Report Number 164 December, 1957

1957 CORN VARIETY TESTS

TABLE OF CONTENTS

This report summarizes the results from the 1957 Corn Variety Yield Tests in Arizona. These summaries show the yield response of different varieties of corn when grown at Yuma, Mesa, and Safford. The suggestions given in this report are based primarily upon yield data. In using this report one should remember that local production costs and marketing conditions may change the corn growing suggestions for specific areas in Arizona.

Arizona Agricultural Experiment Station
University of Arizona
Tucson

1957

CORN VARIETY TESTS[1]

By A. D. Day[2]

During the 10-year period from 1945 to 1955, the annual corn crop planted in Arizona averaged 32,000 acres. Since 1954 there has been considerable interest in hybrid corn as a possible new crop for both silage and grain production. The corn acreage rose to 51,000 acres in 1955 and gradually decreased to 46,000 acres in 1956 and 41,000 acres in 1957.

There has been a steady increase in the average yield of corn in Arizona during the last four years. For example, the average yield per acre was 16 bushels in 1954, 25 bushels in 1955, 28 bushels in 1956, and 33 bushels in 1957.

A number of questions regarding corn production in the Southwest have arisen since 1954. The Arizona Agricultural Experiment Station has started a Corn Research Program in an effort to answer these questions. Although it is impossible to make sound recommendations from only one or two year's data, this report was prepared to offer suggestions for corn growing in Arizona until more definite information can be obtained.

The following agronomic suggestions for corn growing in Arizona are based primarily on the results from the 1955, 1956, and 1957 Corn Variety Tests. The results from the 1957 Corn Variety Tests are summarized in the tables at the end of this report.

WHAT CORN HYBRID SHOULD WE PLANT FOR SILAGE?

If we are interested in total tonnage per acre:

Turn to the summary tables at the end of this report. Observe the silage

1/ The author gratefully acknowledges the valuable assistance of the following personnel in conducting the 1957 Corn Variety Tests: D. C. Aepli and R. K. Thompson, Mesa Experiment Station, Mesa, Arizona; F. Pritchard and H. J. Czajkowski, Yuma Experiment Station, Yuma, Arizona; L. C. Chapman, Safford Experiment Station, Safford, Arizona; and G. D. Massey, Arizona Agricultural Experiment Station, Tucson, Arizona.

2/ Associate Agronomist, Department of Agronomy and Range Management, Arizona Agricultural Experiment Station, Tucson, Arizona.

yields obtained in the corn test grown nearest to your farm. Choose one of the highest silage-yielding varieties from that test.

If we are interested in Total Digestible Nutrients per acre:

Turn to the summary tables at the end of this report. Observe both the silage and grain yields obtained in the corn test grown nearest to your farm. Choose one of the corn varieties that yields high in both silage and grain production.

WHAT CORN HYBRID SHOULD WE PLANT FOR GRAIN?

Turn to the summary tables at the end of this report. Observe the grain yields obtained in the corn test grown nearest to your farm. Choose one of the highest grain yielding corn varieties from that test.

WHEN IS THE BEST TIME TO PLANT CORN FOR SILAGE?

Just as early in the spring as is possible, after the average date of the last killing frost for your area.

WHEN IS THE BEST TIME TO PLANT CORN FOR GRAIN?

Just as early in the spring as is possible, after the average date of the last killing frost for your area.

WHAT IS THE BEST RATE OF PLANTING CORN FOR SILAGE?

About a 6-inch spacing in 36-inch rows or 25,000-28,000 plants per acre.

WHAT IS THE BEST RATE OF PLANTING CORN FOR GRAIN?

About a 9-inch spacing in 36-inch rows or 18,000-19,000 plants per acre.

HOW SHOULD WE IRRIGATE OUR CORN?

Saturate the soil to a depth of 5 feet with a pre-planting irrigation. After planting, corn should never be allowed to stress for water. The last irrigation of corn for silage should be early enough to allow silage harvest during the

soft dough stage of kernel development. The last irrigation of corn for grain should be at the hard dough stage of kernel development.

HOW SHOULD WE FERTILIZE OUR CORN?

Nitrogen: 150-200 pounds of elemental nitrogen per acre.

