AGRICULTURAL EXPERIMENT STATION
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YIELD TRIALS WITH HYBRID FIELD CORN - 1941

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Corn yield trials and demonstrations are conducted each year by the Oregon Agricultural Experiment Station at Corvallis, and with the cooperation of the Extension Service in various other corn-growing areas of the state for the purpose of determining the best adapted strains of corn. The majority of strains now included in these trials are hybrids, since previous trials have proved adapted hybrids to be superior to open-pollinated varieties. A summary of results for the past five years and detailed results for the 1941 season are given in this report.

The excellent results being obtained by Oregon growers from the use of hybrid seed corn is indicated by the rapid shift from open-pollinated varieties to hybrids. Approximately 5 per cent of Oregon's corn acreage was planted to hybrid seed in 1939. The per cent increased to 16 in 1940 and to approximately 30 in 1941. This rapid increase in the percentage of corn land planted to hybrid seed indicates that growers are finding the hybrids to be superior in yield and other factors.

Yield Trials at Corvallis

Yield trials including large numbers of hybrids have been conducted at Corvallis since 1937. In all trials certain hybrids have exceeded the open-pollinated varieties commonly grown in this area in yield, lodging resistance and other characters. Seed of some hybrids found to be adapted in these trials is being produced by growers in the state and is being certified by the Oregon Extension Service.

Results Over a Period of Years

Average yields of varieties tested at Corvallis for two, three, four and five years are given in Table 1. Hybrids 525, 570 and 606 have ranked practically the same in grain yields for the past five years and have consistently yielded nine or more bushels per acre over the open-pollinated variety Minnesota 13. Hybrids 525 and 570 have proved to be practically the same in maturity under Willamette Valley conditions, while Hybrid 606 is a few days later and usually has a slightly higher moisture content.

Table 1.

Average yields in bushels per acre of varieties grown at Corvallis for two or more years.

A. Medium early varieties					B. Late varieties	
Variety	5-year ave.yield 1937-1941	4-year ave.yield 1938-1941	3-year ave.yield 1939-1941	2-year ave.yield 1940-1941	Variety	2-year ave.yield 1940-1941
Oregon 570	55.1	49.5	56.6	69.9	Ohio W 17	92.5
Wisconsin 606	54.5	51.5	60.2	77.2	Wisconsin 695	86.8
Oregon 525	52.4	50.2	57.6	72.5	Idahybrid 416	79.0
Wisconsin 455	53.5	47.5	54.6	68.9	Wisconsin 696	77.0
Wisconsin 355	47.2	41.5	47.0	58.9	Wisconsin 645	75.2
Minnesota 13	44.9	40.1	48.1	60.6	Reid National 110	74.5
Minhybrid 403	----	----	55.8	71.6	Idahybrid 544	74.0
Reid National 95	----	----	62.8	78.5	Wisconsin 625	72.0
Wisconsin 404	----	----	----	59.3	Ohio K 23	69.1
Weaver Yellow Dent	----	----	----	61.8		
Michigan 1218	----	----	----	64.3		
Golden Glow	----	----	----	62.3		

Results During 1941 Season

The early part of the 1941 season was generally favorable for corn and excellent growth was obtained in the trial plots. However, conditions during the fall were not favorable for maturity. Fall rains started during the latter part of August and early September. The heavy fall rains prevented early maturing varieties from drying out normally.

Differences in moisture content between early and late maturing hybrids were less than would be expected, particularly in the trials conducted on Chehalis soil. The early maturing hybrids stopped growing some time before harvest but did not dry out because of the wet weather. The later hybrids continued growth until harvest time as there were no killing frosts. The long growing season apparently favored the late hybrids on Chehalis soil, as a number of hybrids known to be too late in maturity to be safely recommended as grain types for Willamette Valley conditions were near the top in yields during the 1941 season.

