753	8.1	8.1	2,533	972	0.4	72.3	2.2	20.6	93.3
	Yellow Average	5.2	5.0	3,145	5.4	5.4	3,604	2,687	5.7	34.0	3.1	21.7	91.1
	WHITE												
22	Ky216 x CI66	1.2	1.1	4,558	1.3	1.3	4,864	4,252	0.0	3.6	3.0	24.6	92.5
23	CI64 x CI66	1.8	1.3	4,664	2.2	2.2	5,161	4,167	1.3	5.4	3.0	22.6	99.6
37	Ky 5921W	3.7	3.4	3,562	3.9	3.9	3,939	3,184	10.2	9.3	3.2	23.0	90.0
42	Ky 6126W	4.8	4.1	3,412	5.4	5.4	3,603	3,221	3.6	11.3	3.2	23.4	92.5
31	Ky 203	5.2	3.7	2,828	6.6	6.6	3,165	2,491	5.1	31.3	3.7	22.8	89.2
39	Ky 6013W	5.3	5.3	3,403	5.2	5.2	3,602	3,204	0.9	22.0	3.0	22.8	96.7
30	Ky 6306W	6.3	6.1	2,378	6.4	6.4	2,837	1,919	5.3	64.3	2.7	20.7	86.2
41	Ky 6124W	6.5	5.9	2,267	7.0	7.0	2,120	2,413	1.8	34.7	2.7	23.2	91.2
29	Ky 6303W	6.5	5.2	2,019	7.7	7.7	2,636	1,401	2.4	68.6	2.5	21.5	86.2
36	Ky 5905W	6.7	6.2	2,508	7.2	7.2	2,858	2,158	7.9	22.8	2.8	21.6	89.6
33	Ky 205W	6.9	6.0	2,166	7.8	7.8	2,563	1,769	3.2	45.7	2.3	20.8	91.2
40	Ky 6101W	6.9	6.4	1,908	7.3	7.3	2,226	1,590	2.3	56.5	2.8	22.0	90.0
34	Ky 5901W	7.0	6.3	2,494	7.7	7.7	2,873	2,114	2.4	60.2	2.7	21.8	87.9
28	Ky 211 x Ky 216	7.0	7.3	2,588	6.6	6.6	3,137	2,038	1.7	51.5	2.7	21.1	98.7
24	CI 64 x Ky 201	7.2	7.1	3,149	7.3	7.3	3,287	3,011	2.3	46.7	3.0	20.6	89.2
32	Ky 204	7.5	7.1	2,774	7.8	7.8	3,315	2,232	3.8	41.1	3.0	20.4	87.1
35	Ky 5902W	7.9	7.8	1,798	8.0	8.0	2,151	1,444	1.4	69.1	2.8	21.0	91.7
27	Ky 211 x Ky 61-2331W	8.2	7.9	1,001	8.5	8.5	1,368	633	0.0	82.4	2.3	20.0	85.4
38	US 523W	8.6	8.3	726	8.9	8.9	892	560	0.0	84.1	2.3	19.9	89.2
26	Ky 211 x F 163	8.7	8.3	797	9.0	9.0	1,342	252	0.0	76.2	2.3	19.3	89.2
25	Ky 211 x Ky 62-2488	8.8	8.6	491	9.0	9.0	682	299	0.0	84.9	2.3	18.0	88.3
	White Average	6.3	5.9	2,452	6.7	6.7	2,791	2,112	2.6	46.3	2.8	21.5	90.6
	GRAND AVERAGE	5.6	5.3	2,886	5.9	5.9	3,300	2,471	4.6	38.3	3.0	21.6	90.6
	L. S. D. .05		1.7		1.4	1.4	974	656					