Phosphorus: 50 pounds of P_2O_5 per acre in areas where corn responds to phosphorus fertilizer.

OTHER PUBLICATIONS ON CORN IN ARIZONA:

1. Day, A. D. 1955 corn variety tests. Arizona Agr. Exp. Sta. Report 127, 5 p. March, 1956.
2. Day, A. D. 1956 corn variety tests. Arizona Agr. Exp. Sta. Report 144, 13 p. December, 1956.

Table 1.

1957
HYBRID CORN YIELD TEST
YUMA EXPERIMENT STATION, YUMA, ARIZONA

CORN HYBRID OR VARIETY	AVERAGE YIELD OF SILAGE IN % OF MEXICAN JUNE*		
	DRY WEIGHT	GREEN WEIGHT	
	1957	1957	2-YR.AV.(1956-57)
	%	%	%
1. Funk G-29	10	10	31
2. Funk G-50	42	38	51
3. Funk G-91	23	22	43
4. Funk G-711	82	77	80
5. Funk G-740	78	74	82
6. Funk G-787W	51	48	-
7. Funk G-792W	64	64	76
8. Pfister 303	56	46	57
9. Pfister 347	55	52	62
10. Pfister 381	40	39	51
11. Pfister 383	50	50	60
12. Pfister 403	59	55	63
13. Pfister 484	56	60	69
14. Wisconsin 575	45	38	50
15. Wisconsin 642	48	44	56
16. Wisconsin 692	53	48	60
17. Wisconsin 641AA	44	38	49
18. DeKalb 1002	68	66	72
19. DeKalb 1050	67	62	71
20. DeKalb 1051	64	69	80
21. Pioneer 312A	31	31	52
22. Pioneer 9178	54	54	70
23. United 6	53	52	62
24. United 65A	29	31	52
25. Northrup King KR2	30	33	50
26. Northrup King K3A	53	51	61
27. Northrup King KS6	32	29	40
28. Northrup King KY4	37	38	46
29. Northrup King KY7	54	47	59
30. Texas 26	53	58	76
31. Texas 15W	84	81	86
32. Texas TRF-3	70	66	72
33. Texas 28	75	75	85
34. Dixie 18	60	59	-
35. Dixie 29	40	39	-
36. Dixie 82	73	73	-
37. Dixie 33	56	56	-
38. Mexican June	100	100	100
L. S. D. @ 5%	19	17	
Yield of Mexican June calculated in lbs./A.	23,144	63,712	54,812

* Plot size = 49.5 square feet = 0.00114 A.

Table 2.

1957
HYBRID CORN YIELD TEST
YUMA EXPERIMENT STATION, YUMA, ARIZONA

Planted 3-11-57 Harvested 7-16-57

CORN HYBRID OR VARIETY	AVERAGE YIELD OF GRAIN IN % OF MEXICAN JUNE*	
	1957	2-YR.AV. (1956-57)
	%	%
1. Funk G-29	22	60
2. Funk G-50	58	73
3. Funk G-91	65	88
4. Funk G-711	107	110
5. Funk G-740	50	66
6. Funk G-787W	86	-
7. Funk G-792-W	69	86
8. Pfister 303	119	119
9. Pfister 347	84	119
10. Pfister 381	87	108
11. Pfister 383	103	120
12. Pfister 403	106	113
13. Pfister 484	72	108
14. Wisconsin 575	101	112
15. Wisconsin 642	110	120
16. Wisconsin 692	93	112
17. Wisconsin 641AA	107	114
18. DeKalb 1002	136	138
19. DeKalb 1050	101	120
20. DeKalb 1051	137	141
21. Pioneer 312A	86	113
22. Pioneer 9178	104	130
23. United 6	80	80
24. United 65A	38	106
25. Northrup King KR2	71	99
26. Northrup King K3A	96	102
27. Northrup King KS6	65	83
28. Northrup King KY4	68	91
29. Northrup King KY7	93	102
30. Texas 26	91	110
31. Texas 15W	180	143
32. Texas TRF-3	135	140
33. Texas 28	168	153
34. Dixie 18	25	-
35. Dixie 29	110	-
36. Dixie 82	122	-
37. Dixie 33	92	-
38. Mexican June	100	100
L. S. D. @ 5%	47	
Yield of Mexican June calculated in lbs./A.	3080	3457

* Plot size = 49.5 square feet = 0.00114 A.
Grain yield adjusted to 10% moisture.