Yield trials were conducted on two soil types at Corvallis during the 1941 season. One trial, designated in Tables 2 and 3 as East Farm, was on river bottom soil of the Chehalis series and followed alfalfa. The Granger Farm trial (Tables 2 and 3) was on Willamette soil and followed a crop of peas. Yields per acre were considerably higher on the more fertile river bottom soil. Grain moisture content was abnormally high in all plots due to seasonal conditions but was higher on Willamette than on Chehalis soil. Even the earliest maturing hybrids in the trial on Willamette soil were very immature at harvest time.

Data on early maturing hybrids are given in Table 2 and data on late maturing ones in Table 3. The hybrids included in these trials were divided into early and late maturity groups on the basis of the number of days from planting time to silking. In some cases, there is a difference of only a few days between hybrids listed in the early group and some of those listed in the late group. Those hybrids silking before July 31 or less than 82 days after planting were included in the early group, while those silking after August 1 or more than 82 days after planting were classed as late. It will be noted that some hybrids in the early group silked in 80 and 81 days while some of those in the late group silked in 83 and 84 days, indicating that there is little difference between such hybrids in maturity. The exact dividing point had to be chosen arbitrarily in dividing the hybrids into early and late groups and the grouping therefore has little value in border-line cases. However, the hybrids are grouped roughly into those early enough for Willamette Valley conditions and those too late in maturity.

The late maturing hybrids in general were higher yielding than the early ones on Chehalis but were not on Willamette soil. This may have been due to fertility conditions together with unusually heavy rainfall. All hybrids seemed to continue growth until harvest time on the Willamette soil, while only the late ones did so on Chehalis soil.

Table 2.

Yield per acre and other data on medium early maturing hybrids and varieties grown at Corvallis, Oregon - 1941

Hybrid	East Farm (Chehalis Soil) Yield-Bu. 15% moisture	East Farm (Chehalis Soil) Total % moisture	East Farm (Chehalis Soil) Days from planting to silking	Granger Farm (Willamette Soil) Yield-Bu. 15% moisture	Granger Farm (Willamette Soil) Total % moisture
1. Ohio 20	94.5	42.6	80	39.0	62
2. Wisconsin 606	93.9	43.1	80	35.7	64
3. Ohio M 15	92.4	42.6	81	31.2	60
4. Oregon 570	90.0	42.3	79	35.7	58
5. Minhybrid 405	88.8	47.4		----	--
6. Minhybrid 403	86.8	42.5	79	35.7	60
7. Oregon 525	85.2	42.6	77	39.3	60
8. Minhybrid 502	84.6	43.2		----	--
9. Reid National 95	84.0	40.9	79	35.3	57
10. Reid National 98	84.0	42.7	80	37.8	61
11. Reid National 104W	84.0	37.3	78	34.2	59
12. Wisconsin 455	81.6	40.2	75	34.3	60
13. Minhybrid 301	81.0	49.2	77	41.6	59
14. Wisconsin 645	81.0	46.0	79	31.7	66
15. Golden Glow	76.5	38.6	77	27.2	64
16. Sinclair Yellow Dent	75.6	46.4	80	32.3	64
17. Minnesota 13	74.4	41.7	79	29.1	61
18. Wisconsin 335	74.1	37.4	73	36.9	56
19. Minhybrid 701	74.1	41.1	75	29.4	54
20. Pickett Yellow Dent	73.5	42.1	78	32.1	62
21. Minhybrid 603	73.2	42.8		----	--
22. Wisconsin 410	72.9	36.9	73	32.1	56
23. Minhybrid 700	72.9	40.1	75	38.0	54
24. Minhybrid 600	72.9	38.6	77	37.0	55
25. Wisconsin 355	72.6	37.8	72	45.9	51
26. Minhybrid 601	72.0	38.7	78	35.0	54
27. Michigan 51B	72.0	36.8	72	36.8	54
28. Weaver Yellow Dent	71.9	45.0	81	24.6	69
29. Doerner Yellow Dent	70.5	46.8	77	31.4	66
30. Wisconsin 404	69.9	37.3	74	35.4	55
31. Michigan 52C	68.4	42.8	76	37.5	57
32. Oregon 525 (2nd generation seed)	67.5	43.7	79	27.5	64
33. Wisconsin 275	66.6	33.1	72	39.9	49
34. Wisconsin 279	66.6	33.3	72	18.6	50
35. Michigan 1218	65.1	44.8	75	41.7	53
Average	77.6	41.4	76.8	34.4	58.6

Table 3.

