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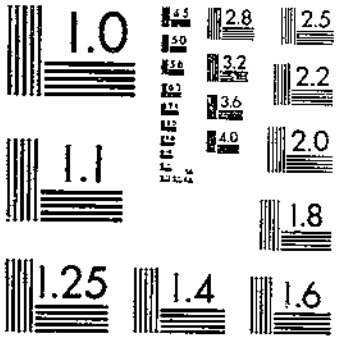
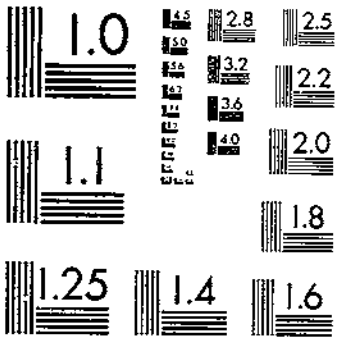


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TECHNICAL BULLETIN No. 96 NOVEMBER, 1929

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

YIELDS OF BARLEY IN THE UNITED STATES AND CANADA, 1922–1926

By H. V. HARLAN, *Principal Agronomist in Charge of Barley Investigations, Office of Cereal Crops and Diseases, Bureau of Plant Industry;* L. H. NEWMAN, *Dominion Cerealist, Dominion of Canada Experimental Farms;* and MARY L. MARTINI, *Assistant Botanist, Office of Cereal Crops and Diseases, Bureau of Plant Industry*

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INTRODUCTION

United States Department of Agriculture Bulletin No. 1334, Tests of Barley Varieties in America,[1] presented the results of plot tests with barley in the United States up to and including 1921. That publication was partly historical, as there had been no previous assembling of the early data and it seemed desirable to include information concerning the early varieties, which was rapidly becoming less available. Information and data were supplied generously by experiment stations throughout the country. To the data from the United States was added much material from the published reports of various agencies in Canada. The printed annual reports of the Dominion Experimental Farms were discontinued in 1916, and Canadian data from this source included in Bulletin No. 1334 ended with those for the crop of 1915. The publications of Provincial agricultural colleges are issued at irregular intervals, as is the case in the United States, and since neither the Dominion Experimental Farms nor the Provincial experiment stations were asked to furnish unpublished data, the Canadian data included in Bulletin No. 1334 were not so complete as would have been desirable.

The original compilation was made with the intention of summarizing in one publication the results of all the early work. It is equally

[1] HARLAN, H. V., MARTINI, M. L., and POPE, M. N. TESTS OF BARLEY VARIETIES IN AMERICA. U. S. Dept. Agr. Bul. 1334, 219 p., illus. 1925.

desirable that there also should be a continuing agency for rendering current results available to experimenters. The present publication accordingly begins where Bulletin No. 1334 left off and deals with the recent years, 1922 to 1926, inclusive, although a few tables give results prior to 1922. It is apparent that prompt publication would be most useful, but the burden of assembling, compiling, and checking the volume of results is much greater than the size of the completed bulletin would indicate. This labor, moreover, was necessarily dovetailed into the already crowded program of a long-time project. It is realized that publications of this sort leave much to be desired and that eventually there must be an annual clearing house of crop data if station agronomists are to be kept informed and progress commensurate with expenditures is fully to be realized. To accomplish this desired end some one must assume an obligation far greater than most people realize.

The present publication consists of direct contributions from many agronomists in the United States and Canada. It is hardly necessary to state that the United States Department of Agriculture has had nothing to do with obtaining most of the results reported.

The largest volume of results in the United States has been received, of course, from the State experiment stations and their branches. At some of these the United States Department of Agriculture has cooperated in obtaining the results. In most cases, however, the results were obtained independently by the stations and appear herein as direct contributions from the stations concerned. In some instances data were furnished by the Office of Dry-Land Agriculture, United States Department of Agriculture.

This publication includes a more complete presentation of Canadian material than was possible in Department Bulletin No. 1334. Doctor Newman, however, is a joint author of the whole publication rather than being responsible merely for the supervision of the Canadian section. The line between the United States and Canada is an arbitrary one. Results obtained in North Dakota are valuable to farmers in adjacent parts of Saskatchewan and Manitoba, and those obtained in the latter Provinces are useful to farmers in North Dakota and Montana. The similar conditions and interests of these adjoining areas make a joint interpretation logical and useful.

Most of the Canadian results were reported from the Dominion Experimental Farms over which L. H. Newman exercises direct supervision. The Provincial agricultural colleges and experiment stations and MacDonald College are independent agencies, and their results are herein presented as independent contributions.

RESULTS BY STATIONS

ARIZONA

Varietal tests of barley were conducted at two points in Arizona during the period 1922 to 1926, inclusive. Results at the Salt River Valley Farm, Mesa, Ariz., are reported by I. A. Briggs, of the Agricultural Experiment Station at Tucson. During the years 1924 to 1926, inclusive, plot tests of barley were carried at the United States field station, Sacaton. These tests were made by the Office of Cotton, Rubber, and Other Tropical Plants.

SALT RIVER VALLEY FARM, MESA, ARIZ.

I. A. BRIGGS, *Agronomist* (TUCSON)

Nine varieties of barley were grown for one or more of the years 1922 to 1926, inclusive. Only three were grown for the entire period. Of these three, Club Mariout (C. I. No. 261)[2] produced the highest average yield of grain. (Table 1.) The variety known as Beardless (C. I. No. 4627) did not seem to be well adapted to Arizona conditions. Common Six-Row (C. I. No. 4625), on the other hand, was only slightly inferior to Club Mariout. This variety is of the Coast type and in the single year tested was much superior to Coast (C. I. No. 4626). The yields of Trebi (C. I. No. 936) were quite satisfactory in the years grown. Colsess (C. I. No. 2792) and Nepal (C. I. No. 595) were decidedly inferior on the basis of a single year.

TABLE 1.—*Acre yields of varieties of barley grown at the Salt River Valley Farm, Mesa, Ariz., and at the United States Field Station, Sacaton, Ariz., in one or more of the years from 1922 to 1926, inclusive*

[Data for Mesa obtained through the courtesy of the Arizona Agricultural Experiment Station and for Sacaton through the courtesy of the Office of Cotton, Rubber, and Other Tropical Plants]

Station and varieties compared	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)		
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Mesa:														
Club Mariout [1]	261	1	64.3	1	29.0	1	48.7	1	49.5	1	53.6	49.0	5	100
Common Six-Row	4625	1	57.9	1	33.5	1	68.5	1	53.5	1	18.6	46.4	5	94.7
Beldi Giant	2777	1	57.6	1	29.6	1	46.0	1	33.8				4	87.3
Tennessee Winter	257	1	55.5										1	86.3
Beardless	4627	1	54.3	1	26.1	1	46.3	1	30.7	1	29.9	37.5	5	76.5
Trebi	936					1	50.3	1	32.5	1	60.6		3	94.1
Coast	4626							1	38.5				1	77.8
Colsess	2792							1	20.5				1	41.4
Nepal	595							2	20.6				1	41.6
Sacaton:														
Club Mariout	261					1	56.3			3	41.3		2	69.6
Trebi [1]	936					2	65.8	3	68.5	3	74.3	69.5	3	100
Coast	690					1	70.4	4	75.8	2	63.5	69.9	3	100.6
Orel	351							4	63.9	2	63.8		2	89.5
Meloy	1176							3	53.2				1	77.7
Hero	1286							3	68.8	2	52.2		2	93.7
Wisconsin Winter	2159							3	57.7	2	37.2		2	66.5
Peruvian	935									2	68.4		1	92.1
Sandrel	937									2	68.9		1	92.7

[1] Standard variety with which others are compared.

UNITED STATES FIELD STATION, SACATON, ARIZ.

C. J. KING, *Superintendent*

Varietal tests covered only three years at Sacaton. The yields of the better varieties were quite satisfactory. Trebi (C. I. No. 936), Coast (C. I. No. 690), and Hero (C. I. No. 1286) were apparently the

[2] Serial accession number of the Office of Cereal Crops and Diseases.

best varieties grown. (Table 1.) Orel (C. I. No. 351), Peruvian (C. I. No. 935, and Sandrel (C. I. No. 937) produced good yields and on the basis of a longer test might prove to be desirable sorts for this section of Arizona. Meloy (C. I. No. 1176), a beardless variety, was discarded after a single year because of inferior yield. This type of barley was also inferior at Mesa.

ARKANSAS

AGRICULTURAL EXPERIMENT STATION, FAYETTEVILLE, ARK.

C. K. McCLELLAND, *Assistant Agronomist*

Arkansas is not a barley-producing State. There are, however, possibilities of growing barley. Owing to variations of topography and climate the selection of the most favorable season for seeding and the choice of variety are difficult. The results reported in Table 2 indicate that in the Fayetteville region spring barleys are not dependable whether spring sown or fall sown. This probably holds true for the State as a whole.

TABLE 2.—*Acre yields of varieties of barley grown at the Arkansas Agricultural Experiment Station, Fayetteville, in one or more of the years from 1919 to 1926, inclusive*

[Data obtained through the courtesy of the Arkansas Agricultural Experiment Station]

Variety	C. I. No.	Number of plots and acre yield															
		1919		1920		1921		1922		1923		1924		1925		1926	
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels
Spring-sown barley:																	
Horsford	507	2	9.5	2	16.6	3	18.1	1	17.2	---	---	---	---	---	---	---	---
Oderbrucker	537	1	10.6	1	18.3	1	22.0	1	17.2	1	27.5	---	---	---	---	---	---
Do	1529	1	9.1	1	7.2	1	11.6	1	14.4	---	---	---	---	---	---	---	---
Manchuria	244	1	7.5	1	15.6	1	24.9	1	24.4	1	23.0	---	---	---	---	---	---
Tennessee Winter	257	1	7.8	1	8.5	---	---	---	---	---	---	---	---	---	---	---	---
Wing Pedigree	1177	---	---	1	14.3	1	15.5	---	---	---	---	---	---	---	---	---	---
Spring barley, fall sown:																	
Horsford	507	---	---	2	7.5	2	3.7	1	28.8	---	---	---	---	---	---	---	---
Oderbrucker	537	---	---	1	11.6	1	5.9	1	33.4	---	---	---	---	---	---	---	---
Do	1529	---	---	1	11.6	1	6.0	1	35.3	---	---	---	---	---	---	---	---
Wing Pedigree	1177	---	---	---	---	1	6.2	1	21.9	---	---	---	---	---	---	---	---
Horsford	610	---	---	---	---	1	3.5	1	26.9	---	---	---	---	---	---	---	---
Manchuria	244	---	---	---	---	1	8.1	---	---	---	---	---	---	---	---	---	---
Nakano Wase	754	---	---	---	---	1	1.8	---	---	---	---	---	---	---	---	---	---
Winter barley:																	
Tennessee Winter	257	---	---	1	9.6	1	6.3	1	34.1	---	---	1	19.4	1	9.4	1	36.3
Wisconsin Winter	2159	---	---	---	---	---	---	---	---	---	---	1	16.9	1	15.6	1	30.0
Alaska	4106	---	---	---	---	---	---	---	---	---	---	1	23.8	---	---	1	28.4
Kentucky Winter	4641	---	---	---	---	---	---	---	---	---	---	1	25.6	1	4.4	1	43.1
Kentucky No. 38	4677	---	---	---	---	---	---	---	---	---	---	1	31.1	1	1.3	1	42.5
Union Winter	583	---	---	---	---	---	---	---	---	---	---	1	25.6	1	8.1	1	30.6
Tennessee Winter	3542	---	---	---	---	---	---	---	---	---	---	1	21.8	1	10.0	1	36.9
Do	3543	---	---	---	---	---	---	---	---	---	---	1	26.9	1	8.3	1	36.5
Do	3544	---	---	---	---	---	---	---	---	---	---	1	29.3	1	10.0	1	35.6
Do	3545	---	---	---	---	---	---	---	---	---	---	1	24.4	1	10.6	1	40.6
Orel	351	---	---	---	---	---	---	---	---	---	---	1	25.8	1	7.5	1	40.4
Tenkow	940	---	---	---	---	---	---	---	---	---	---	1	26.9	1	6.3	1	40.0
Selection 6	4678	---	---	---	---	---	---	---	---	---	---	1	12.5	1	6.3	1	36.3
Beardless 6	2740	---	---	---	---	---	---	---	---	---	---						

In the three years, 1924 to 1926, inclusive, a series of winter barleys were grown. In two of the three years the yields were encouraging. The tests have not been carried long enough to indicate the best variety. Orel (C. I. No. 351), Tennessee Winter (C. I. No. 3545), Selection 6 (C. I. No. 4678), and several others are promising. This section is rather a new field and probably will require rather extensive experimentation to determine the extent of barley possibilities.

CALIFORNIA

Contributed by the CALIFORNIA AGRICULTURAL EXPERIMENT STATION

UNIVERSITY FARM, DAVIS, CALIF.

A large number of varieties have been included in the tests at Davis during the past five years, but most of them were for observation only, or at least their lack of merit was quickly apparent. Only four were grown for the entire 5-year period. Most of the varieties have been introduced into the tests since 1922.