Table 3. — Pedigrees of Experimental Hybrids from the University of Kentucky

Hybrid	Pedigree	Hybrid	Pedigree
YELLOW			
AES 805	(WF9 x 38-11) (C103 x Oh45)	Ky 6510	(H49 x B37) (Ky57-565 x Ky57-573)
AES 809	(WF9 x P8) (Oh43 x C103)	Ky 6511	(H49 x B37) (K57-565 x C103)
Ky 105	(T8 x CI21E) (38-11 x Oh7B)	Ky 6512	(H49 x B37) (Ky57-573 x C103)
Ky 5708R	(H49 x CI38B) (C103 x CI21E)	Ky 6513	(H49 x B37) (Ky57-610 x C103)
Ky 5924	(H49 x CI38B) (C103 x Ky36-11)	Ky 6514	(H49 x B37) (CI21E x C103)
Ky 5933	(T8 x CI21E) (CI38B x C103)	US 13	(WF9 x 38-11) (Hy x L317)
Ky 6001	(WF9 x Ky36-11) (C103 x B14)		B37 x C103
Ky 6311	(H49 x CI38B) (C103 x Ky59-361.3)	WHITE	
Ky 6313	(H49 x CI38B) (Ky59-361.7 x C103)	Ky 203	(Ky 27 x Ky122) (33-16 x Ky49)
Ky 6314	(H49 x CI38B) (Ky57-565 x Ky57-573)	Ky 204	(K64 x 33-16) (K55 x Ky201)
Ky 6316	(H49 x CI38B) (Ky57-565 x C103)	Ky 205W	(Ky211 x 33-16) (Ky209 x H21)
Ky 6319	(H49 x CI38B) (Ky57-573 x Ky57-610)	Ky 5901W	(Ky211 tms x 33-16) (K55 x CI64)
Ky 6321	(H49 x CI38B) (Ky57-573 x C103)	Ky 5902W	(Ky211 tms x 33-16) (K55 x K64)
Ky 6323	(H49 x CI38B) (Ky57-593 x C103)	Ky 5905W	(K55 x CI64) (Ky201 x CI49B)
Ky 6326	(H49 x CI38B) (Ky57-610 x C103)	Ky 5921W	(CI64 x 33-16) (CI66 x Ky201)
Ky 6334	(H49 tms x B37) (Ky36-11 x CmsTC103RFRF)	Ky 6013W	(K55 x CI64) (Ky216 x Ky217)
Ky 6335	(H49 tms x B37) (Ky57-573 x CmsTC103RFRF)	Ky 6101W	(Ky211 x Ky217) (K55 x CI64)
Ky 6337	(H49 tms x B37) (Ky59-361.3 x CmsTC103RFRF)	Ky 6124W	(Ky211 tms x CI49B) (Ky57-254 x Ky230)
Ky 6338	(H49 tms x B37) (Ky59-361.7 x CmsTC103RFRF)	Ky 6126W	(Ky211 tms x CI49B) (CI66 x Ky201)
Ky 6501	(H49 x CI21E) (Oh7A x Oh7B)	Ky 6303W	(Ky211 x Ky217) (F163 x Ky57-281)
Ky 6502	(H49 x B37) (Oh7A x Oh7B)	Ky 6306W	(Ky211 x Ky217) (Ky57-253 x Ky57-281)
Ky 6503	(H49 x C103) (Oh7A x Oh7B)	US 523W	(K55 x K64) (Ky27 x Ky49)
Ky 6504	H49 x (Oh7A x Oh7B)		Ky216 x CI66
Ky 6505	B37 x (Oh7A x Oh7B)		CI64 x CI66
Ky 6506	C103 x (Oh7A x Oh7B)		CI64 x Ky201
Ky 6507	CI21E x (Oh7A x Oh7B)		Ky211 x Ky62-2488
Ky 6508	(H49 x B37) (C103 x Va35c)		Ky211 x F163
Ky 6509	(H49 x B37) (Ky36-11 x Va35c)		Ky211 x Ky225
			Ky211 x Ky216



Table 4. — Summary of Agronomic Data Recorded on Commercial and Experimental Hybrids from Industry Compared Under Maize Dwarf Mosaic Conditions Near Augusta and Vanceburg, Kentucky in 1965.