Yield per acre and other data on late maturing hybrids and varieties grown at Corvallis, Oregon - 1941

Hybrid	East Farm (Chehalis Soil)			Granger Farm (Willamette Soil)	
	Yield-Bu. 15% moisture	Total % moisture	Days from planting to silking	Yield-Bu. 15% moisture	Total % moisture
1. Iowa 939	104.1	42.2	86	34.2	67
2. Ohio 94	104.1	50.7	97	17.6	82
3. Ohio W17	102.9	47.6	88	33.6	67
4. Illinois 751	102.0	46.8	88	27.8	67
5. DeKalb 615	102.0	45.6	88	21.6	74
6. Idahybrid 416	101.4	44.2	83	32.0	66
7. Wisconsin 695	101.0	47.0	89	27.2	65
8. U.S. 65	99.9	44.1	90	30.8	66
9. Ohio 50	99.6	49.5	89	22.7	78
10. Wisconsin 702	98.4	50.6	90	24.8	75
11. DeKalb 404A	96.0	43.2	89	36.9	68
12. Ohio K35	95.1	45.9	84	34.4	64
13. DeKalb 240	93.6	44.3	87	38.0	62
14. Wisconsin 640	93.3	46.4	85	23.7	74
15. Wisconsin 703	92.4	46.7	86	26.7	74
16. Ohio 34	92.1	47.8	84	33.3	71
17. Idahybrid 425	92.1	49.9	86	24.6	74
18. Wisconsin 690	90.6	46.5	89	18.9	76
19. DeKalb 607	90.0	46.7	89	25.2	71
20. Wisconsin 696	87.0	44.1	85	33.6	64
21. Reid National 110	85.5	43.6	84	26.1	66
22. Wisconsin 625	83.4	42.0	83	28.7	61
23. Michigan 36B	82.5	39.9	88	29.6	58
24. Minhybrid 500	81.6	42.5	83	39.2	57
25. Reid National 134D	78.9	62.9	102	8.9	83
26. Ohio K23	77.1	49.4	84	34.1	62
27. Idahybrid 544	76.5	51.0	87	31.4	66
28. Reid National 105	74.4	45.5	83	34.8	60
Average	92.1	46.7	87.4	28.6	68.5

Yield Reduced by Planting Second Generation Hybrid Seed

Seed was saved from a field of commercial Hybrid 525 during the 1940 season and planted in comparison with first generation seed in the 1941 yield trials. The results are given in Table 4.

Table 4

Yield in bushels per acre of first and second generation seed of Oregon Hybrid 525

	Chehalis Soil	Willamette Soil	Average
1st generation seed	85.2	39.3	62.3
2nd generation seed	67.5	27.5	47.5
Decrease from 2nd generation seed:			
in bushels	17.7	11.8	14.8
in %	20.8	30.0	23.7

These data indicate emphatically the necessity for the purchase by growers of freshly crossed seed each season. These data as well as data from experiments by midwestern experiment stations show that reductions in yield of from 15 to 30 per cent may be expected from planting second generation hybrid seed.

County Yield Demonstrations

Yield demonstration plots were conducted by the county agents in the majority of corn-growing counties of the state during the 1941 season. Seed for the most of these trials was collected from growers and seed companies by the Oregon Agricultural Experiment Station and supplied to county agents. Data reported by the county agents are given below.

Willamette Valley Counties

Benton

County Agent W. S. Averill reports that approximately 70 per cent of the corn land in Benton county was planted to hybrid seed in 1941. Oregon 525 is the most popular hybrid in the county although the acreage of Oregon 570 is increasing.