The standard varieties, Club Mariout (C. I. No. 261) and Coast (C. I. No. 690) are among the best. (Table 3.) These sorts are really adapted to California conditions and are not likely to be displaced to any great extent for many years. Hero (C. I. No. 1286), a smooth-awned sort, has held up in yield and may prove useful, particularly where hay is a factor in the choice of a variety. Some of the Cape-Coast Hybrids have given promising yields. Their greatest handicaps are lateness and lack of malting quality. Atlas (C. I. No. 4118) is a selection from Coast. It appears to excel Coast in yield and without doubt is of a type that would meet with high approval on the English market.

In the two years tested, Vaughn (C. I. No. 1367) and Flynn (C. I. No. 1311), both smooth-awned sorts, produced relatively high yields.

KEARNEY PARK, CALIF.

Yields are reported from Kearney Park for 1923. (Table 3.) The highest yields were obtained from the Cape-Coast hybrids Hero (C. I. No. 1286) and Sacramento (C. I. No. 4108).

TABLE 3.—*Acre yields of varieties of barley grown at University Farm, Davis, Calif., and at Kearney Park, Calif., in one or more of the years from 1922 to 1926, inclusive*

[Data obtained in cooperation with the California Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Calif. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
			1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)	
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Davis:															
White Smyrna	105	------	5	78.0	4	85.2	4	51.8	4	46.9	5	61.5	64.7	5	83.1
Club Mariout [1]	261	------	5	92.9	4	110.7	4	69.2	4	53.7	5	62.9	77.9	5	100
California Mariout	1455	2241	2	88.5	4	104.5	4	43.7	----	----	----	----	----	3	86.8
Peda	652	------	5	90.4	----	----	----	----	----	----	----	----	----	1	97.3
Coast	690	------	5	80.7	4	103.2	4	59.3	4	70.3	5	60.9	76.8	5	98.6
Kopeck	869	------	5	90.5	4	108.1	4	61.4	----	----	----	----	----	3	95.4
Trebi	936	------	5	102.3	4	93.8	4	59.2	----	----	----	----	----	3	90.3
Arequipa	1256	------	5	93.6	4	101.5	4	72.5	----	----	----	----	----	3	98.1
Hero (H-6)	1286	------	5	90.0	4	105.8	4	71.8	4	70.6	5	66.5	80.9	5	103.9
Coast	2821	2265	5	88.9	4	101.8	4	58.2	----	----	----	----	----	3	91.3
Peacock	3108	2245	5	64.2	4	74.8	4	44.0	----	----	----	----	----	3	67.1
Coast	4633	------	----	----	4	102.9	4	64.2	4	62.8	5	57.1	----	4	86.9
Cape-Coast Hybrid No. 11	4595	1518	----	----	4	124.6	6	57.7	4	68.3	----	----	----	3	107.2
Sacramento	4108	1511	----	----	4	116.5	4	52.8	4	66.2	5	75.4	----	4	104.9
Atlas	1118	276B	----	----	4	112.5	4	67.1	4	49.2	5	78.8	----	4	103.8
Cape-Coast Hybrid No. 11	4596	1495	----	----	4	112.0	8	48.2	----	----	----	----	----	2	89.0
Coast	4606	190B	----	----	4	111.5	4	61.4	----	----	----	----	----	2	90.1
California Mariout	4628	2275	----	----	4	108.9	4	47.3	----	----	----	----	----	2	86.8
Coast	4605	40B	----	----	4	108.4	4	60.8	----	----	----	----	----	2	94.0
Do	4110	268B	----	----	4	100.8	4	56.2	----	----	----	----	----	2	90.6
Do	4603	45B	----	----	4	104.5	4	56.4	----	----	----	----	----	2	89.4
California Mariout	4632	2296	----	----	4	100.6	4	52.5	2	51.0	----	----	----	3	87.5
Coast	4601	301B	----	----	4	98.4	----	----	----	----	----	----	----	1	87.1
California Mariout	4629	2292	----	----	4	94.6	4	35.6	----	----	----	----	----	2	72.3
Nepal	595	------	----	----	4	75.0	4	16.6	----	----	----	----	----	2	50.9
Chevalier	278	------	----	----	4	74.8	3	32.3	----	----	----	----	----	2	59.6
Coast	4117	170B	----	----	----	----	4	63.5	4	46.9	----	----	----	2	84.9
California	4631	2290	----	----	----	----	4	49.4	----	----	----	----	----	1	71.4
Cape-Coast Hybrid No. 11	4597	1493	----	----	----	----	4	48.1	----	----	----	----	----	1	69.5
Do	4598	1513	----	----	----	----	4	53.8	----	----	----	----	----	1	77.7
Do	4599	1515	----	----	----	----	4	51.9	----	----	----	----	----	1	75.0
Do	4600	1527	----	----	----	----	3	71.8	----	----	5	78.4	----	2	113.6
Do	4601	1528	----	----	----	----	3	57.8	----	----	----	----	----	1	83.5
Mechanical mixture	4115	------	----	----	----	----	3	27.1	2	46.4	2	67.7	----	3	76.1
Composite Cross	4116	------	----	----	----	----	3	29.5	2	47.8	2	63.6	----	3	75.9
Trebut	4607	------	----	----	----	----	----	----	4	47.1	----	----	----	1	87.7
Vaughn	1367	------	----	----	----	----	----	----	2	90.7	5	93.2	----	2	157.8
California Mariout	4630	2291	----	----	----	----	----	----	2	66.2	----	----	----	1	123.3
Kamamugi	577	------	----	----	----	----	----	----	2	49.0	2	46.9	----	2	82.3
Flynn	1311	------	----	----	----	----	----	----	1	75.0	5	77.5	----	2	130.9
Rakoff	2432	------	----	----	----	----	----	----	1	54.2	----	----	----	1	100.9
India	2319	------	----	----	----	----	----	----	1	50.0	----	----	----	1	93.1
Hero	4602	------	----	----	----	----	----	----	----	----	5	66.7	----	1	106.0
Merv	697	------	----	----	----	----	----	----	----	----	2	68.8	----	1	109.4
Kearney Park:															
Club Mariout	261	------	----	----	5	89.9	----	----	----	----	----	----	----	----	----
California Mariout	4628	2275	----	----	5	88.9	----	----	----	----	----	----	----	----	----
Kopeck	869	------	----	----	5	89.2	----	----	----	----	----	----	----	----	----
Hero	1286	------	----	----	5	93.0	----	----	----	----	----	----	----	----	----
California Mariout	1455	2241	----	----	5	86.0	----	----	----	----	----	----	----	----	----
Coast	690	------	----	----	5	91.2	----	----	----	----	----	----	----	----	----
Arequipa	1256	------	----	----	5	89.6	----	----	----	----	----	----	----	----	----
Peacock	3108	2245	----	----	5	69.4	----	----	----	----	----	----	----	----	----
Sacramento	4108	1511	----	----	5	94.5	----	----	----	----	----	----	----	----	----
Cape-Coast Hybrid No. 11	4598	1513	----	----	5	94.2	----	----	----	----	----	----	----	----	----
Do	4042	1529	----	----	5	91.7	----	----	----	----	----	----	----	----	----
Do	4107	1488	----	----	5	84.6	----	----	----	----	----	----	----	----	----

[1] Standard variety with which others are compared.

COLORADO

Barley is grown in Colorado both on dry-land farms and under irrigation. Yields are reported from two stations, the Colorado Agricultural Experiment Station at Fort Collins (under irrigation) and the United States Dry-Land Field Station at Akron (dry-land tests).

AGRICULTURAL EXPERIMENT STATION, FORT COLLINS, COLO.

ALVIN KEZER, *Chief Agronomist*

A large number of varieties have been tested at Fort Collins. In all years there were 10 plots of each variety. Twenty-seven varieties were grown in all of the five years. In Table 4 Coast (C. I. No. 2791) is used as a basis of comparison. Of the varieties grown for the full period, five produced more grain than Coast (C. I. No. 2791). The highest yield was from Lion (C. I. No. 923). This yield was practically identical with that of Trebi (C. I. No. 936). Elfry (C. I. No. 2800), Moister (C. I. No. 2799), and Manchuria (C. I. No. 2783) all produced yields slightly greater than that of Coast (C. I. No. 2791). A number of varieties produced yields 90 per cent or higher, as compared with the standard. Among the better of these was O. A. C. 21 (C. I. No. 1470), Canadian Thorpe (C. I. No. 740), Manchuria (C. I. No. 2330), Svansota (C. I. No. 1907), Hannchen (C. I. No. 531), and Hanna (C. I. No. 2784). Among the varieties grown less than five years two smooth-awned ones produced high yields. These were Velvet (C. I. No. 4252) and Comfort (C. I. No. 4578). The lowest yields were from late 2-rowed sorts such as Garton 986 (C. I. No. 645) and Princess (C. I. No. 529). Colsess (C. I. No. 2792), a hooded variety produced by this station, was much superior to Horsford (C. I. No. 1271) and Wing Pedigree (C. I. No. 1177), two hooded sorts from other sources.

UNITED STATES DRY-LAND FIELD STATION, AKRON, COLO.

Three varieties were grown for the entire period of the test at Akron. Of these, Coast (C. I. No. 690) is used as the basis of comparison in Table 4. The yield of Coast was surpassed by that of the two other varieties which were grown for the entire period. Of these two, Blackhull (C. I. No. 378) was unquestionably superior to Smyrna (C. I. No. 2642). Of those varieties grown for less than five years but more than one year, Club Mariout (C. I. No. 261) was the best. Flynn (C. I. No. 1311) was almost equal to Club Mariout. Smyrna (C. I. No. 4586), a selection from White Smyrna, produced a high yield. Meloy (C. I. No. 1176), Horsford (C. I. No. 877), and Colsess (C. I. No. 2792) are hooded varieties. They did not yield well at Akron. Himalaya (C. I. No. 620), a hull-less variety produced a yield of 75 per cent of that of Coast.

TABLE 4.—*Acre yields of varieties of barley grown at the Colorado Agricultural Experiment Station, Fort Collins, and at the United States Dry-Land Field Station, Akron, Colo., in one or more of the years from 1922 to 1926, inclusive*

[Data for Fort Collins obtained through the courtesy of the Colorado Agricultural Experiment Station and for Akron through the courtesy of the Office of Dry-Land Agriculture in cooperation with the Colorado Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Colo. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard varieties named	
			1922		1923		1924		1925		1926				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Fort Collins:															
Hanna	2784		10	82.1	10	56.0	10	75.9	10	72.6	10	82.6	73.8	5	97.4
Coast	2785		10	72.4	10	69.8	10	48.9	10	64.7	10	70.7	66.5	5	87.7
Gold	1145		10	71.1	10	62.2	10	59.5	10	75.8	10	82.4	70.2	5	92.6
Hanna	2786		10	75.7	10	64.4								2	89.5
Do	2787		10	68.9	10	70.5	10	60.1	10	66.1	10	78.0	68.7	5	90.6
Coast	2789		10	70.2	10	76.8								2	93.9
Colsess	2792		10	73.9	10	80.0	10	49.4	10	52.8	10	74.1	66.0	5	87.1
Hanna	2788		10	72.9	10	72.8								2	93.1
Coast	2790		10	61.8	10	72.3								2	85.7
Charlottetown 80	2732		10	64.7	10	64.2	10	62.6	10	69.6	10	88.2	69.9	5	92.2
Black Hull-less	595		10	76.9	10	53.8	10	57.4	10	54.4	10	68.3	62.2	5	82.1
Silver King	890		10	71.7	10	81.1	10	61.1	10	60.0	10	87.7	72.3	5	95.4
Coast	690		10	59.6	10	83.3								2	97.7
Telli	194		10	78.4	10	70.2	10	60.4	10	70.7	10	86.6	73.1	5	96.4
Garton 986	645		10	49.8	10	45.5								2	61.6
Chevalier II	200		10	66.5	10	56.6	10	61.0	10	64.4	10	71.9	64.1	5	84.6
Horsford	507		10	49.8										1	66.8
Wing Pedigree	1177		10	52.0	10	56.4								2	69.2
Horsford	1271		10	51.1	10	50.0	10	51.2	10	46.9	10	60.9	52.0	5	68.6
Princess	529		10	49.0	10	49.2								2	62.7
Nepal	595		10	70.9	10	49.4	10	55.0	10	54.6	10	67.9	59.6	5	78.6
Blackhull	878		10	63.0	10	66.0								2	82.4
Coast [1]	2791		10	74.5	10	82.0	10	60.2	10	72.8	10	89.6	75.8	5	100
Golden Drop	2135		10	56.6	10	51.5	10	58.9	10	60.5	10	72.2	59.9	5	79.0
O. A. C. 21	1470		10	82.0	10	75.4	10	60.9	10	67.0	10	91.5	75.4	5	99.5
Manchuria	2783		10	77.8	10	78.9	10	66.3	10	66.4	10	98.0	77.5	5	102.2
Molster	2790		10	86.5	10	84.8	10	62.0	10	71.2	10	78.7	76.6	5	101.1
Elfry	2800		10	87.9	10	85.3	10	64.3	10	69.1	10	83.9	78.1	5	103.0
Canadian Thorpe	740		10	90.8	10	68.8	10	57.3	10	60.7	10	98.3	75.2	5	99.2
Samoa	1211		10	75.3	10	79.9	10	50.5	10	60.5	10	78.3	68.9	5	90.9
Manchuria	2330		10	80.5	10	66.9	10	62.2	10	67.9	10	90.9	73.7	5	97.2
Minsturdi	1556		10	68.4	10	74.5	10	44.2	10	59.8	10	84.0	62.2	5	82.1
Svansota	1907		10	80.3	10	64.8	10	62.1	10	68.0	10	93.3	73.7	5	97.2
Lion	923		10	83.2	10	81.1	10	75.7	10	75.6	10	85.1	80.1	5	105.7
Bark	2793		10	89.0	10	53.7	10	43.0	10	72.8	10	90.6	69.8	5	92.1
Hannchen	531		10	80.9	10	63.1	10	62.9	10	73.0	10	90.9	74.2	5	97.9
Trebi	936	307	10	75.3	10	90.0	10	71.7	10	74.3	10	88.9	80.0	5	105.5
California Mariout	1455	314			10	59.4	10	30.0	10	62.2	10	84.3		4	73.8
Smyrna	2642						10	65.6	10	70.6	10	74.0		3	94.5
Himalaya	620						10	42.0	10	64.4	10	70.9		3	79.6
Velvet	4252						10	76.3	10	62.5	10	80.2		3	98.7
Black Six-Row	4691	319					10	60.9	10	56.3	10	68.1		3	83.3
Club Mariout	261	335							10	58.9	10	78.8		2	84.9
Comfort	4578	336							10	72.1	10	93.6		2	102.1
Akron:															
Blackhull	878		4	27.1	4	33.8	4	6.2	6	12.2	4	.9	17.0	5	120.6
Coast [1]	690		4	22.7	4	26.5	4	9.1	4	11.3	3	1.1	14.1	5	100
White Smyrna	195		4	23.6	4	22.3	4	4.9	4	10.7				4	88.5
Smyrna	2642		2	26.2	4	31.0	4	6.3	4	8.7	3	1.1	14.7	5	104.3
Orel	351		2	14.4										1	63.4
Hannchen	531		2	13.5	4	27.4								2	83.3
Horsford	877		2	16.4										1	72.2

[1] Standard variety with which others are compared.