Table 3. HYBRID CORN YIELD TESTS

YUMA EXPERIMENT STATION, YUMA, ARIZONA

THE TEN HIGHEST SILAGE PRODUCING VARIETIES	
1957	2-YEAR AVERAGE (1956-57)
1. Mexican June	1. Mexican June
2. Texas 15W	2. Texas 15W
3. Funk G-711	3. Texas 28
4. Texas 28	4. Funk G-740
5. Funk G-740	5. Funk G-711
6. Dixie 82	6. DeKalb 1051
7. DeKalb 1051	7. Funk G-792W
8. Texas TRF-3	8. Texas 26
9. DeKalb 1002	9. Texas TRF-3
10. Funk G-792W	10. DeKalb 1002

Table 4. HYBRID CORN YIELD TESTS

YUMA EXPERIMENT STATION, YUMA, ARIZONA

THE TEN HIGHEST GRAIN PRODUCING VARIETIES	
1957	2-YEAR AVERAGE (1956-57)
1. Texas 15W	1. Texas 28
2. Texas 28	2. Texas 15W
3. DeKalb 1051	3. DeKalb 1051
4. DeKalb 1002	4. Texas TRF-3
5. Texas TRF-3	5. DeKalb 1002
6. Dixie 82	6. Pioneer 9178
7. Pfister 303	7. Wisconsin 642
8. Dixie 29	8. DeKalb 1050
9. Wisconsin 642	9. Pfister 383
10. Funk G-711	10. Pfister 303

Table 5.

1957
HYBRID CORN YIELD TEST
MESA EXPERIMENT STATION, MESA, ARIZONA

Planted 3-13-57 — Harvested 7-10-57

CORN HYBRID OR VARIETY	AVERAGE YIELD OF SILAGE IN % OF MEXICAN JUNE*		
	DRY WEIGHT	GREEN WEIGHT	
	1957	1957	3-YR.AV. (1955-57)
	%	%	%
1. Funk G-29	43	62	68
2. Funk G-50	49	66	74
3. Funk G-91	61	74	76
4. Funk G-711	89	84	89
5. Funk G-740	81	92	92
6. Funk G-787W	70	72	-
7. Funk G-792W	77	86	88
8. Pfister 303	47	52	65
9. Pfister 347	58	62	72
10. Pfister 381	61	62	68
11. Pfister 383	61	63	67
12. Pfister 403	52	62	72
13. Pfister 484	67	73	84
14. Wisconsin 575	49	46	62
15. Wisconsin 642	53	55	65
16. Wisconsin 692	62	61	68
17. Wisconsin 641AA	56	49	66
18. DeKalb 1002	75	72	87
19. DeKalb 1050	77	70	84
20. DeKalb 1051	73	82	90
21. Pioneer 312A	58	66	76
22. Pioneer 9178	78	78	84
23. United 6	54	70	78
24. United 65A	55	62	-
25. Northrup King KR2	50	51	63
26. Northrup King K3A	58	60	67
27. Northrup King KS6	39	43	58
28. Northrup King KY4	47	53	63
29. Northrup King KY7	57	59	68
30. Texas 26	59	82	90
31. Texas 15W	80	79	88
32. Texas TRF-3	59	65	79
33. Texas 28	81	80	-
34. Dixie 18	73	86	-
35. Dixie 29	71	73	-
36. Dixie 82	82	83	-
37. Dixie 33	65	78	-
38. Mexican June	100	100	100
L. S. D. @ 5%	10	10	
Yield of Mexican June calculated in lbs./A.	18,598	56,991	55,730

* Plot size = 36 square feet = 0.00083 A.

Table 6.