Clackamas

County Agent J. J. Inskeep reports that 14,000 pounds of Hybrid 355 seed corn were sold in Clackamas county by two seed dealers. Some seed of this hybrid and others was also obtained in the county from other sources. Hybrid 355 is recommended for the major portion of the county although Hybrid 525 is preferred by growers in some areas. Hybrid 525 appears to be adapted to the better drained, warmer soils.

The Eureka Dent, an open-pollinated variety, continued to give excellent results as an early maturing type, although the yield was lower than that obtained from several hybrids. This variety is particularly good for early hogging down. One grower started hogging down a field of Eureka Dent on August 15, 1941.

Linn

Data obtained by County Club Agent O. E. Mikesell from corn demonstration plots in Linn county are given in Table 5.

Table 5.

Comparative grain and silage yields in Linn County corn demonstrations - 1941

Grain Yields				Silage Yields	
M. B. Harding Farm		Will Caldwell Farm		A. R. Forster Farm	
Pl. June 5, Harv. Nov. 28.		Pl. May 23, Harv. Nov. 17.		Pl. May 26, Harv. Oct. 14.	
Amity silt loam		Chehalis silty clay loam		Willamette silt loam	
Variety	Yield in Bu.	Variety	Yield in Bu.	Variety	Yld in Tons Dry Wt.
Oregon 525	60.4	Minhybrid 502	65.1	Wisconsin 606	6.7
Oregon 570	60.2	Minhybrid 603	58.2	DeKalb 607	6.5
Wisconsin 606	51.8	Oregon 570	55.5	DeKalb G39	6.5
Minhybrid 403	48.8	Oregon 525	54.4	Oregon 570	5.9
Wisconsin 404	38.2	Minhybrid 403	53.1	DeKalb 240	5.8
Falk's Golden Glow	36.4	Wisconsin 404	51.9	Oregon 525	5.6
Wisconsin 455	30.2	Minhybrid 405	49.2	Wisconsin 355	5.5
Minnesota 13	24.0	Wisconsin 355	48.4	Wisconsin 455	5.4
Weisner Golden Glow	22.8	Minnesota 13	39.9	DeKalb 404	5.2
		Golden Glow	37.5	Minhybrid 403	5.2
				DeKalb 606	4.8
				DeKalb 639	4.5
				Golden Glow	4.4
				Wisconsin 404	4.0
				Minnesota 13	3.8

Marion

Yield demonstrations were conducted in six locations in Marion county by Assistant County Agent W. G. Nibler. Data obtained and observations made are given below.

Table 6.

Data from corn yield demonstrations conducted in Marion County - 1941

Variety	Valley Soil										Average	
	(1) Seely		(2) Haslebacher		(3) Hunt		(4) Miller		(5) Duda			
	Yield	% Moist.	Yield	% Moist.	Yield	% Moist.	Yield	% Moist.	Yield	% Moist.	Yield	% Moist.
1. Wisconsin 606	62.6	38.6	57.0	48.6	78.9	40.0	----	----	45.9	58.6	61.1	46.4
2. Oregon 570	67.1	36.4	67.8	51.7	67.6	46.9	49.9	62.2	41.6	49.6	58.8	49.4
3. Wisconsin 355	53.2	36.6	----	----	62.6	43.4	49.1	51.7	46.5	47.1	52.8	44.7
4. Oregon 525	62.1	40.4	48.2	49.7	56.9	47.1	49.6	42.8	47.6	54.4	52.7	48.9
5. Wisconsin 455	58.2	35.6	51.8	46.9	64.3	46.5	48.2	51.1	38.2	55.9	52.1	47.2
6. Local varieties	43.4	35.2	51.7	49.1	----	----	53.6	49.0	----	----	47.2	44.4

Notes: (1) Ralph Seely Farm - Willamette silt loam of good fertility. Planted April 20. Harvested Oct. 15. Hybrids 570 and 606 appeared to be good silage types.