TABLE 4.—*Acre yields of varieties of barley grown at the Colorado Agricultural Experiment Station, Fort Collins, and at the United States Dry-Land Field Station, Akron, Colo., in one or more of the years from 1922 to 1926, inclusive*—Con.

Station and varieties compared	C. I. No.	Colo. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard varieties named	
			1922		1923		1924		1925		1926				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Akron—Continued.															
Baku	709		2	11.8										1	52.0
Himalaya	620		2	16.1	4	24.0	2	3.5			3	1.0		4	75.2
Nepal	593		2	13.0										1	57.3
Club Mariout	261				4	37.5	4	8.3	4	10.7	3	.5		4	119.2
Flynn	1311				4	34.7	4	9.0	4	10.0	3	1.4		4	115.0
Smyrna	4586	[1] 013 WS			4	31.5	2	6.6	4	9.7	3	1.2		4	102.5
Do	4587	[1] 02 WS			4	26.9	2	2.9	4	8.6	3	.9		4	81.7
California Mariout	1458				4	33.6	4	3.9	4	8.1	3	1.6		4	93.3
Saudrel	937				2	30.2	1	9.8						2	112.4
Beldi Dwarf	190				2	24.1								1	90.9
Meloy	1176				4	23.1								1	87.2
Horn	926				4	25.1								1	94.7
Smyrna	4584	[1] 09 WS					2	5.5	4	12.0	3	1.9		3	90.3
Do	4585	[1] 05 WS					2	5.5	4	11.2	3	1.7		3	84.7
Colsess	2792						1	2.6	4	6.1	3	.8		3	44.4
Snyder	4588						2	11.2						1	123.1
Butler	4589						2	8.6						1	94.5
Coast	4590	[2] 015 Ct.					2	6.3						1	69.2
Do	4591	[2] 023 Ct.					2	5.9						1	64.8
Molster	2799	2286							4	11.2				1	99.1
Elfry	2800	2287									3	.9		1	81.8
Trebi	930										3	.5		1	45.5

[1] Identification number, Smyrna selection.
[2] Identification number, Coast selection.

GEORGIA

STATE COLLEGE OF AGRICULTURE, ATHENS, GA.

The results from the variety tests of barley at Athens have been quite satisfactory. A number of varieties have been tested during a period of years and their relative worth fairly well established. In Table 5 Orel (C. I. No. 4592) has been used as a basis of comparison. Its average yield is not significantly greater than that of Argentine (C. I. No. 4594) and Greece (C. I. No. 4593). These three varieties are outstanding, and incidentally they are local selections from varieties of the same name which have shown promise at both Athens, Ga., and Arlington Farm, Rosslyn, Va.

Wisconsin Winter (C. I. No. 519), which has given high yields at Arlington Experiment Farm, produced 4 bushels less per acre on the average than did Orel at Athens.

The yields of 1926 are of interest. Yields such as these can be expected but rarely. However, even an occasional year as favorable as this would insure a satisfactory average for the better varieties.

TABLE 5.—*Acre yields of varieties of barley grown at the Georgia State College of Agriculture, at Athens, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained in cooperation with the Georgia State College of Agriculture]

Variety	C. I. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926				
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Orel (351–4)[1]	4592	2	34.7	2	46.3	2	28.0	3	25.5	2	86.5	44.2	5	100
Argentine (223–6)	4594	2	33.0	2	53.1	2	17.1	2	30.5	2	81.3	43.0	5	97.3
Greece (221–4)	4593	2	33.0	2	48.3	2	15.2	2	33.3	2	84.4	43.0	5	97.3
Tennessee Winter	257	2	19.3	2	44.3	2	34.4	2	26.1	2	68.7	38.2	5	86.4
Wisconsin Winter	519	2	25.5	2	39.0	2	53.5	2	21.7				4	89.0
Mammoth (220–10)	4683	2	30.7	2	36.6	2	23.4	2	24.4	2	85.5	40.3	5	91.2
Nakano Wase (754–1)	2104	2	27.7	2	37.2	2	39.5	2	18.3	2	69.3	36.6	5	82.8
Black Russian	705	2	25.7	2	38.5	2	12.3	2	24.1				4	75.0
Hannchen	531	2	33.0	2	33.6	2	2.1	2	22.7	2	64.1	31.1	5	70.4
Arlington Awnless (702–10)	4684	2	17.6	2	24.0								2	51.4
California Mariout	1455	2	26.6	2	11.4								2	46.9
Beardless 5	3384							2	15.5	2	52.6		2	60.9
Tennessee Winter (Sel. 66)	3546									2	68.8		1	79.5
Beardless 6	2746									2	51.0		1	59.0

[1] Standard variety with which others are compared.

IDAHO

Variety tests of barley are reported from four stations: Moscow, Aberdeen, Felt, and Sandpoint. The work at Aberdeen is cooperative between the Idaho Agricultural Experiment Station and the United States Department of Agriculture. The yields at Felt are for seven years instead of five, as the yields for 1920 and 1921 were not included in United States Department of Agriculture Bulletin No. 1334, for which material was supplied in 1921.

The outstanding features of the results (Table 6) are the obvious excellence of Trebi under a variety of conditions and the continued high yields of winter varieties at the agricultural experiment station at Moscow.

TABLE 6.—*Acre yields of varieties of barley grown at the Idaho Agricultural Experiment Station, Moscow, and at the substations at Aberdeen, Felt, and Sandpoint, Idaho, in one or more of the years from 1920 to 1926, inclusive*

Data for Moscow, Felt, and Sandpoint obtained through the courtesy of the Idaho Agricultural Experiment Station; data for Aberdeen obtained in cooperation with the Idaho Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Idaho No.	Number of plots and acre yield														Number of comparable years and yield in comparison with standard variety named	
			1920		1921		1922		1923		1924		1925		1926		Average, 1920–1926 (bushels)		
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
MOSCOW																			
Winter Club (spring sown)	438	2001					2	51.7	2	117.1	2	66.3	2	65.9	2	92.6	78.7	5	82.2
Han River	206	2072					2	46.6	2	121.7	2	77.3	2	81.5	2	96.9	84.8	5	88.5
Trebi [1]	936	2073					2	53.3	2	127.5	2	85.8	2	98.1	2	114.2	95.8	5	100
White Smyrna	910	2074					2	57.5	2	111.7	2	63.3	2	79.4	2	92.7	80.9	5	84.4
Peruvian	935	2075					2	49.2	2	112.9	2	79.2	2	90.0	2	104.0	87.1	5	90.9
Baker	975	2076					2	45.0	2	116.9	2	79.6	2	87.1	2	99.5	85.6	5	89.4
Rex	1398	2076A									2	55.4	2	76.1	2	88.6		3	73.8
Prentice	917	2077									2	47.5	2	68.7	2	85.7		3	67.7
Binder	1909	2078									2	59.2	2	83.1	2	93.1		3	79.0
July	1563	2079									2	42.9	2	45.8				2	48.3
Colsess	2792	2088									2	64.2	2	72.9	2	78.1		3	72.1
Faust	4579	2105													2	70.1		1	61.4
Winter barleys:																			
Winter Club [1]	488	2001					2	71.6	2	105.4	2	82.7		(2)	2	116.8		4	100
Wisconsin Winter	519	2039					2	70.7	2	91.0	2	98.0		(2)	2	113.8		4	98.7
Tennessee Winter	257	2040					2	76.0	2	98.3	2	80.2		(2)	2	106.1		4	95.9
Michigan Winter	2036	2041					2	83.0	2	99.3	2	79.5		(2)	2	117.0		4	100.6
ABERDEEN																			
Trebi [1]	936						2	58.6	2	87.4	2	87.7	2	107.5	2	60.9	80.4	5	100
Beldi Giant	2777						2	57.0	2	83.6	2	76.2	2	96.2	2	65.9	75.8	5	94.3
Sandrel	937						2	54.7	2	77.1	1	62.0						3	78.7
Hannchen	531						2	50.2	2	76.7	2	77.0	2	81.7	2	57.3	68.6	5	85.3
Han River	206						2	53.1										1	90.6
Peruvian	935						2	53.7										1	91.6
White Smyrna	910						2	63.7	2	62.0	2	68.5	2	79.7	2	55.4	65.9	5	82.0
Baker	975						2	52.3										1	89.2
Algerian	1179						2	50.4	2	64.3			2	84.6				3	78.6
Colsess	2792						2	45.8	1	58.8								2	71.6
Meloy	1176								2	62.9	2	60.4	2	71.8	2	49.6		4	71.2
Horsford	507								1	30.8								1	35.2
Alpha	959								2	62.6	2	53.9	2	75.0	2	51.3		4	70.7
Cape-Coast Hybrid No. 11	4595										2	54.4	2	70.4				2	63.9
Flynn	1311												2	77.6	2	50.2		2	75.9
Orel	351												2	72.3	2	62.8		2	80.3
Horn	926												2	85.8	2	62.5		2	88.1
Faust	4579														2	55.5		1	91.1
Bohemian	27														1	60.0		1	98.5
Bohemian	1148														1	53.3		1	87.5
White Smyrna	4580														1	58.3		1	95.7
Abed Bluder	1081														1	49.2		1	80.8

[1] Standard variety with which others are compared.
Varieties not sown in fall of 1924 on account of dry weather.

TABLE 6.—*Acre yields of varieties of barley grown at the Idaho Agricultural Experiment Station, Moscow, and at the substations at Aberdeen, Felt, and Sandpoint, Idaho, in one or more of the years from 1920 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Idaho No.	Number of plots and acre yield																Average, 1920–1926 (bushels)	Number of comparable years and yield in comparison with standard variety named	
			1920		1921		1922		1923		1924		1925		1926						
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels				Number	Per cent
FELT																					
Trebi [1]	936		2	17.4	2	22.0	2	45.8	2	52.0	2	28.3	2	58.7	2	43.7			38.3	7	100
Beldi Giant	2777		2	17.6	2	18.3	2	44.8	2	52.5	2	22.4	2	65.8	2	41.3			37.5	7	97.9
White Smyrna	910		2	29.9	2	15.8	2	17.0	2	40.0	2	15.8	2	54.5	2	30.0			29.0	7	75.7
Peruvian	935		2	10.9	2	19.1	2	35.8	2	46.0	2	12.4								5	74.9
Sandrei	937		2	10.8	2	15.4	2	32.5	2	46.2	2	25.4	2	65.8	2	40.4			33.8	7	88.3
Han River	206		2	12.3	2	12.5	2	32.0	2	50.0	2	23.3	2	62.0	2	38.3			32.9	7	85.9
Baker	975		2	10.6	2	10.8	2	40.0	2	58.3	2	24.1	2	66.2	2	44.1			36.3	7	94.8
Meloy	1176		2	16.3	2	7.0	2	27.9	2	52.5	2	27.9	2	55.3	2	37.9			32.1	7	83.8
SANDPOINT																					
White Smyrna	910								2	22.0	2	44.3	2	47.8	2	23.7			34.5	4	102.7
Trebi [1]	936								2	24.8	2	28.7	2	51.5	2	29.3			33.6	4	100
Han River	206								2	22.1	2	22.5	2	44.2	2	23.9			28.2	4	83.9
Horsford	4665								2	17.5	2	21.1	2	45.3	2	31.5			28.9	4	86.0
Winter Club	488										2	26.6	2	43.1	2	29.4				3	90.4
Coisess	2702														2	29.3				1	100

[1] Standard variety with which others are compared.