Entry Number	Hybrid	M. D. M. Virus Rating		Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
		Aug	1.0		Aug	1.0	Aug	1.0					
	YELLOW												
38	Hagan Exp. 1	1.0	1.0	5,490	1.0	1.0	6,267	4,712	21.1	5.0	3.5	22.4	90.8
4	Ky 105	1.2	1.2	4,988	1.0	1.2	5,424	4,552	20.4	7.7	3.7	22.2	92.1
17	Pioneer Ex-44182	1.2	1.1	5,940	1.3	1.1	6,316	5,563	6.6	15.9	3.5	20.5	94.2
5	P-A-G Exp. 15020	1.3	1.6	5,583	1.0	1.6	5,949	5,216	12.2	7.0	3.5	20.6	95.8
50	Stull 98Y	1.3	1.2	4,679	1.3	1.2	5,031	4,327	23.3	2.8	3.3	21.7	89.6
49	Pioneer Ex-44185	1.5	1.8	5,354	1.3	1.8	5,791	4,916	4.7	5.6	3.7	22.0	96.7
59	N. K. Ped 10	1.7	2.3	4,839	1.0	2.3	5,224	4,453	29.1	1.8	3.8	24.0	94.6
12	N. K. Ped 3	1.8	2.7	3,900	1.0	2.7	4,083	3,716	10.1	11.1	2.5	22.2	90.4
57	N. K. Ped 9	1.8	2.6	3,301	1.0	2.6	3,901	2,702	3.9	13.1	2.7	22.0	85.8
10	Pioneer Ex-44199	2.2	2.0	4,243	2.3	2.0	4,724	3,761	7.2	25.3	2.3	18.5	92.1
20	Pioneer Ex-44189	2.7	2.2	4,806	3.3	2.2	4,945	4,666	6.5	2.6	3.3	22.9	96.2
43	McNair 6440	3.0	3.6	3,401	2.3	3.6	3,869	2,932	9.4	13.9	4.0	24.3	92.9
47	Ken-Bred Exp. 2	3.2	2.7	3,494	3.7	2.7	3,700	3,287	8.1	19.5	2.8	22.4	87.5
37	Pioneer Ex-31806	3.7	4.4	3,818	3.0	4.4	4,583	3,053	6.5	19.5	2.8	22.4	89.6
33	Stull 100Y	3.8	4.9	3,847	2.7	4.9	4,570	3,125	0.4	14.0	2.7	20.8	95.4
61	Stull 111YA	4.2	4.7	2,464	3.7	4.7	3,375	1,552	13.1	22.9	3.8	25.0	72.9
19	McNair 6203	5.2	6.3	2,822	4.0	6.3	3,116	2,528	9.5	22.4	3.5	24.7	87.5
29	Dekalb XL-83	5.3	6.4	1,793	4.3	6.4	2,154	1,433	2.0	26.5	2.0	19.0	83.3
63	Hagan Exp. 2	5.3	5.1	3,748	5.3	5.1	4,164	3,332	11.5	38.7	2.8	21.8	90.4
22	P-A-G 434	5.3	6.0	3,607	6.0	4.7	4,186	3,028	5.5	18.2	3.2	20.9	91.7
2	N. K. Ped 1	5.5	7.3	2,854	3.7	7.3	4,210	1,498	3.7	27.1	2.5	22.7	90.8
44	Schenk S87A	5.7	5.9	2,878	5.3	5.9	3,235	2,521	6.2	40.4	2.7	22.8	93.8
46	Dixie's 98Y	5.8	5.7	2,722	5.7	5.9	3,325	2,118	4.2	29.3	3.0	20.8	79.6
53	Ken-Bred Exp. 4	5.8	6.0	2,236	5.6	6.0	2,789	1,683	6.1	42.1	2.2	20.2	82.1
1	P-A-G 14674	5.8	5.7	3,396	5.7	5.8	3,944	2,847	2.7	34.7	2.5	20.2	93.8
35	Burgdorf Exp. 1	6.2	6.0	2,783	6.0	6.4	3,263	2,304	3.1	36.1	2.5	21.0	80.8
16	Burgdorf Exp. 5	6.2	6.0	2,463	6.0	6.4	2,828	2,097	5.2	35.2	2.5	20.9	87.5
9	McNair 304A	6.2	5.3	2,226	5.3	7.1	3,079	1,372	14.2	16.6	3.2	25.2	87.9
8	P-A-G 444	6.2	6.0	2,767	6.0	6.3	3,063	2,472	4.2	36.4	2.8	22.1	89.6
27	Crib Filler 75	6.3	6.0	2,261	6.0	6.7	2,742	1,780	16.6	46.4	2.7	21.0	87.9

(continued)