(2) Ed Haslebacher Farm - Planted after May 1st on Willamette silt loam. Corn rather immature.

(3) P. J. Hunt Farm - Planted April 20 on alfalfa sod. Excellent growth and all hybrids well matured.

(4) Val Miller Farm - Planted May 23 on well-drained Amity silt loam. Poor maturity. Hybrid 355 appeared most mature and was in good stage for filling silo. Looked like a good silage corn.

(5) Walter Duda Farm - Planted near middle of May on Willamette silt loam. All strains appeared too immature for cribbing.

Marion (continued)

General observations during the 1941 season

1. Hybrid 355 has a big advantage in its maturity. Planted as late as May 23 it was nearly mature enough to crib on October 15.

2. Hybrid 525 did not mature satisfactorily when planted after May 1. The 1941 season was a poor one for maturity but Hybrid 525 matured satisfactorily where planted before May 1.

3. Hybrids 570 and 606 appeared promising when planted early on good soil. These are good silage types.

4. Phosphate fertilizer hastened maturity and appeared to increase yields. Ammophos 11-48 gave excellent results.

5. Open-pollinated corn lodged badly showing up the striking advantage of hybrid corn in this respect.

6. New soils and those high in fertility mature corn in a shorter period than those that have been depleted.

Washington

Assistant County Agent Palmer Torvend planted two demonstration plots of corn on the W. T. Putnam and Sons Farm, one being irrigated and the other non-irrigated. Apparently no increase in yield was obtained from irrigation in this particular case, probably due to the abundance of available moisture during the 1941 season. The average yields of all varieties on nonirrigated and irrigated plots respectively were 43.6 and 44.8 bushels. Since there was such a small difference in yield between the two plots, only the average yields are reported in Table 7.

Table 7.

Corn yield demonstration data.
Washington County - 1941.

Variety	Yield - Bu. 15% Moisture	% Moisture at Harvest
Wisconsin 606	47.8	44.4
Oregon 525	47.3	46.4
Wisconsin 355	47.0	40.5
Oregon 570	46.2	45.9
Wisconsin 455	43.8	43.7
Red Dent	42.6	48.0
Wisconsin 404	41.8	42.1
Minnesota 13	34.1	39.2

Yamhill

A silage yield demonstration was conducted by County Agent Rex Warren on the George Fullenwider Farm. Four rows ten feet long of each hybrid were cut and weighed on September 30 and acre yields of green corn calculated. Hybrid 355 was the most mature but gave a low silage yield.

Table 8.

Silage Yield Demonstration
Yamhill County - 1941

Variety	Lbs. per acre	Remarks
Idaho Minn. 13	24,258	Soft dough stage - late
Wisconsin 455	23,325	Dent stage - best corn
Oregon 525	22,700	Medium-soft dough stage
Wisconsin 606	22,392	Stalks coarse, medium-soft dough
Oregon 570	21,770	Medium-soft dough stage
Minhybrid 403	14,617	Short stalks - soft dough stage
Wisconsin 355	13,373	Corn mature, large ears, short stalks

Southern Oregon Counties

Douglas

County Agent J. R. Parker reports that orders for 2000 pounds of Hybrid 525 seed corn were pooled in his county in 1941 and that several hundred pounds of hybrid seed were purchased by farmers direct from seed dealers. Trial plantings of Hybrids 525 and 695 were made in nine different communities in the county.

Hybrid 525 has matured well during the past three years and outyielded most of the hybrids tried. During the 1941 season, four other hybrids, Wisconsin 695 and Idahybrids 416, 425 and 544, gave higher yields but did not mature as early. These hybrids will be tested further but it is believed that they can be successfully grown if planted early in the spring.

Douglas (continued)

Table 9.