AGRICULTURAL EXPERIMENT STATION, MOSCOW, IDAHO

H. W. HULBERT, *Professor of Agronomy and Agronomist, University of Idaho*

The yields at Moscow are reported in Table 6. The average yield of Trebi (C. I. No. 936) was more than 8 bushels greater than Peruvian (C. I. No. 935), the next-ranking variety. In four of the five years Trebi produced the highest yield. In 1922 its yield was exceeded by that of White Smyrna. This was the most adverse year of the five and relatively more favorable to White Smyrna than ordinary seasons. Five new varieties were included in the test in 1924. None of these showed promise, the best giving an average yield only 79 per cent of that of Trebi for the same years.

The spring varieties proved to be inferior to the winter ones. All yields from winter sorts were high. However, the high yields of the winter varieties were qualified somewhat by the fact that in 1924 the fall was too dry for seeding and no winter barleys were grown in 1925. All four of the winter varieties produced about the same average yields. Michigan Winter (C. I. No. 2036) and Winter Club (C. I. No. 488) were slightly superior to Wisconsin Winter (C. I. No. 519) and Tennessee Winter (C. I. No. 257), although Wisconsin Winter was the leading variety in 1924.

ABERDEEN SUBSTATION, ABERDEEN, IDAHO

A number of years ago it became evident that Trebi (C. I. No. 936) was the best of the varieties which had been tested at Aberdeen. It was distributed to farmers and has been used as the standard in appraising new varieties. As a consequence, although 22 varieties have been grown in the past five years, only 4 have been tested for the full period. These were Trebi, Beldi Giant (C. I. No. 2777), Hannchen (C. I. No. 531), and White Smyrna (C. I. No. 910). Beldi Giant was the only one to compete seriously with Trebi, and its yield (as shown in Table 6) was only 94 per cent of that of Trebi.

Several varieties have not yet been grown for a sufficient length of time to establish an accurate comparison. Bohemian (C. I. No. 27) gave a good yield in 1926, but it was grown only in that year and on a single plot. The hooded types have not been promising.

FELT SUBSTATION, FELT, IDAHO

The climatic conditions at Felt are such that almost all varieties of spring barley should develop normally. The results shown in Table 6 indicate that this is the case. Trebi (C. I. No. 936) produced the highest average yield over the 7-year period (1920–1926), but it was superior to all other varieties tested in only three of the seven years. Its average yield was only slightly greater than that of Beldi Giant (C. I. No. 2777) and not significantly greater than that of Baker (C. I. No. 975).

SANDPOINT SUBSTATION, SANDPOINT, IDAHO

Only a few varieties have been tested at Sandpoint. Of these, only four were grown for the full period. The average yield of White Smyrna (C. I. No. 910) was greater than that of Trebi (C. I. No. 936), as Table 6 shows. This was due to the results of 1924, when its yield was 44.3 bushels as compared with 28.7 for Trebi. In the three other years the returns from Trebi were greater than those from White Smyrna. Colsess (C. I. No. 2792) showed up well in 1926, the only year in which it was grown.

ILLINOIS

Varietal tests of barley are reported from two localities in Illinois, namely, Urbana and De Kalb. At neither place has any considerable number of varieties been grown.

AGRICULTURAL EXPERIMENT STATION, URBANA, ILL.

W. L. BURLISON, *Head of Department, Professor, and Chief in Crop Production*

Only two varieties were grown in all of the five years, 1922 to 1926. Of these Lion (C. I. No. 923) was slightly superior to Wisconsin Pedigree (C. I. No. 835) and is used as the standard of comparison in Table 7. Lion is a smooth-awned black barley and owing to its color is not the equal of Wisconsin Pedigree for market purposes. Silver King (C. I. No. 890) is a barley of the same type as Wisconsin Pedigree. For the four years in which it was grown its average yield was greater than that of either Lion or Wisconsin Pedigree. Horsford (C. I. No. 507), a hooded, hulled variety, was not promising.

TABLE 7.—*Acre yields of varieties of barley grown at the Illinois Agricultural Experiment Station, Urbana, and at the Soil Experiment Field, De Kalb, Ill., in one or more years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Illinois Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)		
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Urbana:														
Oderbrucker	836	2	10.6	2	47.4	2	46.3						3	99.1
Wisconsin Pedigree	835	2	10.1	2	43.9	2	47.1	2	29.4	2	52.3	36.6	5	98.4
Lion [1]	923	2	15.0	2	38.7	2	51.7	2	26.4	2	54.1	37.2	5	100
Horsford	507			2	30.8	2	35.2						2	73.0
Silver King	890			2	40.5	2	50.1	2	34.8	2	58.4		4	107.7
De Kalb:														
Oderbrucker	836	2	60.5	2	51.3	2	53.2	2	67.5				4	110.4
Wisconsin Pedigree	835	2	60.0	2	50.1	2	53.3			2	59.2		4	111.8
Horsford	507	2	43.8	2	37.8								2	74.6
Lion [1]	923	2	60.0	2	49.4	2	28.8	2	72.7	2	61.0	54.4	5	100
Silver King	890	2	54.4	2	51.1	2	49.8			2	60.0		4	108.0

[1] Standard variety with which others are compared.

SOIL EXPERIMENT FIELD, DE KALB, ILL.

The same varieties were grown at De Kalb as at Urbana. Lion is used as the standard of comparison. It was not the equal, however, of any variety of the Manchuria-Oderbrucker type in point of yield. Oderbrucker (C. I. No. 836), Silver King (C. I. No. 890), and Wisconsin Pedigree (C. I. No. 835) produced approximately equal yields. Horsford (C. I. No. 507) was distinctly inferior, as at Urbana.

INDIANA

Barley varieties have been grown in plot experiments in Indiana at La Fayette, Bedford, and North Vernon. Both winter and spring sorts have been tested. As a whole the yields have been greater from the winter varieties. Since only a few localities in northern Indiana are well adapted to the growing of barley, the yields reported are not particularly high, and the returns do not compare favorably with those from winter wheat.

AGRICULTURAL EXPERIMENT STATION, LA FAYETTE, IND.

R. R. MULVEY, *Associate in Crops*

In the experiments at La Fayette the barleys were grown with frequently repeated checks of a standard variety. Reported yields were obtained by correcting plot yields graphically with those of the checks. Five varieties of winter barley and 10 spring varieties were grown one or more years during the 5-year period reported. The yields of the winter varieties have exceeded those of the spring sorts during these years. Only three of the five winter varieties were grown for the entire period. The average yields of these three were essentially identical.

TABLE 8.—*Acre yields of varieties of barley grown at the Indiana Agricultural Experiment Station, La Fayette, and at the substations at Bedford and North Vernon, Ind., in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Indiana Agricultural Experiment Station]

Station and variety	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926			
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Average, 1922–1926 (bushels)	Number	Per cent
LA FAYETTE														
Winter barleys:														
Purdue 21	4581	2	29.8	2	32.6	2	28.8	2	34.2	2	36.2	32.3	5	99.1
Purdue 1101	4582	4	39.9	4	30.7	4	25.6	4	30.9	4	35.9	32.6	5	100
Tennessee Winter [1]	257	2	40.7	2	29.7	2	27.5	2	27.7	2	37.2	32.6	5	100
Michigan Winter	2036	2	37.5										1	92.1
German Winter	4583			2	21.8	2	28.5	2	17.3				3	79.5
Spring barleys:														
Success Beardless	1808	4	5.2	8	18.6	8	29.9	8	23.8	6	30.3	21.6	5	83.5
Featherston [1]	1120	1	3.8	2	27.1	2	38.1	2	27.6	2	32.6	25.8	5	100
Lion (Michigan Black Barbless)	923	1	4.8	2	21.6	2	23.4	2	29.0	2	39.2	23.6	5	91.5
Michigan Two-Row (Hei) Hanna No. 1)	2782	1	.3	2	17.9	2	22.2						3	58.7
Golden Queen (Wis. Ped. No. 1)	1511	1	4.1	2	27.3	2	38.7	2	29.2				4	102.5
Gatami	575	1	4.6	2	23.0	2	28.1						3	80.9
Manchuria	2330	1	3.7	2	31.3	2	39.1	2	27.5	2	29.2	26.2	5	101.3
White Smyrna	195									2	26.5		1	81.3
Const	690									2	30.1		1	92.3
Colsess	2792									2	35.4		1	103.6
BEDFORD														
Winter barleys:														
Purdue No. 21 [1]	4581			1	30.0	1	10.0	1	22.0	1	15.0	19.3	4	100
Purdue No. 1101	4582			2	29.0	2	9.0	2	19.0	2	27.0	21.0	4	108.8
Spring barley:														
Success Beardless	1808			1	12.5	1	10.0	1	11.0	1	8.0	11.9	4	61.7
NORTH VERNON														
Winter barleys:														
Purdue No. 21 [1]	4581	1	24.9	1	33.5	1	7.5	1	18.0	1	20.0	20.4	5	100
Purdue No. 1101	4582			2	33.0	2	7.8	2	11.5	2	27.0		4	102.6
Spring barley:														
Success Beardless	1808	1	0	1	9.5	1	8.5	1	10.5	1	14.9	8.5	5	41.7

[1] Standard variety with which others are compared.

Tennessee Winter (C. I. No. 257), the highest yielding variety, is used as a basis of comparison for winter-barley yields in Table 8. Two varieties of this name were grown in 1922 and the yield reported is the average of the two. Purdue No. 21 (C. I. No. 4581) is a variety resulting from the survival of six plants in a twentieth-acre plot of Tennessee Winter seeded in the fall of 1903. Its yield was not significantly different from that of Tennessee Winter.

Four of the spring barleys were grown in all of the five years. Manchuria (C. I. No. 2330; Minn. 184) and Featherston (C. I. No. 1120) were the best of the four, although the margin of superiority was slight. Lion (C. I. No. 923) has produced fair yields and is valuable at least for the production of smooth-awned hybrids.

BEDFORD SUBSTATION, BEDFORD, IND.

The same varieties were grown at Bedford as at North Vernon. Results were obtained in only four years. (Table 8.) Here, also, the winter varieties were superior to the single spring variety in yielding capacity, and Purdue No. 1101 (C. I. No. 4582) produced a greater yield than Purdue No. 21 (C. I. No. 4581).

NORTH VERNON SUBSTATION, NORTH VERNON, IND.

Yields at North Vernon were parallel to those at La Fayette. The winter barleys exceeded the single spring variety by a wide margin. (Table 8.) Of the two winter varieties grown Purdue No. 1101 (C. I. No. 4582) was better than Purdue No. 21 (C. I. No. 4581), although the yields were almost identical.

KANSAS

H. H. LAUDE, *Associate Professor of Agronomy, Kansas State Agricultural College and Agricultural Experiment Station, Manhattan, Kans.*

Since only the western part of the State is adapted to the growing of barley, no varietal tests are recorded from the eastern station at Manhattan. Yields were obtained from the Fort Hays, Colby, Garden City, and Tribune branch experiment stations. The work at the Fort Hays and Colby stations has been more extensive than that at Garden City and Tribune. Colby is located in the section of the State most favorable to the growing of barley. In addition to the tests at these substations varieties were grown on farms by a considerable number of cooperators. The outstanding features of the five years of experimentation are as follows: (1) The general superiority of barleys suited to semiarid conditions, such as Coast (C. I. No. 690), Club Mariout (C. I. No. 261), and Stavropol (C. I. No. 2103); (2) the superiority of Club Mariout, which gave the highest average yield for the period both at the stations and on the farms of the cooperators.

TABLE 9.—*Acre yields of varieties of barley grown at the branch experiment stations at Hays, Colby, Garden City, and Tribune, Kans., in one or more of the years from 1922 to 1926, inclusive*

[Data for Hays obtained through the cooperation of the Kansas Agricultural Experiment Station, for Colby through the courtesy of the Kansas Agricultural Experiment Station and the Office of Dry-Land Agriculture, and for Garden City and Tribune through the courtesy of the Kansas Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923[1]		1924		1925		1926		Average, 1922–1926 (bushels)		
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
HAYS														
White Smyrna	195	2	45.6	...	.....	2	36.4	2	7.3	2	32.8	30.5	4	99.7
Blackhull	878	2	44.0	...	.....	2	32.1	2	8.9	2	29.7	28.7	4	93.8
California Mariout	1455	2	43.3	...	.....	..	.....	..	.....	..	.....	.....	1	101.6
Flynn	1311	2	42.8	...	.....	2	36.7	2	8.1	2	31.8	29.9	4	97.7

[1] No yields are reported for 1923 at Hays, as hail destroyed the crop.