Table 4 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating		Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
		Aug	Vance		Aug	Vance	Aug	Vance					
25	S. S. Exp. 4	6.3		3,301	7.0	5.8	3,971	2,631	7.8	24.7	2.5	22.2	91.2
48	Dixie's 97Y	6.8		2,144	7.0	6.5	2,607	1,680	1.0	49.2	2.2	20.4	80.4
51	N. K. Ped 6	6.8		1,653	6.0	7.7	2,492	813	1.4	57.9	2.0	23.1	87.1
15	S. S. Exp. 2	7.0		2,634	6.7	7.4	3,360	1,908	4.2	40.4	3.0	21.0	88.7
31	S. S. Exp. 3	7.0		2,500	7.0	7.0	3,028	1,972	6.0	37.5	2.0	19.7	83.3
54	Dekalb Ex. 3058	7.2		1,545	6.7	7.8	1,854	1,235	2.0	65.8	2.3	20.6	84.2
28	Dekalb Ex. 8553	7.2		2,412	6.7	7.7	2,980	1,844	3.4	43.4	2.2	20.4	85.4
42	S. S. Exp. 1	7.2		2,133	7.0	7.3	2,727	1,539	6.3	66.3	2.8	22.1	85.4
56	Schenk S-56	7.2		1,844	7.3	7.0	1,990	1,698	5.0	57.3	2.3	20.6	82.9
52	Princeton S8	7.3		2,103	7.3	7.3	2,375	1,830	2.5	62.8	2.0	22.3	82.9
62	Dekalb Ex. 8551	7.7		1,896	8.0	7.4	2,177	1,615	4.3	64.3	1.8	23.4	86.2
58	Schenk S-73	7.7		1,884	7.7	7.5	2,278	1,489	0.0	57.9	2.2	19.9	81.3
6	Schenk SS-77	7.7		1,792	7.7	7.7	2,602	983	2.7	69.5	2.3	20.9	91.7
13	Crib Filler 131	7.8		2,093	8.0	7.9	2,335	1,850	5.9	19.8	2.5	20.9	84.2
36	Ken-Bred Exp. 3	7.8		1,341	8.0	7.5	1,279	1,403	1.0	76.7	2.0	20.2	80.4
23	S. S. Exp. 5	7.8		1,391	7.7	8.1	2,024	759	2.8	59.7	1.8	20.0	87.9
18	McNair X200	8.0		1,049	7.7	8.4	1,516	581	3.0	72.0	2.0	20.4	68.3
40	Crib Filler 70B	8.2		1,450	8.3	8.0	1,873	1,026	1.0	59.5	2.2	21.0	81.3
30	Oh43 x Ky36-11	8.3		1,121	8.0	8.6	1,774	468	0.0	87.0	2.3	20.5	73.7
34	Dekalb Ex-8529	8.5		814	8.7	8.1	1,195	433	0.6	78.5	2.2	19.0	73.7
26	Princeton W10	8.5		1,345	8.3	8.5	1,886	803	0.0	49.2	2.0	19.5	78.7
	Yellow Average	5.4		2,885	5.2	5.6	3,376	2,395	6.6	36.0	2.7	21.5	86.7
	WHITE												
45	Princeton D38	2.5		4,211	1.3	3.7	4,854	3,568	9.3	8.4	3.5	23.3	94.6
11	T-E Whitemaster	2.7		3,502	2.7	2.6	3,450	3,553	19.1	18.7	3.3	23.8	87.1
21	Stull 500 WB	3.5		4,035	2.3	4.8	4,323	3,747	8.8	8.3	3.0	23.1	95.0
7	Ken-Bred Exp. 1	3.7		3,466	2.7	4.6	3,980	2,952	4.7	18.9	2.8	22.4	88.3
60	P-A-C Exp. 15444W	3.7		3,434	2.7	4.5	4,469	2,399	8.6	9.0	3.2	22.7	87.5

(continued)