Data from three corn yield demonstrations in Douglas County - 1941

Variety	Busenbark Bros. Farm: Yield-Bu.	Busenbark Bros. Farm: % moisture at harvest	Lester Kamp Farm: Yield-Bu.	Lester Kamp Farm: % moisture at harvest	J. P. Talbot Farm: Yield-Bu.	J. P. Talbot Farm: % moisture at harvest
Idahybrid 544	141.9	25.6	----	----	----	----
Idahybrid 416	133.9	26.0	----	----	----	----
Idahybrid 425	111.1	25.8	----	----	----	----
Hybrid 695	100.1	25.6	106.7	27.8	90.8	26.0
Hybrid 525	94.0	23.8	80.0	24.8	----	----
Hybrid 606	92.9	24.2	----	----	----	----
Hybrid 570	84.7	24.0	----	----	----	----
Hybrid 455	84.4	23.7	----	----	----	----
Local variety	----	----	55.6	27.3	71.5	23.5

Jackson

County Agent R. G. Fowler reports that 8200 pounds of Hybrid 525 seed was produced in the county and sold for 1941 planting. This hybrid is too early in maturity to give the highest possible yields in this area but has taken very well.

Table 10.

Data from corn yield demonstrations in Jackson County - 1941

Variety	Saltzgaver Farm: Yield Bu.	Saltzgaver Farm: % Moist.	E. Russell Farm: Yield Bu.	E. Russell Farm: % Moist.	Wolff Farm: Yield Bu.	Wolff Farm: % Moist.	Bohnert Farm: Yield Bu.	Bohnert Farm: % Moist.
Idahybrid 416	104.9	36.7	----	----	----	----	----	----
Idahybrid 544	86.6	33.3	101.4	35.8	----	----	62.9	32.8
Ohio W17	82.7	39.4	----	----	----	----	----	----
Wisconsin 606	63.0	39.0	----	----	----	----	----	----
Idahybrid 425	52.3	39.3	----	----	----	----	----	----
Wisconsin 455	----	----	126.6	33.3	----	----	----	----
Iowa 939	----	----	81.5	36.6	----	----	----	----
Oregon 525	----	----	73.2	41.8	----	----	----	----
Wisconsin 695	----	----	----	----	51.9	24.2	56.1	27.3
Local Yellow Dent	----	----	----	----	41.1	19.4	----	----
AQ 3	----	----	----	----	----	----	58.0	29.1

Josephine

County Agent O. K. Beals reports that demonstrations in Josephine county indicate Hybrids 570, 525 and 606 to be the best for grain. Wisconsin 695 gave excellent yields but was too late in maturity for grain. Wisconsin 695 and some of the Idahybrids appear best for silage. Results from yield trials in 1940 and 1941 are given in Table 11.

Table 11.

Data from corn yield demonstrations in Josephine County - 1940 and 1941

Variety	1940 Yield: Bu.	1940 % Moist.	1940 Silage Yields: Tons	1941 Yield: Bu.	1941 % Moist.	1941 Silage Yields: Tons	2 year average yield Bu.
Wisconsin 695	129.4	37.1	14.6	75.8	52.5	15.7	102.6
Oregon 570	105.7	27.8	12.1	78.9	42.7	9.5	92.3
Idahybrid 416	126.3	40.0	13.8	50.0	48.7	7.7	88.2
Idahybrid 544	115.0	35.6	13.0	56.9	51.6	10.9	86.0
Oregon 525	99.7	31.1	11.1	61.4	48.5	8.6	80.6
Wisconsin 606	101.2	33.2	11.5	57.4	46.6	10.4	79.3
Wisconsin 455	99.6	38.6	12.3	48.6	42.2	6.4	74.1
Idahybrid 680	127.3	43.9	16.7	----	----	----	----
Idahybrid 425	----	----	----	68.0	53.5	12.0	----
Johnson Yellow Dent	----	----	----	42.7	58.3	12.9	----

Eastern Oregon Counties

Baker

Hybrid seed was planted on 347 acres in Baker county during the 1941 season. Seed for 26 men planting 197 acres was secured and distributed by County Agent P. T. Fortner. No yields were obtained but results were reported by growers as poor, good or excellent. Of 15 growers planting Oregon Hybrid 570, 12 reported results as excellent, two as good and one as poor. Results for three men growing Oregon Hybrid 525 were reported as one good and two excellent. Five men grew Wisconsin Hybrid 355 and reports were, one poor, one fair, and three good. One grower producing Idahybrid 544 reported good results.