TABLE 9.—*Acre yields of varieties of barley grown at the branch experiment stations at Hays, Colby, Garden City, and Tribune, Kans., in one or more of the years from 1922 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926				
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
HAYS—continued.														
Beldi Dwarf	190	2	41.8			2	34.4	2	6.5	2	26.6	27.3	4	89.2
Club Mariout [1]	261	2	42.6			2	38.3	2	6.3	2	35.5	30.6	4	100
Coast	690	2	40.6			2	34.0	2	4.4	2	32.5	27.4	4	89.5
Trebi	936	2	40.5										1	95.1
Stavropol	2103	2	36.7			2	30.7	2	7.3	2	27.1	25.5	4	83.3
Meloy	1176	2	36.0			2	28.1	2	5.8	2	27.9	24.5	4	80.1
Gatami	575	2	35.2			2	33.1	2	3.6	2	27.1	24.8	4	81.0
Himalaya	620	2	35.4			2	28.4	2	2.1	2	22.7	22.2	4	72.5
Hannchen	531	2	34.9			2	19.0	2	4.7	2	29.1	21.9	4	71.6
Odessa	182	2	34.9			2	25.0	2	2.4	2	25.5	22.0	4	71.9
Svanhals	187	2	32.5										1	76.3
Manchuria	244	2	28.1										1	66.0
Cape-Coast Hybrid No. 11	4595					2	30.5	2	1.6	2	24.7		3	78.6
Winter barleys:														
Tennessee winter [2]	257					2	37.5	2	0				2	100
Orel	351					2	27.6	2	0				2	73.4
COLBY														
Ellis	2107	2	24.2	2	36.9	2	22.2	2	19.6	2	0	20.5	5	97.2
White Smyrna		2	17.5	2	34.3	2	19.3	2	23.0	2	0	18.8	5	89.1
Gatami	575	2	15.9	2	33.3	2	16.6	2	16.0	2	0	16.4	5	77.7
Manchuria	244	2	12.9	2	21.6	2	11.1	2	12.4	2	0	11.6	5	55.0
Coast	690	2	22.2	2	27.3	2	20.0	2	19.6	2	0	17.8	5	84.4
Club Mariout [1]	261	2	32.1	2	31.5	2	20.4	2	21.3	2	0	21.1	5	100
Flynn	1311	2	31.6	2	30.4	2	20.6	2	19.2	2	0	20.4	5	96.7
Stavropol	2103	2	14.6	2	29.1	2	21.4	2	24.0	2	0	17.8	5	84.4
Meloy	1176	2	21.3	2	23.2	2	15.2	2	20.0	2	0	16.9	5	75.4
Blackhull	878	2	20.4	2	39.4	2	15.2	2	18.6	2	0	18.7	5	88.6
California Mariout	1455	2	16.8	2	28.6	2	9.2	2	14.6				4	65.8
Local Malt	4643	2	25.6	2	28.9	2	18.0	2	20.8	2	0	18.7	5	88.6
Trebi	936	2	23.0	2	25.9	2	17.6	2	19.7	2	0	17.2	5	81.5
Odessa	182			2	31.9	2	18.3	2	24.0	2	0		4	101.6
Hannchen	531			2	30.0	2	18.3	2	22.5	2	0		4	98.7
Svanhals	187			2	22.3	2	15.7	2	22.7	2	0		4	83.1
Beldi Dwarf	190			2	32.4	2	12.6	2	18.5	2	0		4	86.9
Unnamed	4670			2	29.1	2	14.4	2	19.5	2	0		4	86.3
Shloh Hull-less	4680			2	23.1	2	13.3	2	13.9	2	0		4	68.9
Wingfield Malt	4644							2	24.5	2	0		2	115.0
Himalaya	620							2	9.7	2	0		2	45.8
Nepal	595							2	9.5	2	0		2	44.9
GARDEN CITY														
Club Mariout [1]	261		(3)	1	30.2	1	47.8	1	29.4	1	35.0	35.6	4	100
Coast	690		(3)	1	26.0	1	41.1	1	21.3	1	38.5	31.7	4	89.0
White Smyrna			(3)	1	28.6	1	28.8	1	30.6	1	36.2	31.1	4	87.4
Odessa	182		(3)	1	29.2	1	33.1	1	24.4	1	19.8	26.6	4	74.7
Manchuria	244		(3)	1	15.1	1	21.4	1	13.1				3	46.1
Stavropol	2103		(3)							1	30.3		1	86.6
TRIBUNE														
Coast	690	2	7.8	2	16.7	4	24.0	4	15.9	4	10.6	15.0	5	89.8
Stavropol	2103	2	11.3	2	17.2	4	24.8	4	14.0	4	10.6	15.6	5	93.4
Club Mariout [1]	261	2	13.5	2	17.8	4	22.7	4	15.2	4	14.2	16.7	5	100
Local (Stavropol type)	4645	2	12.6	2	19.9			4	16.8	4	13.7		4	103.9
White Smyrna		2	12.4										1	91.9
Trebi	936	2	10.9										1	80.7
Hull-less				2	12.3								1	69.1

[1] Standard variety with which others are compared.
[2] Harvested grain at Garden City in 1922 scattered by very high wind; yields could not be accurately ascertained.

FORT HAYS BRANCH EXPERIMENT STATION, HAYS, KANS.

Most of the varieties grown at the Fort Hays Branch Experiment Station were included during all four years in which data were obtained so that the average yields in Table 9 form a good index of the producing qualities of the varieties grown. This is perhaps most apparent in the percentage comparisons with Club Mariout (C. I. No. 261), which was distinctly superior to most of the varieties grown. It was not, however, materially better than White Smyrna (C. I. No. 195) and Flynn (C. I. No. 1311). The difficulties of harvesting White Smyrna are such, however, that Flynn is the only real competitor. Flynn is a smooth-awned variety, which may more than compensate for the slight difference in yield favoring Club Mariout. The 0.7 bushel difference of the four comparable years is hardly sufficient to enable the grower to make a choice between these two varieties on the basis of yield alone. Stavropol has long been the standard variety of northwestern Kansas. Coast is very similar to Stavropol, but it has given a somewhat better average. Blackhull (C. I. No. 878), which is a good variety in Colorado, has proved satisfactory, though not superior at Hays. The hooded and naked varieties have not shown promise here. Barleys of the Manchuria type are not well adapted to this section. One of these was included in the test for a single year only. Winter varieties produced satisfactory yields in years when they did not winterkill. Winterkilling, however, occurs so frequently that the average yield is likely to be much less than that from the spring sorts.

COLBY BRANCH EXPERIMENT STATION, COLBY, KANS.

The results at Colby are indicative of the value of varieties for the important barley-growing section of northwestern Kansas. As may be seen in Table 9 a considerable number of varieties have been tested at this place. Of those varieties which were grown in all the five years, 1922 to 1926, Club Mariout (C. I. No. 261) produced the highest average yield. As at Hays, Flynn (C. I. No. 1311) was almost as good as Club Mariout. Ellis (C. I. No. 2107) is a variety of the Stavropol type, but it gave a higher yield than either Coast or Stavropol. The Wingfield Malt (C. I. No. 4644), which was grown in only two years, belongs to the same group. Blackhull (C. I. No. 878) did not rank so well as it did at Hays. Manchuria (C. I. No. 244) was grown at Colby for the full five years but produced a yield only 55 per cent of that of Club Mariout. The hull-less and hooded varieties were distinctly inferior to the awned hulled sorts, as they were at Hays.

GARDEN CITY BRANCH EXPERIMENT STATION, GARDEN CITY, KANS.

Only six varieties of barley were grown during the 5-year period at Garden City and of these one was grown for a single year and another for only three years. Club Mariout (C. I. No. 261) was the highest yielding variety, as may be seen in Table 9. Coast (C. I. No. 690) White Smyrna, and Stavropol (C. I. No. 2103) produced good yields, but were markedly inferior to Club Mariout. The yield of Manchuria (C. I. No. 244) was very low, as compared with that of Club Mariout. It was discontinued after three years.

TRIBUNE BRANCH EXPERIMENT STATION, TRIBUNE, KANS.

At Tribune three varieties were grown for the full 5-year period, one for four years and three for one year each. Of those grown in the five seasons Club Mariout (C. I. No. 261) was the leading variety, although the yield of Stavropol was very good and that of Coast (C. I. No. 690) satisfactory. (Table 9.) The Stavropol type from seed obtained locally (C. I. No. 4645) averaged a little higher in yield than Club Mariout in four years.

MICHIGAN

AGRICULTURAL EXPERIMENT STATION, EAST LANSING, MICH.

E. E. DOWN, *Assistant Professor of Farm Crops;* H. M. BROWN, *Research Assistant in Farm Crops*

No varietal work was conducted during 1922, 1923, and 1924. In 1925 and 1926 Michigan Two-Row (C. I. No. 2782), a 2-rowed variety of the Hanna group, was distinctly superior to others grown. This is in line with the earlier work at East Lansing and is a point of real interest. In most of the area east of the Mountain States 2-rowed barleys are not well adapted. As a rule they are much inferior to strains of Manchuria. Where 2-rowed sorts are equal in yield they offer certain advantages. The kernels are usually both larger and plumper.

TABLE 10.—*Acre-yield comparisons of varieties of barley grown at the Michigan Agricultural Experiment Station, East Lansing, in one or both of the years 1925 and 1926*

[Data obtained through the courtesy of the Michigan Agricultural Experiment Station]

Variety	C. I. No.	Mich. No.	Yield in comparison with Michigan Two-Row				
			1925		1926		2-year average
			Number of plots	Per cent	Number of plots	Per cent	
Michigan Two-Row (Heil Hanna No. 1)	2782	124	20	100	18	100	100
Michigan 04103	4649	68	6	81.2	4	95.4	88.3
Michigan 04113	4650	68	6	96.0	4	94.1	95.1
Velvet	4252	95	6	71.0	4	98.8	84.8
Chatham	4647	98	6	72.0	4	104.8	88.4
Glabron	4577	99	6	82.2	4	102.0	92.1
Minnesota 450	4646	100	6	87.0	4	105.0	96.0
Manchuria (Wis. Ped. No. 9)	1275	101	6	77.0	4	86.8	81.9
Lion (Michigan Black Barbless)	923	102	6	79.0	4	96.3	87.7
Wilk Two-Row	4648	103	6	80.3	4	61.3	70.8
Colsess	2792	120	------	------	4	84.0	------
Alpha	959	121	------	------	4	84.9	------
Hull-less (Coelest)	4681	122	------	------	4	72.8	------

The annual yields in Table 10 are expressed in percentages of Michigan Two-Row. In 1926 some of the smooth-awned hybrids from the Minnesota station were promising, but their yields for the two years were not so good as those of the Michigan Two-Row. Minnesota 450 (C. I. No. 4646) produced the highest yields of the smooth-awned varieties. It was almost the equal of Michigan Two-Row. Michigan 04103 (C. I. No. 4649) and 04113 (C. I. No. 4650) are deciduous, most of the awns dropping by harvest time. These varieties

are early, are characterized by stiff straw, and have yielded better than Manchuria. The smooth-awned barleys have persistent awns under Michigan conditions and seem less desirable on that account. Chatham (C I. No. 4647) is a smooth-awned selection from Velvet (C. I. No. 4252) made at the Michigan station. Wilk Two-Row (C. I. No. 4648) is a selection made from a field of 6-rowed barley. It is at least seven days later than Manchuria (C. I. No. 1275) at East Lansing.

MINNESOTA

Varietal tests of barley were conducted at six points in Minnesota in each of the five years 1922 to 1926, inclusive. These six stations are as follows: The University Farm at St. Paul, the Northeast Demonstration Farm and Substation at Duluth, the Southeast Demonstration Farm and Substation at Waseca, the North-Central Substation at Grand Rapids, the West-Central Substation at Morris, and the Northwest Substation at Crookston.

The manner of conducting experiments was similar at all points, and with minor exceptions the same list of varieties was grown at all stations. Manchuria has been a prominent commercial variety in Minnesota for many years. Minnesota 184 (Manchuria, C. I. No. 2330) is the best of many selections of Manchuria made at St. Paul. In Table 11, in which the yields at the various points are reported, Manchuria (C. I. No. 2330) is used as a standard of comparison.