Table 4 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating		Acre Yield, Lb	M. D. M. Virus Rating		Acre Yield, Lb		Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Harvest Moist, %	Stand, %
		Virus Rating	Aug		Virus Rating	Aug	Aug	Vance					
55	Princeton D35	4.0	3.0	3,862	5.0	4,062	3,661	5.0	10.1	2.7	20.9	90.8	
39	Princeton D37	4.3	4.0	3,633	4.7	3,751	3,515	12.7	8.6	2.7	22.4	91.7	
32	Burgdorf Exp. 4	5.0	4.7	3,319	5.4	3,778	2,859	7.6	13.7	2.8	21.8	87.9	
41	Burgdorf Exp. 3	5.3	5.0	3,734	5.6	4,242	3,225	3.2	14.8	3.0	21.7	90.0	
3	Burgdorf Exp. 2	5.7	5.3	3,020	6.0	2,875	3,164	6.3	22.0	2.8	23.3	92.9	
14	McNair 425	5.7	6.0	2,194	5.3	2,288	2,101	8.8	17.2	3.3	25.7	89.6	
24	K64 x Ky27	8.8	9.0	419	8.7	517	321	3.1	68.1	2.2	18.5	66.7	
	White Average	4.6	4.1	3,236	5.1	3,549	2,922	8.1	18.2	2.9	22.5	88.5	
	POPCORN												
70	P 410	3.2	2.0	1,971	4.4	2,453	1,489	5.4	54.6	2.2	16.9	77.1	
66	P 632	3.5	2.3	1,458	4.7	1,916	1,000	7.0	29.0	2.7	15.8	77.5	
65	P 605	4.2	3.0	1,931	5.4	2,009	1,852	12.2	22.5	2.7	16.1	88.7	
68	P 303	4.3	3.7	1,462	5.0	1,870	1,054	3.4	83.5	2.2	17.2	85.8	
67	P 406A	4.8	4.0	2,084	5.7	2,485	1,683	11.7	15.4	3.0	15.6	89.2	
64	P 202	5.0	4.7	863	5.4	1,168	558	1.2	65.5	1.8	17.2	70.0	
69	P 213	5.0	4.7	1,532	5.5	1,867	1,197	8.8	53.4	2.3	17.0	85.0	
71	Ia 3595	5.8	5.3	795	6.3	1,246	343	0.0	60.3	2.3	15.1	74.6	
72	Ia pop 10	5.8	5.7	1,148	6.2	1,449	847	2.7	57.8	2.2	15.8	77.1	
	Popcorn Average	4.6	3.9	1,472	5.4	1,829	1,114	5.8	49.1	2.4	16.3	80.6	
	GRAND AVERAGE	5.2	4.9	2,767	5.5	3,211	2,323	6.8	34.7	2.7	21.0	86.2	
	L. S. D. .05		1.8		1.4	923	670						

Table 5. -- Summary of Yield Data from Hybrids Compared Under Maize Dwarf Mosaic Conditions Near Augusta and Vanceburg, Kentucky in 1965, Grouped by M. D. M. Rating Classes

Virus Rating Class	Yield, Pounds/Acre												N
	Commercial Hybrids		Yield, Pounds/Acre		Expt Hybrids, Univ of Ky		Expt Hybrids, Industry		S. C. Hybrids, Univ of Ky		Avg		
	Augusta	Vanceburg	Augusta	Vanceburg	Augusta	Vanceburg	Augusta	Vanceburg	Augusta	Vanceburg			
1.0 - 1.9	4,704	4,547	5,085	4,609	5,286	4,878	4,116	4,777	42				
2.0 - 2.9	4,346	3,948	4,474	3,909	4,200	3,730	4,099	4,077	48				
3.0 - 3.9	4,127	3,836	3,618	3,310	4,150	3,248	2,839	3,780	35				
4.0 - 4.9	3,601	2,979	3,618	3,259	3,203	2,890	2,946	3,214	40				
5.0 - 5.9	3,125	2,906	3,399	2,856	3,455	2,990	2,705	3,108	47				
6.0 - 6.9	2,738	1,994	2,990	2,290	2,766	2,218	2,638	2,514	74				
7.0 - 7.9	2,229	1,310	2,750	1,943	2,514	1,529	2,139	1,954	85				
8.0 - 8.9	1,814	795	1,753	1,081	1,792	627	1,943	1,389	50				
9.0	-----	482	-----	420	515	-----	-----	459	6				



Table 6. — Summary of Agronomic Data Recorded on a Yellow Diallel Set of Single-cross Hybrids Compared Under Maize Dwarf Mosaic Conditions Near Augusta, Kentucky in 1965