Malheur

Data obtained by County Agent R. Brooke from two yield demonstrations in Malheur county are given in Table 12. Seed of a local open-pollinated variety was planted every tenth plot in these trials for a check. Actual yields in bushels per acre are given in Table 12 and in the column headed per cent of check the yield of each hybrid is shown as per cent of the two nearest check plot yields. Although the per cent of the check column does not give actual yields, it probably represents the relative yielding ability of the hybrids more accurately than

Malheur (continued)

the actual yields since all are compared to one variety which was planted at intervals through the field.

Table 12.

Yield Data from Malheur County corn yield demonstrations - 1941

Variety	Yield in Bushels *1	Yield in Bushels *2	Average for 2 Farms Yield in Bu.	Average for 2 Farms % of nearest 2 checks 1/
1. DeKalb 240	109.3	97.5	103.4	163.8
2. DeKalb 615	112.5	110.0	111.3	161.8
3. Reid National 117	122.5	81.3	101.9	161.4
4. Idahybrid 416	133.8	88.8	110.8	161.1
5. Reid National 1202	107.5	95.5	101.5	160.8
6. Wisconsin 695	97.5	103.8	100.6	159.4
7. Idahybrid 680	121.3	78.8	100.0	158.4
8. Oregon 570	108.8	88.8	98.8	156.4
9. Idahybrid 425	99.5	101.3	100.4	153.7
10. DeKalb 404A	106.3	83.8	95.0	150.5
11. Iowealth 16	101.3	86.3	93.8	148.5
12. Idahybrid 544	96.8	90.0	93.4	147.9
13. Funks G19RF	103.8	92.5	98.3	142.7
14. Funks G12RF	----	98.8	----	135.0
15. Iowealth AQ	88.8	81.3	85.0	134.7
16. Funks G1RF	82.5	87.5	85.0	134.7
17. Iowealth AQ 5	86.3	83.7	85.0	134.7
18. Kingcrost KY	87.5	96.3	91.9	133.6
19. Funks G18RF	81.3	91.3	86.3	132.1
20. DeKalb 405	----	96.3	----	131.6
21. DeKalb 201	82.5	82.5	82.5	130.7
22. Funks G66RF	69.8	95.0	82.4	130.5
23. Funks G7RF	88.8	81.3	84.5	129.4
24. DeKalb 80	----	93.8	----	128.2
25. DeKalb 607	88.8	86.3	87.5	126.5
26. Iowealth B1	76.3	87.5	81.9	125.4
27. Iowealth S	95.0	76.3	85.7	124.5
28. DeKalb 78	83.8	73.8	83.8	121.8
29. DeKalb 607	78.8	81.3	79.5	121.7
30. Idahybrid 330	74.3	70.0	72.2	114.3
31. Wisconsin 525	71.8	76.3	74.0	113.3
32. Wisconsin 606	75.0	80.0	77.5	112.7
33. Iowealth 15	78.8	75.5	77.7	112.2
34. Funks G4RF	63.8	68.8	66.8	105.0
35. DeKalb 66	51.5	77.5	64.4	98.6
36. Wisconsin 455	68.5	53.8	61.2	96.8
37. Reid National 112	45.0	57.5	51.3	78.5

* 1. R. W. Woods Farm. 2. W. F. Corn Farm

1/ A local open-pollinated variety was used as the check. Average yield of all check plots -- 63.9 bushels.

Umatilla

County Agent W. A. Holt reports that demonstration plots during previous years have established the superiority of hybrids over open-pollinated varieties and hybrids are now in extensive use.