TABLE 11.—*Acre yields of varieties of barley grown at the Minnesota Agricultural Experiment Station, University Farm, St. Paul; at the Northeast Demonstration Farm and Substation, Duluth; at the Southeast Demonstration Farm and Substation, Waseca; at the North-Central Substation, Grand Rapids; at the West-Central Substation, Morris; and at the Northwest Substation, Crookston, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Minnesota Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Minn. No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Manchuria	
			1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
St. Paul:										
Glabron	4577	445	67.2	33.8	40.4	52.5	59.5	50.7	5	127.7
Velvet	4252	447	67.2	28.2	25.4	46.3	48.5	43.1	5	108.6
Manchuria	2330	184	48.3	35.4	25.4	46.2	43.2	39.7	5	100
Minsturdi	1556	439	54.1	24.1	41.2	33.5	40.9	42.8	5	107.8
Oderbrucker	1529	454	54.1	31.3	35.8	39.0	39.1	39.9	5	100.5
Svansota	1907	440	74.8	35.2	37.2	43.1	36.4	46.3	5	116.6
Comfort	4578	451	------	28.9	34.8	43.4	47.1	------	4	102.7
Trebi	936	448	------	23.9	43.4	55.2	43.2	------	4	110.1
Manchuria × Smooth Awn	4668	458	------	------	------	------	55.9	------	1	129.4
Do	4667	457	------	------	------	------	55.4	------	1	128.2
Do	4669	459	------	------	------	------	45.8	------	1	106.0
Duluth:										
Velvet	4252	447	42.5	35.2	37.3	28.3	45.6	37.4	5	113.7
Glabron	4577	445	36.2	41.1	30.5	26.2	45.1	35.8	5	108.8
Manchuria	2330	184	31.3	44.0	34.8	11.4	43.2	32.9	5	100
Svansota	1907	440	25.8	37.3	37.9	30.7	40.5	34.4	5	104.6
Trebi	936	448	------	38.7	28.9	46.4	50.6	------	4	123.4
Comfort	4578	451	------	41.9	36.0	------	50.4	------	3	105.2
Oderbrucker	1529	454	------	------	------	27.6	44.2	------	2	131.5
Manchuria × Smooth Awn	4668	458	------	------	------	------	48.5	------	1	112.3
Do	4667	457	------	------	------	------	46.0	------	1	106.5

TABLE 11.—*Acre yields of varieties of barley grown at the Minnesota Agricultural Experiment Station, University Farm, St. Paul; at the Northeast Demonstration Farm and Substation, Duluth; at the Southeast Demonstration Farm and Substation, Waseca; at the North-Central Substation, Grand Rapids; at the West-Central Substation, Morris; and at the Northwest Substation, Crookston, in one or more of the years from 1922 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Minn. No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Manchuria	
			1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Waseca:										
Velvet	4252	447	65.0	50.9	68.5	60.6	56.1	60.2	5	99.2
Manchuria	2330	184	70.4	49.5	70.3	58.2	55.1	60.7	5	100
Svansota	1907	440	72.1	53.5	72.5	58.9	52.6	61.5	5	101.3
Glabron	4577	445	70.4	47.0	74.2	58.3	46.8	59.3	5	97.7
Minsturdi	1656	439	65.6	39.1	53.6	51.9	40.6	50.2	5	82.7
Trebi	936	448	------	62.2	82.5	64.5	60.6	------	4	115.8
Comfort	4578	451	------	50.9	66.8	58.0	47.9	------	4	95.9
Oderbrucker	1529	454	------	------	------	60.6	49.7	------	2	97.4
Manchuria × Smooth Awn	4667	457	------	------	------	------	54.2	------	1	98.4
Do	4668	458	------	------	------	------	52.1	------	1	94.6
Do	4669	459	------	------	------	------	45.6	------	1	82.8
Grand Rapids:										
Svansota	1907	440	41.0	35.3	22.4	------	47.0	------	4	104.0
Manchuria	2330	184	41.5	30.5	24.5	17.4	43.5	31.5	5	100
Glabron	4577	445	44.2	34.3	27.1	26.7	39.0	34.3	5	108.9
Trebi	936	448	------	31.2	29.7	------	54.0	------	3	118.8
Comfort	4578	451	------	37.5	27.6	11.2	32.6	------	4	93.8
Velvet	4252	447	------	23.2	24.9	14.6	29.0	------	4	79.0
Oderbrucker	1529	454	------	------	------	25.6	32.7	------	2	95.7
Manchuria × Smooth Awn	4667	457	------	------	------	------	51.0	------	1	117.2
Colsess	2792	------	------	------	------	------	45.4	------	1	104.4
Manchuria × Smooth Awn	4668	458	------	------	------	------	36.8	------	1	84.6
Morris:										
Glabron	4577	445	29.0	36.8	46.6	42.0	30.3	36.9	5	104.5
Svansota	1907	440	26.6	43.2	46.5	43.5	26.2	37.2	5	105.4
Velvet	4252	447	30.3	39.3	37.4	42.2	25.5	34.9	5	98.9
Manchuria	2330	184	31.0	37.5	40.8	43.1	24.1	35.3	5	100
Trebi	936	448	------	38.6	46.8	41.4	32.9	------	4	109.6
Comfort	4578	451	------	37.6	36.1	44.7	29.5	------	4	101.6
Oderbrucker	1529	454	------	------	------	34.8	23.1	------	2	86.3
Manchuria × Smooth Awn	4667	457	------	------	------	------	28.8	------	1	119.5
Do	4668	458	------	------	------	------	27.4	------	1	113.7
Do	4669	459	------	------	------	------	24.5	------	1	101.7
Crookston:										
Velvet	4252	447	53.0	37.8	31.3	32.2	45.4	39.9	5	99.0
Glabron	4577	445	58.2	34.1	45.8	32.3	41.2	42.3	5	105.0
Manchuria	2330	184	53.6	34.8	44.1	30.3	38.6	40.3	5	100
Svansota	1907	440	56.8	38.7	41.6	39.8	32.4	41.9	5	104.0
Trebi	936	448	------	38.4	47.0	48.6	42.5	------	4	119.2
Comfort	4578	451	------	42.8	33.0	42.4	36.7	------	4	104.6
Oderbrucker	1529	454	------	------	------	29.7	41.2	------	2	102.9
Manchuria × Smooth Awn	4667	457	------	------	------	------	39.0	------	1	101.0
Do	4669	459	------	------	------	------	38.4	------	1	94.3
Do	4668	458	------	------	------	------	34.5	------	1	89.4

UNIVERSITY FARM, ST. PAUL, MINN.

A. C. ARNY, *in Charge of Farm Crops*

Six varieties of barley were grown in each of the five years reported in Table 11. The highest average yield was produced by Glabron (C. I. No. 4577). For a number of years the breeding work in Minnesota has been centered on the production of smooth-awned varieties. That this work and the production of desirable rough-awned types has proceeded satisfactorily is evidenced by the fact that Manchuria (C. I. No. 2330) produced the lowest comparative yield of all the

varieties tested. Manchuria and Svansota (C. I. No. 1907) are rough-awned varieties of hybrid origin. Both have produced satisfactory yields. Of the varieties tested less than five years the yield of Trebi (C. I. No. 936) is the most surprising. This variety, introduced by the United States Department of Agriculture, is a high producer in the West under irrigation. In Minnesota it is susceptible to leaf diseases which are common in this section. Nevertheless, it produced a high yield at all of the Minnesota stations.

NORTHEAST DEMONSTRATION FARM AND SUBSTATION, DULUTH, MINN.

The results at Duluth were characterized by the high average yield of Velvet (C. I. No. 4252) which at this station was superior to Glabron (C. I. No. 4577), the leading smooth-awned variety elsewhere in the State. (Table 11.) Svansota (C. I. No. 1907) was superior to Manchuria (C. I. No. 2330), its average yield being 1½ bushels less than that of Glabron. Trebi (C. I. No. 936) was again outstanding in the years in which it was grown. In two of the four years Glabron produced slightly more grain than Trebi, but in the other two years the margin of difference was greatly in favor of Trebi. Comfort (C. I. No. 4578) was grown for three years only, but during those years its yields were high. This is a smooth-awned sort, although less smooth than Glabron or Velvet.

SOUTHEAST DEMONSTRATION FARM AND SUBSTATION, WASECA, MINN.

Five varieties were grown at Waseca in all of the five years 1922 to 1926. Of these five varieties Svansota (C. I. No. 1907) produced the highest average yield. (Table 11.) This yield, however, was scarcely more than 2 bushels higher than that of Glabron (C. I. No. 4577), which ranked fourth. The yields of Manchuria (C. I. No. 2330) and Velvet (C. I. No. 4252) were higher than that of Glabron. The yield of Minsturdi (C. I. No. 1556) was significantly less than that of the four leading varieties. Trebi (C. I. No. 936) also produced high yields at Waseca. In each of the four years in which it was grown its yield exceeded that of any other variety.

NORTH-CENTRAL SUBSTATION, GRAND RAPIDS, MINN.

Manchuria (C. I. No. 2330) and Glabron (C. I. No. 4577) were the only two varieties grown in all five years at Grand Rapids. The average yield of Glabron exceeded that of Manchuria by almost 3 bushels. (Table 11.) Of the varieties grown less than five years, Trebi (C. I. No. 936) and Svansota (C. I. No. 1907) were the most promising. Minnesota 457 (C. I. No. 4667), a smooth-awned selection, produced a high yield in the one year in which it was grown.

WEST-CENTRAL SUBSTATION, MORRIS, MINN.

The range of yields of the varieties grown at Morris was less than at St. Paul. Of the varieties carried for the full 5-year period Svansota (C. I. No. 1907) produced the highest yield. This yield, however, was only approximately 2 bushels greater than that of Velvet (C. I. No. 4252), the lowest yielding of the four comparable varieties. (Table 11.) Glabron (C. I. No. 4577) was superior to Velvet. Of the varieties grown less than five years Trebi (C. I. No. 936) was distinctly the best. Three smooth-awned varieties were tested for a single year.

NORTHWEST SUBSTATION, CROOKSTON, MINN.

The results at Crookston were very similar to those at Morris. The same four varieties, Velvet (C. I. No. 4252), Glabron (C. I. No. 4577), Manchuria (C. I. No. 2330), and Svansota (C. I. No. 1907), were grown in all of the five years. Their relative yields were approximately the same, although at this station Glabron produced slightly more grain than Svansota. (Table 11.) Of the varieties grown less than five years Trebi (C. I. No. 936) was again outstanding. Its performance at Crookston was relatively better than at Morris. More grain was produced by Trebi than by Glabron in each of the four years in which they were comparable. Trebi, Glabron, and Svansota were the outstanding varieties tested.

MISSOURI

AGRICULTURAL EXPERIMENT STATION, COLUMBIA, MO.

W. C. ETHERIDGE, *Professor and Chairman of Department of Field Crops*

In the past five years there has been little activity in barley testing in Missouri. During 1922 and 1923 a number of varieties were grown in a rod-row test at Columbia. (Table 12.) In 1922 the varieties were replicated 11 times while 10 replications were grown in 1923. It is probable that essentially the same relative results would have been obtained in plots, and in the absence of plot tests these nursery yields are reported. Manchuria (C. I. No. 956) is used as a basis of comparison. Odessa (C. I. No. 927) has the same average yield as Manchuria. Frankish (C. I. No. 953) was the only variety grown in both years which exceeded Odessa and Manchuria in average yield. Barleys of the Manchuria group were among the better yielding sorts. Horsford (C. I. No. 507) was the only hooded variety grown, and its yield was distinctly less than that of the awned types.

TABLE 12.—*Acre yields of varieties of barley grown at the Missouri Agricultural Experiment Station, Columbia, in one or both of the years 1922 and 1923*

[Data obtained through the courtesy of the Missouri Agricultural Experiment Station]

Variety	C. I. No.	Mo. No.	Acre yield (bushels)			Number of comparable years and yield in comparison with Manchuria	
			1922	1923	2-year average	Number	Per cent
Luth	908	B3	3.8	27.4	15.6	2	94.0
Lion	923	B8	7.1	23.5	15.3	2	92.2
Odessa	927	B11	4.4	28.7	16.6	2	100
Summit	929	B12	3.9	25.9	14.9	2	89.8
Trebi	936	B16	4.7	24.6	14.7	2	88.6
Sandrel	937	B17	6.0	22.0	14.0	2	84.3
Frankish	953	B19	4.3	30.6	17.5	2	105.4
Manchuria	956	B20	6.1	27.0	16.6	2	100
Featherston	1120	B27	8.0	----------	----------	1	131.1
Oderbrucker	537	B35	6.0	24.0	15.0	2	90.4
Horsford	507	B32	5.3	20.3	12.8	2	77.1
Oderbrucker	957	B21	----------	31.4	----------	1	116.3

MONTANA

Barley varieties were compared in Montana at the Montana Agricultural Experiment Station, Bozeman; the Judith Basin Branch Station, Moccasin; the Northern Montana Branch Station, Havre; and the Huntley Field Station, Huntley. At Moccasin and at

Huntley the work was conducted in cooperation with the Offices of Cereal Crops and Diseases and of Western Irrigation Agriculture, Bureau of Plant Industry, respectively.