Entry Number	Hybrid	M. D. M. Virus Rating	Acre Yield, Lb	Harvest Moist, %	Root Lodging, %	Stalk Lodging, %	Ear Ht, Ft	Stand, %	Virus Rating, Missl/	M. D. M. Virus Rating, Frankfort
32	T8 x Oh07	2.3	4,883	23.8	7.0	9.1	3.5	81.3	1.2	3.8
12	T8 x CI38B	2.5	2,883	23.5	10.1	3.9	3.5	73.3	1.1	6.0
25	T8 x CI21E	1.5	4,568	24.9	20.0	5.7	3.8	79.5	1.0	6.5
4	T8 x Ky36-11	2.0	3,812	24.1	0.9	4.5	4.0	62.5	1.1	4.0
33	T8 x B14	1.3	3,604	22.9	5.1	4.3	3.8	66.5	1.2	6.3
19	T8 x H49	1.3	4,099	24.2	25.2	3.1	3.5	72.2	1.1	6.8
35	T8 x Ky134	1.5	3,777	24.2	12.8	6.4	3.0	61.9	1.1	6.5
34	T8 x B37	2.0	4,204	25.3	37.5	6.7	3.3	68.2	1.1	7.5
31	T8 x CI03	2.5	4,423	23.2	4.8	8.8	3.5	71.0	1.9	6.3
14	Oh07 x CI38B	2.3	4,517	20.9	7.4	5.0	3.3	68.8	1.1	3.8
27	Oh07 x CI21E	1.5	5,304	23.6	20.2	4.8	3.5	70.5	1.3	5.8
6	Oh07 x Ky36-11	1.3	4,491	22.3	0.0	6.5	3.3	60.8	1.0	4.0
40	Oh07 x B14	2.8	3,361	21.3	2.9	7.8	2.8	58.5	1.2	3.8
21	Oh07 x H49	2.8	4,778	21.8	4.6	2.8	3.0	61.4	1.4	4.5
42	Oh07 x Ky134	2.3	5,184	22.7	5.6	3.2	3.0	70.5	1.3	6.8
41	Oh07 x B37	2.5	4,472	19.5	15.3	18.5	2.8	70.5	1.7	7.5
36	Oh07 x CI03	1.3	4,805	21.5	1.9	8.7	3.0	59.1	1.7	6.3
11	CI38B x CI21E	2.0	4,577	22.7	29.8	9.6	3.8	59.1	1.2	6.0
1	CI38B x Ky36-11	1.5	2,640	23.5	4.5	15.3	2.5	63.1	1.0	6.5
15	CI38B x B14	3.0	2,746	20.6	0.0	16.4	2.5	65.9	1.3	6.0
10	CI38B x H49	3.8	3,532	21.0	6.8	4.3	2.8	66.5	1.3	6.0
17	CI38B x Ky134	2.5	3,259	22.0	5.2	77.1	3.0	54.5	1.6	7.8
16	CI38B x B37	1.3	3,729	21.2	7.1	1.9	3.0	88.1	1.6	7.5
13	CI38B x CI03	6.0	2,689	20.4	2.4	7.1	2.3	77.6	1.6	6.8
3	CI21E x Ky36-11	2.3	2,945	20.7	1.9	19.6	3.5	60.8	1.5	4.5
28	CI21C x B14	3.8	3,067	20.5	0.8	46.0	2.0	70.5	1.5	7.0
18	CI21E x H49	5.3	2,799	21.1	0.0	34.9	2.8	71.6	1.4	7.0
30	CI21E x Ky134	5.5	3,270	24.2	0.0	28.9	2.3	72.7	1.3	7.3
29	CI21E x B37	6.0	3,640	23.1	17.6	14.5	3.0	74.4	1.8	6.8
26	CI21E x CI03	6.5	3,194	23.3	4.2	25.8	2.8	68.2	1.4	7.0

(continued)

Table 6 (Continued)