1957
HYBRID CORN YIELD TEST
MESA EXPERIMENT STATION, MESA, ARIZONA

Planted 3-13-57 Harvested 7-5-57

CORN HYBRID OR VARIETY	AVERAGE YIELD OF GRAIN IN % OF MEXICAN JUNE*	
	1957	3-YR.AV. (1955-57)
	%	%
1. Funk G-29	105	147
2. Funk G-50	89	143
3. Funk G-91	95	136
4. Funk G-711	131	123
5. Funk G-740	111	124
6. Funk G-787W	117	-
7. Funk G-792W	101	123
8. Pfister 303	122	143
9. Pfister 347	123	158
10. Pfister 381	113	163
11. Pfister 383	121	160
12. Pfister 403	135	167
13. Pfister 484	120	131
14. Wisconsin 575	101	133
15. Wisconsin 642	117	152
16. Wisconsin 692	122	149
17. Wisconsin 641AA	113	149
18. DeKalb 1002	147	146
19. DeKalb 1050	142	145
20. DeKalb 1051	138	156
21. Pioneer 312A	141	157
22. Pioneer 9178	140	153
23. United 6	129	142
24. United 65A	111	-
25. Northrup King KR2	114	145
26. Northrup King K3A	128	173
27. Northrup King KS6	105	143
28. Northrup King KY4	113	139
29. Northrup King KY7	118	147
30. Texas 26	146	167
31. Texas 15W	159	180
32. Texas TRF-3	132	153
33. Texas 28	148	-
34. Dixie 18	86	-
35. Dixie 29	104	-
36. Dixie 82	88	-
37. Dixie 33	88	-
38. Mexican June	100	100
L. S. D. @ 5%	20	
Yield of Mexican June calculated in lbs./A.	4598	3851

* Plot size = 36 square feet = 0.00083 A.
Grain yield adjusted to 10% moisture.

Table 7. HYBRID CORN YIELD TESTS

MESA EXPERIMENT STATION, MESA, ARIZONA

THE TEN HIGHEST SILAGE PRODUCING VARIETIES	
1957	3-YEAR AVERAGE (1955-57)
1. Mexican June	1. Mexican June
2. Funk G-740	2. Funk G-740
3. Funk G-792W	3. DeKalb 1051
4. Dixie 18	4. Texas 26
5. Funk G-711	5. Funk G-711
6. Dixie 82	6. Funk G-792W
7. DeKalb 1051	7. Texas 15W
8. Texas 26	8. DeKalb 1002
9. Texas 28	9. Pfister 484
10. Texas 15W	10. Pioneer 9178

Table 8. HYBRID CORN YIELD TESTS

MESA EXPERIMENT STATION, MESA, ARIZONA

THE TEN HIGHEST GRAIN PRODUCING VARIETIES	
1957	3-YEAR AVERAGE (1955-57)
1. Texas 15W	1. Texas 15W
2. Texas 28	2. Northrup King K3A
3. DeKalb 1002	3. Texas 26
4. Texas 26	4. Pfister 403
5. DeKalb 1050	5. Pfister 381
6. Pioneer 312A	6. Pfister 383
7. Pioneer 9178	7. Pfister 347
8. DeKalb 1051	8. Pioneer 312A
9. Pfister 403	9. DeKalb 1051
10. Texas TRF-3	10. Pioneer 9178

Table 9.

1957
HYBRID CORN YIELD TEST
SAFFORD EXPERIMENT STATION, SAFFORD, ARIZONA

Planted 6-3-57 Harvested 10-12-57

CORN HYBRID OR VARIETY	AVERAGE YIELD OF SILAGE IN % OF MEXICAN JUNE*		
	DRY WEIGHT	GREEN WEIGHT	
	1957	1957	3-YR. AV. (1955-57)
	%	%	%
1. Texas TRF-3	91	80	65
2. Texas 17W	81	71	73
3. Texas 26	72	65	70
4. Texas 28	75	67	72
5. Texas 30	85	89	79
6. Texas 32	58	59	70
7. Northrup King KR2	39	31	40
8. Northrup King K3A	48	42	50
9. Northrup King KY4	38	35	43
10. Northrup King KY7	59	51	58
11. Pioneer 300	84	70	62
12. Pioneer 309A	93	87	75
13. Pioneer 312A	68	69	71
14. Pioneer 329	70	65	68
15. Pioneer 352	59	47	50
16. Pioneer 9178	90	89	85
17. Pfister 347	68	62	59
18. Pfister 381	55	45	52
19. Pfister 383	67	50	55
20. Pfister 403	65	60	63
21. DeKalb 459	56	49	53
22. DeKalb 666	59	62	60
23. DeKalb 850	64	59	62
24. DeKalb 876	53	55	64
25. DeKalb 1002	82	75	79
26. DeKalb 1022	81	80	79
27. DeKalb 1051	87	80	77
28. Funk G-711	73	72	71
29. Funk G-740	82	82	86
30. Funk G-78W	82	85	87
31. Funk G-792W	64	66	73
32. Dixie 18	61	62	-
33. Dixie 33	50	48	-
34. Mexican June	100	100	100
L. S. D. @ 5%	21	16	
Yield of Mexican June calculated in lbs./A.	15,972	38,526	35,776