Mr. F. S. Green, Stanfield, Oregon, won the hybrid yield contest in the Oregon State Corn Show for the second consecutive year with a field of Iowealth AQ hybrid corn.

Adaptation of Hybrids in Oregon

It is difficult with the limited data available to make recommendations with regard to the best adapted hybrids for all individual localities of the state. Corn is grown in Oregon under widely varying conditions of rainfall, soil, elevation, irrigation and temperature. The majority of hybrids are rather limited in adaptation. However, yield trials have proved that certain hybrids are adapted in certain general areas of the state and that other hybrids definitely are not adapted. It is extremely important for a grower to secure adapted hybrid seed since new seed must be obtained each year and there is no chance of changing a hybrid by selection. Brief descriptions of some hybrids known to be adapted to certain Oregon corn-growing areas are given below. Oregon-grown seed of these hybrids is available. Sources of seed can be obtained from county agents or from the Oregon Agricultural Experiment Station.

1. Oregon 525

This hybrid is the same as the one grown in past years in Oregon under the name Wisconsin 525. The name has been changed because the crossing stock for the production of the hybrid is now being grown in Oregon. It has proved to be an excellent grain and silage type throughout the major portion of the Willamette Valley, and is being grown in southern Oregon as an early grain type. It is about the same to a few days later in maturity as the strains of Minnesota 13 being grown in the Willamette Valley. In trials at Corvallis, this hybrid has averaged 9 to 10 bushels per acre above Minnesota 13 in grain yield. Oregon 525 appears to be more widely adapted than many hybrids tested in Oregon, having given excellent results on different soil types and under varying climatic conditions. However, it seems to be best suited to the more fertile, well-drained soils.

2. Oregon 570

Oregon 570 has given practically the same grain yields as Oregon 525 in trials at Corvallis, but is a better silage type. The grain moisture content at harvest has been practically the same as that of Hybrid 525 and it appears to be adapted to the same areas. This hybrid is being grown extensively in Baker county as well as in the Willamette Valley counties.

3. Wisconsin 355

This hybrid is approximately ten days earlier in maturity than Hybrids 525 and 570. Hybrid 355 is being grown extensively in Clackamas county and appears

to be best adapted to the upland soils. Grain and silage yields on Willamette and Chehalis soils at Corvallis have generally been lower than Hybrid 525.

4. Minhybrid 403

Minhybrid 403 is a good grain type for the major portion of the Willamette Valley. Trials at Corvallis indicate that this hybrid is equal to Hybrid 525 in grain yield and matures in about the same season. Silage yields have been relatively low.

5. Wisconsin 606

A good silage type for Willamette Valley conditions. This hybrid is being grown extensively in Washington county for silage. Wisconsin 606 is several days later in maturity than Oregon 525 and hence cannot be generally recommended for grain although trials have shown it to be approximately equal to Oregon 525 in grain yield.

6. Wisconsin 695

Limited trials indicate that Wisconsin 695 may be adapted to corn-growing areas in Malheur and Umatilla counties, and it is giving excellent results in Douglas, Jackson and Josephine counties. This hybrid is too late in maturity for Willamette Valley conditions.

Other Adapted Hybrids

As will be noted from the data given in the tables in this circular, several other hybrids have given excellent results in trials and commercial plantings in various parts of Oregon. Seed of some of these hybrids is available.

Reid National Hybrid 95 has given high yields in trials at Corvallis and appears to be about right in maturity for most sections of the Willamette Valley.

Idahybrids 416, 425, 468, 544 and 680 appear to be adapted to parts of Jackson, Josephine, Douglas, Malheur and Umatilla counties and have given excellent yields of grain and silage where adapted. These hybrids seem to be too late in maturity for Willamette Valley conditions.

Iowealth AQ and some of the other Iowealth hybrids appear to be adapted to the same general areas as the Idahybrids but are too late for the Willamette Valley.

It is suggested that growers check with county agents regarding hybrids adapted to local communities.