Entry Number	Hybrid	M. D. M. Virus Rating	Acre Yield, Lb	Harvest Moist, %	Root Lodgings, %	Stalk Lodgings, %	Ear Ht, Ft	Stand, %	Virus Rating, Miss <sup>1</sup> /	M. D. M. Virus Rating, Frankfort
7	Ky36-11 x B14	3.3	1,999	22.6	2.0	70.3	2.5	57.4	1.5	8.0
2	Ky36-11 x H49	6.0	1,936	22.8	0.0	36.2	2.5	59.7	1.5	5.5
9	Ky36-11 x Ky134	6.8	1,537	23.2	0.0	47.7	2.3	46.9	1.8	6.8
8	Ky36-11 x B37	6.0	2,826	23.0	11.2	35.2	2.8	71.0	1.6	6.5
5	Ky36-11 x C103	7.8	1,661	21.9	0.0	33.7	2.5	57.4	1.5	5.3
22	B14 x H49	4.0	2,943	22.8	0.0	40.5	2.5	65.9	1.9	6.0
44	B14 x Ky134	5.5	2,048	23.7	3.8	43.3	2.3	59.1	2.0	7.5
43	B14 x B37	7.8	1,869	21.7	0.0	53.8	2.3	67.6	2.3	7.8
37	B14 x C103	7.0	2,211	20.0	0.0	40.3	2.5	76.1	1.9	7.0
24	H49 x Ky134	7.5	2,278	23.5	0.9	37.6	2.3	61.9	1.2	7.5
23	H49 x B37	7.5	2,573	21.4	0.0	40.8	2.5	55.7	1.6	7.8
20	H49 x C103	7.5	2,124	21.6	0.0	40.7	3.5	67.0	1.4	7.5
45	Ky134 x B37	7.8	2,262	22.9	1.0	44.8	2.8	59.7	1.9	7.8
39	Ky134 x C103	8.3	2,054	20.8	0.0	39.1	2.3	62.5	1.9	7.5
38	B37 x C103	8.3	1,832	21.5	3.7	48.1	2.5	61.4	1.5	7.5
	GRAND AVERAGE	4.1	3,276	22.4	6.6	22.6	2.9	65.8	1.5	6.4
	L. S. D. .05	1.8	1,096							

<sup>1</sup>/ Data obtained from C. O. Grogan, State College, Mississippi. Values are a weighted index of individual plant ratings taken on a scale of 1 to 5. 1, no symptoms; 5, more than  $\frac{1}{2}$  of stalk below the upper ear and all above the upper ear with symptoms.



Table 7. — M. D. M. Virus Ratings of a Diallel Set of Single-cross Hybrids Summarized by Parental Inbreds

Parent Inbred	M. D. M. Virus Rating									
	Oh 07	CI 38B	CI 21E	Ky 36-11	B 14	H 49	Ky 134	B 37	C 103	S. C. Ave.
T8	2.3	2.5	1.5	2.0	1.3	1.3	1.5	2.0	2.5	1.9
Oh07		2.3	1.5	1.3	2.8	2.8	2.3	2.5	1.3	2.1
CI38B			2.0	1.5	3.0	3.8	2.5	1.3	6.0	2.8
CI21E				2.3	3.8	5.3	5.5	6.0	6.5	3.8
Ky36-11					3.3	6.0	6.8	6.0	7.8	4.1
B14						4.0	5.5	7.8	7.0	4.3
H49							7.5	7.5	7.5	5.1
Ky134								7.8	8.3	5.3
B37									8.3	5.5
C103										6.1
Inbred										

Table 8. — Yield of a Diallel Set of Single-cross Hybrids Compared Under Virus Conditions and Summarized by Parental Inbreds

Parent Inbred	Yield Lb/Acre									
	Oh 07	CI 38B	CI 21E	Ky 36-11	B 14	H 49	Ky 134	B 37	C 103	S. C. Ave.
T8	4,883	2,883	4,568	3,812	3,604	4,099	3,777	4,204	4,423	4,028
Oh07		4,517	5,304	4,491	3,361	4,778	5,184	4,472	4,805	4,644
CI38B			4,577	2,640	2,746	3,532	3,259	3,729	2,689	3,397
CI21E				2,945	3,067	2,799	3,270	3,640	3,194	3,696
Ky36-11					1,999	1,936	1,537	2,826	1,661	2,650
B14						2,943	2,048	1,869	2,211	2,650
H49							2,278	2,573	2,124	3,007
Ky134								2,262	2,054	2,852
B37									1,832	3,070
C103										2,777
Inbred										