TABLE 13.—*Acre yields of varieties of barley grown at the Montana Agricultural Experiment Station, Bozeman; at the Judith Basin Branch Station, Moccasin; at the Northern Montana Branch Station, Havre; and at the Huntley Field Station (under irrigation) in one or more of the years from 1922 to 1926, inclusive*

[Data for Bozeman and for Havre obtained through the courtesy of the Montana Agricultural Experiment Station; for Moccasin in cooperation with the Montana Agricultural Experiment Station; and for Huntley through the courtesy of the Office of Western Irrigation Agriculture]

Station and varieties compared	C. I. No.	Mont. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard varieties named	
			1922		1923		1924		1925		1926				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Bozeman:															
Chevalier	530	1530	1	59.6	1	73.3	1	64.4	1	38.4	1	83.3	63.8	5	74.5
Club Mariout	261	1523	1	70.4	1	64.3	1	65.3	1	40.5	1	75.0	63.1	5	73.7
Coast	696	1521	3	77.5	3	60.5	3	68.6	3	43.5	1	62.5	62.5	5	73.0
White Smyrna	910	1507	1	37.9	1	74.5	1	48.7	1	32.4	1	55.0	53.7	5	62.7
Horn	926	1539	1	68.3	3	72.4	3	81.0	3	61.3	3	79.2	72.4	5	84.6
Himalaya	620	1542	3	72.9	1	61.5	3	85.1	3	38.6	3	66.4	64.9	5	75.8
Trebi [1]	936	1500	3	85.7	3	85.9	3	116.6	3	51.7	3	88.1	85.6	5	100
Nepal	595	1520	3	66.5	3	56.1	3	57.6	3	36.5	3	78.6	59.1	5	69.0
Steigum	907	1547			1	70.6	1	70.8	1	48.2	1	79.2		4	78.5
Hornford	507	1550			3	62.0	1	75.8	1	27.2	1	64.2		4	68.9
Eureka	1250	1556			1	52.1	1	72.8	1	32.8	1	66.7		4	65.5
Union Hybrid	4674	1568					1	89.2	1	49.3	3	93.0		3	90.3
Colsess	2792	1572					1	57.5	1	37.4	1	62.5		3	61.4
Faust	4579	1573							1	47.3	3	76.1		2	88.3
Union Hybrid	4675	1574									3	87.5		1	99.3
Do	4676	1575									3	92.8		1	105.3
Moccasin:															
White Smyrna	195		5	42.4	4	44.0	4	43.5	4	42.2	4	40.5	42.5	5	88.2
Svanhals	187		5	43.1	4	45.6	4	39.6	4	31.2	4	48.9	41.7	5	86.5
Hannchen	531		5	40.4	4	52.6	4	43.8	4	33.6	4	52.1	44.5	5	92.3
Franconian	680		5	33.5	4	44.5	4	30.5	4	25.8				4	73.7
Horn [1]	926		5	45.9	4	52.1	4	45.8	4	38.6	4	58.6	48.2	5	100
Coast	696		5	40.6	4	38.0	4	44.7	4	43.2	4	44.8	44.1	5	91.5
Club Mariout	261		5	52.0	4	31.0	4	43.2	4	47.9	4	40.6	42.9	5	89.0
Meloy	1176		5	52.7	4	39.3	4	51.2	4	42.5	4	50.4	47.2	5	97.9
Himalaya	620		5	41.3	4	15.8	4	37.6	4	32.9	4	38.0	33.1	5	68.7
White Smyrna	910		1	40.6										1	88.5
July	1563		1	34.9	2	45.3	2	37.6	2	29.7				4	80.9
Manchuria	244		1	41.1	2	48.0	2	33.1	2	24.8	2	38.8	37.2	5	77.2
Nepal	595		1	28.6	2	27.1	2	32.6	2	37.0				4	72.6
Hurst	1304				4	41.2	4	45.7	4	40.3	4	44.7		4	88.1
Mechanical Mixture	4115						2	38.6	2	44.3	2	51.1		3	93.7
Composite Cross	4116						2	38.0	2	44.8	2	50.0		3	92.9
Hero	1286										1	43.6		1	74.4
Faust	4579										2	44.8		1	76.5
Alpha	959										4	49.5		1	84.6
Havre:															
Coast	696		3	8.1	3	20.5	3	24.3	3	26.4	3	9.7	17.8	5	94.2
Han River	206		3	5.2	3	24.0	3	18.5	3	23.3	3	8.3	15.9	5	84.1
Horn [1]	926		3	4.0	3	27.1	3	20.0	3	33.0	3	10.4	18.9	5	100
Goldfoil	928		3	4.9	3	22.2	3	22.9	3	22.9				4	86.7
Beldi Giant	2777		3	5.4	3	11.8	3	23.6	3	26.0	3	9.7	15.3	5	81.0
Sandrel	937		3	5.6	3	26.0	3	22.6	3	25.3	3	10.1	18.2	5	96.3
Holland	952		3	5.9	3	25.3	3	18.0	3	27.4	3	9.4	17.2	5	91.0
Trebi	936		3	6.0	3	30.6	3	23.2	3	24.0	3	10.1	18.8	5	99.5
Flynn	1311		3	8.3	3	18.1	3	25.7	3	27.8	3	7.6	17.5	5	92.6
Meloy	1176		3	5.9	3	17.0	3	25.7	3	27.1	3	10.1	17.2	5	91.0
Svanhals	187		3	5.0										1	125.0
Nepal	595				3	18.4	3	15.4	3	19.1	3	3.5		4	82.4
Faust	4579										3	6.3		1	60.6
Huntley:															
Trebi [1]	936				11	62.8	3	61.3	2	53.4	7	70.2	61.9	4	100
Himalaya	620							35.2	2	28.0				2	55.1

[1] Standard variety with which others are compared.

On the basis of results now available the agronomy department of the Montana Agricultural Experiment Station recommends Trebi (C. I. No. 936) and Horn (C. I. No. 926) as standard varieties for the State. Trebi is an outstanding variety for irrigated land, while Horn is preferred for nonirrigated districts. Hannchen is now grown on nonirrigated lands, but Horn is superior and will entirely replace Hannchen as soon as sufficient seed of Horn becomes available.

AGRICULTURAL EXPERIMENT STATION, BOZEMAN, MONT.

CLYDE MCKEE, *Head of Department of Agronomy*

Sixteen varieties of barley were tested in one or more years at Bozeman. Eight varieties were grown for the entire period of five years, and Trebi (C. I. No. 936) produced the highest yield and is used as a standard of comparison in Table 13. Second in rank was Horn (C. I. No. 926). Its average yield, however, was only 84.6 per cent of that of Trebi. White Smyrna (C. I. No. 910) and Nepal (C. I. No. 595) produced the lowest yields of the eight varieties continuously grown. Of the varieties tested less than five years the highest relative yield was that of Union Hybrid (C. I. No. 4674). Union Hybrid (C. I. Nos. 4675 and 4676) also produced high yields in 1926, the only year in which they were grown. The second of these two hybrids yielded more grain than Trebi in that year. Both produced slightly less than Union Hybrid (C. I. No. 4674). The lowest relative yield was obtained from Colsess (C. I. No. 2792), a hooded barley which after tests covering three years does not seem to be well adapted to Montana conditions.

JUDITH BASIN BRANCH STATION, MOCCASIN, MONT.

Nineteen varieties of barley were included in the tests at Moccasin for one or more years in the period 1922 to 1926, inclusive. Of these varieties nine were grown in all five years. (Table 13.) In 1922 those varieties which were grown on single plots were on rather thin soil. In 1923 Coast (C. I. No. 690), Club Mariout (C. I. No. 261), Meloy (C. I. No. 1176), Himalaya (C. I. No. 620), and Hurst (C. I. No. 1304) were injured by hail. The highest 5-year average yield was obtained from Horn (C. I. No. 926), the yield of Meloy (C. I. No. 1176) being only slightly less. Good yields were obtained also from Hannchen (C. I. No. 531) and Coast (C. I. No. 690). Of the varieties grown for less than five years the relative yields of C. I. Nos. 4115 and 4116 are interesting. The first of these consisted of a mechanical mixture of 11 prominent varieties. The second consisted of the mixed progeny of a number of crosses between these varieties. The naked varieties, Himalaya (C. I. No. 620), Nepal (C. I. No. 595), and Faust (C. I. No. 4579), were not particularly promising.

NORTHERN MONTANA BRANCH STATION, HAVRE, MONT.

At Havre, Horn (C. I. No. 926) is well adapted and is used as a basis of comparison in Table 13. It produced the highest average yield of all varieties grown in all five years. Its average yield, however, was practically identical with that of Trebi (C. I. No. 936). The yield of Sandrel (C. I. No. 937) was good also. Trebi and Horn are probably the two best varieties which have been tested.

HUNTLEY FIELD STATION, HUNTLEY, MONT.

Two varieties were grown at Huntley during the four years 1923 to 1926, inclusive. In previous years several were grown, Trebi (C. I. No. 936) being the best. During the four years tested Trebi produced an average yield of 61.9 bushels. The yield of Himalaya (C. I. No. 620) was a little more than half that of Trebi in the two years it was grown. (Table 13.)

NEBRASKA

Varietal tests have been conducted in Nebraska at the State agricultural experiment station at Lincoln and the North Platte Substation at North Platte.

AGRICULTURAL EXPERIMENT STATION, LINCOLN, NEBR.

T. A. KIESSELBACH, *Professor of Agronomy*, W. E. LYNESS, *Assistant in Agronomy*, and L. L. ZOOK, *Agronomist, North Platte Substation*

Yields were obtained at Lincoln in only four of the five years 1922 to 1926, inclusive. The crop of 1926 was so severely injured by chinch bugs and other outside factors that the yields were not considered dependable. In Table 14 Manchuria (C. I. No. 2330) is used as a standard of comparison. The yield of this variety was but slightly more than the average of the varieties tested. The average of the nine varieties tested for the four years is 18.5. Of those varieties grown in all four years the highest returns were obtained from White Smyrna (C. I. No. 658). Odessa (C. I. No. 182) produced a high yield, and Oderbrucker (C. I. No. 1529) was slightly better than Manchuria (C. I. No. 2330). A number of new varieties were introduced into the tests in 1923 and 1924. Owing to the combination of good yield and somewhat smoother awns than Minnesota 450 (C. I. No. 4646), Comfort (C. I. No. 4578) is regarded as the most desirable of the five barbless varieties tested under Nebraska conditions. Its yield was 18.2 per cent above that of Manchuria during three years. Trebi (C. I. No. 936) also produced relatively high yields in the two years in which it was grown. The hooded and naked varieties were not satisfactory in general.

NORTH PLATTE SUBSTATION, NORTH PLATTE, NEBR.

At North Platte also yields were obtained in only four of the five years. In 1922 the varieties were mixed by a storm, so that no yields are available for that year. In Table 14 Manchuria (C. I. No. 2330) is used as a basis of comparison. Seven varieties were grown in all of the five years reported. In this group the highest average yield was obtained from Common Six-Row (C. I. No. 4640). This yield, however, was only slightly better than that of McClymont (C. I. No. 2126). The yield of Smyrna (C. I. No. 2642) was approximately equal to that of Manchuria. Several of the varieties grown for less than four years also compare favorably with Manchuria. This is particularly true of Sandrel (C. I. No. 937), the yield of which was 139.6 per cent of that of Manchuria for the same years. Both Mechanical Mixture (C. I. No. 4115) and Composite Cross (C. I. No. 4116) produced more than average yields. The returns from Club Mariout (C. I. No. 932) also were relatively good.

TABLE 14.—*Acre yields of varieties of barley grown at the Nebraska Agricultural Experiment Station, Lincoln, and at the North Platte Substation in one or more of the years from 1922 to 1926, inclusive*

[Data for Lincoln obtained through the courtesy of the Nebraska Agricultural Experiment Station and those for North Platte in cooperation with the Nebraska Agricultural Experiment Station]

Station and varieties compared	C. I. No.	State Nos.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
			1922		1923		1924		1925		1926 [1]		Average, 1922–1926 (bushels)		
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Lincoln:															
Manchuria	1580		2	20.0	2	30.2	2	15.8	2	10.0			19.0	4	96.4
Do [2]	2330	Minn. 184	2	18.0	2	30.8	2	16.6	2	13.4			19.7	4	100
Club Mariout	281		2	23.6	2	27.5	2	11.6	2	7.9			17.7	4	89.8
O. A. C. 21	1470	Kans. 7119	2	19.4	2	30.3	2	15.3	2	10.7			18.9	4	95.9
Odessa	182	S. Dak. 182	2	23.1	2	35.7	2	17.0	2	11.5			21.8	4	110.7
Oderbrucker	1529	N. Dak. 2121	2	24.6	2	28.6	2	16.3	2	10.1			19.9	4	101.0
Wing Pedigree	1177	N. Dak. 3101	2	19.1	2	21.4	2	15.2	2	10.3			16.5	4	83.8
White Smyrna	658	Kans. 7122	2	24.7	2	32.8	2	19.0	2	16.3			23.2	4	117.8
Nepal	595		2	8.6	2	15.8	2	7.4	2	8.0			10.0	4	50.8
Manchuria	1562		2	20.3	2	31.1								2	105.3
Bearded Six-Row	1703	Kans. 7024	2	21.5	2	36.5								2	118.9
Oderbrucker	1529	Wis. Ped. 6	2	22.5	2	24.6								2	96.7
Gatami	575	Kans. 7107	2	22.8	2	31.9								2	112.3
Horsford	507		4	16.6	4	23.1								2	81.6
Ace	1853	S. Dak. 1173	2	22.8	2	26.4								2	100.8
Svanhals	187		2	15.2	2	31.2								2	95.1
Chevalier	1826	Minn. 230	2	19.2	2	28.3								2	97.5
Hannchen	531	N. Dak. 1399	2	18.3	2	31.4								2	102.0
Minnesota 449	4651				2	35.0								1	113.6
Minnesota 450	4646				2	41.9	2	18.9	2	15.0				3	124.6
Comfort	4578	Minn. 451			2	40.3	2	18.3	2	13.3				3	118.2
Velvet	4252	Minn. 447					2	13.6	2	8.1				2	72.7
McClymont	2126						2	20.4	2	9.8				2	100.7
Trebi	936						2	19.6	2	13.5				2	110.7
Coast	4652						2	17.2	2	12.1				2	98.0
Flynn	1311						2	10.9	2	9.1				2	66.7
Lion	923						2	13.4	2	10.5				2	80.0
Horsford	4653								2	9.2				1	68.7
North Platte:															
Himalaya	620				2	18.1	2	20.8	4	17.1	2	1.3	14.3	4	85.1
Hannchen	531				2	29.5					2	1.5		2	124.0
Manchuria [2]	2330				2	23.3	3	24.1	4	17.9	3	1.2	16.8	4	100
Trebi	936				2	21.3	4	23.9	4	18.1	2	1.5	16.2	4	96.4
Common Six-Row	4640				7	22.8	14	29.9	4	22.7	3	1.4	19.2	4	114.3
Wisconsin Pedigree	835				2	16.7								1	70.2
Smyrna	2642				2	26.9	2	19.9	4	18.3	3	1.7	16.7	4	99.4
McClymont	2126				4	17.9	3	34.1	10	21.2	5	1.5	18.7	4	111.3
Coast	690				2	14.4	3	27.7	4	22.2	3	1.7	16.5	4	98.2
Sandrel	937						1	35.0	4	23.8	3	1.5		3	139.6
Composite Cross	4116						2	30.4	4	20.0	3	1.2		3	119.4
Mechanical Mixture	4115						2	27.4	4	21.1	3	1.4		3	115.3
Cape-Coast Hybrid No. 11	4654						3	26.9	4	14.8	2	.8		3	98.6
Blackhull	878						3	26.1	4	15.4	2	.6		3	97.2
Club Mariout	932						3	24.9	4	22.3	2	2.1		3	113.9
Snyder	4588						2	23.7	4	23.1	2	1.3		3	111.1
Coast	4591						2	23.3						1	96.7
Butler	4589						2	22.8	4	20.6	2	1.7		3	104.2
Smyrna	4585						2	21.2						1	88.0
Coast	4590						1	19.1						1	79.3
White Smyrna	195						2	18.7						1	77.6
California Mariout	1455						3	17.7						1	73.4
Smyrna	4587						2	17.4						1	72.2
Flynn	1311						2	17.0						1	70.5
Smyrna	4586						2	17.0						1	70.5
Do	4584						2	15.0						1	62.2
Colsess	2792											1.3		1	108.3

[1] Yields for 1926 at Lincoln were not reported because of severe damage by chinch bugs.
[2] Standard variety with which others are compared.