* Plot size = 45 square feet = 0.00103 A.

Table 10.

1957
HYBRID CORN YIELD TEST
SAFFORD EXPERIMENT STATION, SAFFORD, ARIZONA

Planted 6-3-57 Harvested 10-12-57

CORN HYBRID OR VARIETY	AVERAGE YIELD OF GRAIN IN % OF MEXICAN JUNE*	
	1957	3-YR. AV. (1955-57)
	%	%
1. Texas TRF-3	123	117
2. Texas 17W	133	136
3. Texas 26	126	133
4. Texas 28	139	146
5. Texas 30	107	119
6. Texas 32	122	112
7. Northrup King KR2	71	82
8. Northrup King K3A	70	82
9. Northrup King KY4	70	78
10. Northrup King KY7	72	101
11. Pioneer 300	92	92
12. Pioneer 309A	131	120
13. Pioneer 312A	125	119
14. Pioneer 329	113	128
15. Pioneer 352	71	87
16. Pioneer 9178	108	133
17. Pfister 347	130	114
18. Pfister 381	118	103
19. Pfister 383	101	119
20. Pfister 403	92	112
21. DeKalb 459	82	92
22. DeKalb 666	72	90
23. DeKalb 850	76	108
24. DeKalb 876	108	109
25. DeKalb 1002	85	136
26. DeKalb 1022	102	122
27. DeKalb 1051	102	100
28. Funk G-711	98	104
29. Funk G-740	85	88
30. Funk G-787W	115	110
31. Funk G-792W	95	94
32. Dixie 18	70	-
33. Dixie 33	95	-
34. Mexican June	100	100
L. S. D. @ 5%	21	
Yield of Mexican June calculated in lbs./A.	2526	2325

* Plot size = 45 Sq. Ft. = 0.00103 A.
Grain yield adjusted to 10% moisture.

Table 11. HYBRID CORN YIELD TESTS

SAFFORD EXPERIMENT STATION, SAFFORD, ARIZONA

THE TEN HIGHEST SILAGE PRODUCING VARIETIES	
1957	3-YEAR AVERAGE (1955-57)
1. Mexican June	1. Mexican June
2. Texas 30	2. Funk G-787W
3. Pioneer 9178	3. Funk G-740
4. Pioneer 309A	4. Pioneer 9178
5. Funk G-787W	5. Texas 30
6. Funk G-740	6. DeKalb 1022
7. Texas TRF-3	7. DeKalb 1002
8. DeKalb 1022	8. DeKalb 1051
9. DeKalb 1051	9. Pioneer 309-A
10. DeKalb 1002	10. Texas 17W

Table 12. HYBRID CORN YIELD TESTS

SAFFORD EXPERIMENT STATION, SAFFORD, ARIZONA

THE TEN HIGHEST GRAIN PRODUCING VARIETIES	
1957	3-YEAR AVERAGE (1955-57)
1. Texas 28	1. Texas 28
2. Texas 17W	2. Texas 17W
3. Pioneer 309A	3. DeKalb 1002
4. Pfister 347	4. Texas 26
5. Texas 26	5. Pioneer 9178
6. Pioneer 312A	6. Pioneer 329
7. Texas TRF-3	7. DeKalb 1022
8. Texas 32	8. Pioneer 309-A
9. Pfister 381	9. Texas 30
10. Funk G-787-W	10. Pfister 383