Table 9. -- Summary of M. D. M. Virus Ratings of Inbred Lines

Inbred	M. D. M. Virus Rating	Inbred	M. D. M. Virus Rating
Ky 221	1.0	CI 21E (Ky)	5.5
N 7B	1.5	Ky 108	5.8
Ky 997-3-2-2-1	1.7	T 101	5.8
Ky 997-4-1-3-1	1.8	Ky 997-16-2-2-2	5.8
Ky 997-10-1-1	2.0	Ky 4339-23R <sup>4</sup>	5.8
Ky 998-11-2-1	2.0	Ky 4339-88R <sup>4</sup>	5.8
Ky 5104-58R <sup>3</sup>	2.0	33-16 (Ky)	6.0
Ky 997-4-1-3-1	2.5	Ia 63:1261	6.0
Ky 226	2.5	Ky 39	6.0
Ky 128	2.7	Ky 217	6.0
Oh7B	2.8	Ky 59-3617	6.0
CI 44	3.0	K 41	6.0
Ky 122	3.3	Mo14W	6.0
Oh7B (Ky)	3.3	Miss T101	6.0
Ky 997-8-1-1	3.3	N 8A	6.0
Ky 1000-9-3-1-1	3.3	Oh05	6.0
T 8	3.5	R 217	6.0
Ky 4339-80R <sup>3</sup>	3.5	Ky 4339-94R <sup>4</sup>	6.0
Ky 4339-86R <sup>4</sup>	3.5	Ky 5104-82R <sup>4</sup>	6.0
Oh07	4.0	Ky 131	6.3
Oh7A	4.0	33-16	6.5
Ky 5104-96R <sup>4</sup>	4.0	A 305	6.5
CI 21E (Ky)	4.3	Hy	6.5
CI 38B	4.3	Ky 216	6.5
E 38-11-11-5	4.3	Ky 223	6.5
Ky 4339-91R <sup>4</sup>	4.3	Mo1W	6.5
Ky 57-254	4.7	Oh61:6210	6.5
T 115	4.8	Ky 5104-39R <sup>4</sup>	6.5
Va. 35 (Ky)	4.8	B 37	6.8
Ky 997-12-1-2-1	4.8	H 49	6.8
CI 21E	5.0	T 111	6.8
H 90	5.0	H 21	7.0
Mo14W (Ky)	5.0	Ky 36-11	7.0
Va. 36	5.0	Ky 209	7.0
B 14	5.3	Ky 229	7.0
CI 66	5.3	Ky 230	7.0
Ky 112	5.3	Pa 11	7.0
N 7A	5.3	C 103	7.3
P 8	5.3	CI 64	7.3
CI 21E (Ky)	5.5	Ia63:1255	7.3

(continued)



Table 9 (Continued)

Inbred	M. D. M. Virus Rating	Inbred	M. D. M. Virus Rating
Ky 21	7.3	Ky 57-565	8.0
Ky 219	7.3	L 317	8.0
Mp 488	7.3	N 8B	8.0
R 220	7.3	Oh45A	8.0
H 85	7.5	WF 9	8.0
Ky 49	7.5	A 308	8.3
Ky 225	7.5	B 37	8.3
Ky 132	7.5	Ky 62-2488	8.3
Oh64:5011	7.5	Oh43 (Ky)	8.3
R 218	7.5	Oh45B	8.3
Ky 4339-36R <sup>4</sup>	7.5	Ky 5104-89R <sup>4</sup>	8.3
A 312	7.7	B 41	8.5
H 86	7.7	K 64	8.5
Oh61:6186	7.7	Ky 120	8.5
38-11	7.8	Ky 129	8.5
Hy	7.8	Mp 486	8.5
Ky 110	7.8	Pa 32	8.5
Ky 130	7.8	Ky 211	8.7
Ky 59-3613	7.8	Ky 5104-36R <sup>4</sup>	8.7
Oh43	7.8	CI31A	8.8
Va. 31	7.8	K 55	8.8
Ky 5104-48R <sup>4</sup>	7.8	Ky 213	8.8
CI 31	8.0	A 188	9.0
CI 49B	8.0	Ky 27	9.0
EF9-24-8	8.0	Ky 218	9.0
F 163	8.0	Mo 5	9.0
H 55	8.0	Oh 29	9.0
Ky 30A	8.0	Oh 45	9.0
Ky 134	8.0	Ky 133	no germination
Ky 201	8.0	Ky 224	"
Ky 222	8.0	Ky 227	"
Ky 228	8.0	Va. 35	"