NEW JERSEY

AGRICULTURAL EXPERIMENT STATION, NEW BRUNSWICK, N. J.

GEORGE W. MUSGRAVE, *Agronomist*

Barley is not an important crop in New Jersey, and varietal tests were discontinued in 1926. As a consequence the results of only three years are reported in Table 15. Only two varieties were grown in all three years. Of these, Featherston (C. I. No. 1120) was slightly better than Manchuria (C. I. No. 244). For the two years in which it was grown, Alpha (C. I. No. 959) was decidedly superior to either Featherston or Manchuria. Club Mariout (C. I. No. 261) and White Smyrna (C. I. No. 658) are varieties well adapted to semi-arid climates, and yet in 1924 and 1925 they produced average yields at New Brunswick, exceeding that of Featherston and being somewhat below that of Alpha.

TABLE 15.—*Acre yields of varieties of barley grown at the New Jersey Agricultural Experiment Station, New Brunswick, in one or more of the years from 1923 to 1925, inclusive*

[Data obtained through the courtesy of the New Jersey Agricultural Experiment Station]

Variety	C. I. No.	Number of plots and acre yield						Average, 1923–1925 (bushels)	Number of comparable years and yield in comparison with Featherston	
		1923		1924		1925				
		Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Featherston	1120	2	25.4	10	36.0	10	29.8	30.4	3	100
Manchuria	244	2	23.0	10	37.7	10	28.7	29.8	3	98.0
Hannchen	531	2	18.2						1	71.7
Alpha	959			10	40.9	10	32.2		2	111.2
Club Mariout	261			10	34.6	10	32.1		2	101.5
White Smyrna	658			10	37.6	10	29.6		2	102.1

NEW MEXICO

AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE, N. MEX.

J. C. OVERPECK, *Professor of Agronomy*

The New Mexico Agricultural Experiment Station is located in a region of mild winter climate. Both spring and winter varieties produce good yields from fall seeding. The average yield of Tennessee Winter (C. I. No. 257), during the 5-year period from 1922 to 1926, inclusive, was 38.8 bushels. (Table 16.) This yield was exceeded, however, by the unnamed varieties C. I. No. 4672 and C. I. No. 4673. The latter variety produced an average yield of 52.3 bushels. Wisconsin Winter (C. I. No. 519) gave a good yield in 1922, the one year in which it was grown. Nepal (C. I. No. 4670) was grown in all of the five years, but its yield was low. Colsess (C. I. No. 2792) grown in only 1925 and 1926, produced a yield only 68 per cent of that of Tennessee Winter for the same years. The hooded varieties apparently are not well adapted to conditions in the Southwest.

TABLE 16.—*Acre yields of varieties of barley grown at the New Mexico Agricultural Experiment Station, State College, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the New Mexico Agricultural Experiment Station]

Varieties	C. I. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with Tennessee Winter	
		1922		1923		1924		1925		1926				
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Tennessee Winter	257	2	36.6	3	26.6	3	30.3	3	61.3	3	39.0	38.8	5	100
O. A. C. Sel. 7	2814	2	33.3	---	---	---	---	---	---	---	---	---	1	91.0
O. A. C. Sel. 8	2813	2	34.3	---	---	---	---	---	---	---	---	---	1	93.7
Unnamed	4672	2	40.9	2	52.2	3	24.5	3	59.0	3	43.2	44.0	5	113.4
Do	4673	2	40.4	3	46.5	3	33.7	3	74.4	3	61.5	52.3	5	134.8
Wisconsin Winter	519	2	40.5	---	---	---	---	---	---	---	---	---	1	110.7
Nepal	4670	1	32.0	8	9.4	3	25.5	3	18.6	3	23.5	21.8	5	56.2
Blue Ball	4671	---	---	4	17.1	3	27.1	---	---	---	---	---	2	77.5
Hanna	2788	---	---	---	---	---	---	1	36.8	3	43.7	---	2	80.3
Colsess	2792	---	---	---	---	---	---	3	36.1	3	32.3	---	2	68.1

NEW YORK

NEW YORK AGRICULTURAL EXPERIMENT STATION, CORNELL UNIVERSITY, ITHACA, N. Y.

H. H. LOVE, *Professor of Plant Breeding*

The varietal tests at Ithaca were not conducted in field plots but in rod rows. In Table 17 are given the results of all varieties tested in rod rows replicated 10 times. It is difficult to summarize the tests within the limits here allotted. For the convenience of the reader the last column of the table presents a statement of the percentage yield of each variety as compared with the yield of Featherston (C. I. No. 1120) for the same years. Most of the sorts tested were selections from fields of commercial barley in New York, from old standard varieties, or from hybrid progenies. A large number of varieties were first placed in the rod-row test in 1926. In this year the yield of the Featherston check was comparatively lower than in the other years of the 5-year period. As a consequence almost all of the selections grown only in 1926 produced relatively more than Featherston. The relative merits of these strains, however, are readily apparent.

TABLE 17.—*Acre yields of varieties of barley grown at the New York Agricultural Experiment Station at Cornell University, Ithaca, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained in cooperation with the New York Agricultural Experiment Station. The yields of ten 1-rod rows were taken as the basis of each test]

Variety	C. I. No.	Cornell No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Featherston	
			1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Silver King	----	101-48	38.8	33.2					2	104.3
Do	----	101-58	38.3	43.7	47.8	46.8	50.4	45.4	5	111.5
Do	----	101-35	37.2	29.7					2	97.1
Selection	----	106-157	36.2	33.8					2	101.4
Oderbrucker	----	103-53	36.2	33.9	48.3				3	94.7
Silver King	----	101-19	35.6	35.5	51.2	43.7			4	99.0
Oderbrucker	----	103-42	35.2	40.7	49.2	49.5	52.5	45.4	5	111.5
Do	----	103-13	35.1	34.2					2	100.6
Do	----	103-28	34.5	38.5	52.6	45.6	38.5	41.9	5	102.9
Do	----	103-16	34.4	37.0					2	103.5
Selection	----	106-120	32.9	36.6					2	100.9
Oderbrucker	1272	2389	32.6	40.9	46.0	47.2	45.1	42.4	5	104.2
Silver King	890	1828	32.3	39.4	49.0				3	93.4
Manchurian	4832	Ottawa 60	31.1	33.2		48.6	46.1		4	108.2
Unnamed	----	68a-4	30.3						1	107.4
Selection	----	106-22	30.0	34.8					2	93.9
Do	----	105-12	29.3						1	103.9
Featherston	1120	2299	28.2	40.7	56.3	42.4	35.8	40.7	5	100
Selection	----	105-8	29.1						1	103.2
Do	----	25a	29.1						1	103.2
Do	----	106-40	27.4						1	97.2
Trebi	936	2320	26.5						1	94.0
Selection	----	104-15	40.3	35.6	50.1	44.1			4	101.4
Do	----	105-133	40.2	38.0	49.2	45.1			4	102.9
Do	----	105-209	39.9	36.5					2	110.7
Do	----	105-266	39.8	37.2					2	111.6
Do	----	106-181	39.7	45.6	52.6	46.7	49.9	46.9	5	115.2
Unnamed	----	81a-5	39.5	38.4					2	113.0
Do	----	81a-10	39.0	37.4					2	110.7
Two-Row × Chevallier	----	81a-8	38.3	38.5	51.2	45.6			4	103.6
Selection	----	104-37	37.7	40.0	52.2	47.3	47.6	45.0	5	110.6
Norfut (Russian)	1007		37.0	37.5			44.1		3	113.2
Selection	----	105-244	36.2	41.5	50.3	47.3	44.4	43.9	5	107.9
Do	----	105-308	35.4	35.0					2	102.0
Unnamed	----	14a-1	34.7	38.5					2	106.1
Do	----	105-214	33.3						1	118.1
Do	----	104-14	33.0	42.7	56.7	52.7	52.2	47.5	5	116.7
Do	----	106-335	32.9						1	116.7
Manchuria × Champion of Vermont.	----	2294	31.5						1	111.7
Unnamed	----	82a-1	31.0						1	109.9
Do	----	2a-18-6-146		40.9	52.5				2	96.3
Do	----	2a-4		40.8	50.4	39.6			3	93.8
Do	----	2a-5-5-31		40.4					1	99.3
Lion × Manchuria	1191			37.8	48.5	41.6			3	91.6
Do	1192			37.5	51.9	44.4	57.7		4	109.4
Unnamed	----	2a-11-8-94		37.3	51.3	39.2			3	91.6
Do	----	2a-23-37-298		37.3	43.0				2	82.9
Lion	923			36.5	46.5	39.0			3	87.6
Lion × Manchuria	1196			36.3					1	89.2
Swiss Spring	----			35.8	62.0	58.2	46.3		4	114.4
Unnamed	----	2a-26-20-367		35.6	53.5	34.4			3	88.6
Do	----	2a-18-4		35.0	40.8	36.1			3	80.2
Do	----	2a-27-12-384		33.2					1	81.6
Do	----	2a-40-2-439		32.6	47.8	32.9			3	81.3
Do	----	2a-40-3-440		32.1	50.7	36.8			3	85.8
Do	----	2a-4-7-28		32.0					1	78.6
Do	----	2a-6-3-32		31.8					1	78.1
Alpha	959			46.9	55.6	40.5	40.4		4	105.3
Unnamed	----	55a-23		36.8					1	90.4
Do	----	2a-23-13-275-241			49.3	41.3	41.3		3	98.2
Do	----	2a-9-15-54-1			48.9	35.4			2	82.4
Do	----	2a-23-13-275-240			48.6	40.9	48.2		3	102.5
Do	----	2a-26-18-385-5			48.5	30.8			2	80.4
Do	----	2a-23-13-275-239			47.9				1	85.1
Do	----	2a-23-1-263-236			46.4	39.1			2	86.6
Do	----	2a-1-1-1			45.6	34.7			2	81.4
Do	----	2a-23-1-263-234			45.1	38.8			2	85.0
Do	----	2a-23-1-263-231			43.3				1	76.9
Do	----	2a-9-2-45-24			42.8	35.7			2	79.6
Do	----	2a-18-10-150-175			40.9	36.9			2	78.7

TABLE 17.—*Acre yields of varieties of barley grown at the New York Agricultural Experiment Station of Cornell University, Ithaca, in one or more of the years from 1922 to 1926, inclusive*—Continued

Variety	C. I. No.	Cornell No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Featherston	
			1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Unnamed		2a-27-3-375-344			40.2				1	71.4
Do		2a-0-5-48-30			39.7	37.5			2	78.1
Do		2a-0-5-48-33			36.3				1	64.5
Do		2a-18-7-147-166			34.9				1	62.0
Do		2a-23-1-263-229			34.4				1	61.1
Do		2a-23-1-263-230			34.3				1	60.9
Do		2a-0-5-48-27			33.2				1	59.0
Do		2a-0-2-45-20			30.8				1	54.7
Do		2a-9-2-45-21			29.2				1	51.9
Manchurian (2-rowed)		Cap Rouge 14			49.7	42.9			2	93.7
French						51.2	48.7		2	127.9
Abed Binderleyg						46.0	40.6		2	110.7
Wisconsin						47.8	51.0		2	126.3
Wisconsin 511						46.5	43.6		2	115.3
Canadian (2-rowed)						49.2	49.0		2	125.6
Michigan (2-rowed)	2782					41.7	39.1		2	103.3
Michung	1160						52.5		1	140.6
Manchuria Pedigree	1244						50.1		1	139.9
Unnamed	2368						48.8		1	136.3
Do		2a-1923-96					50.2		1	140.2
Series 6-44							47.5		1	132.7
Unnamed	2373						48.2		1	134.6
Do		2a-205					48.4		1	135.2
Chevron	1111						47.4		1	132.4
Abyssinian	1223						46.1		1	128.8
Unnamed		2a-251					45.4		1	126.8
Do		2a-373					46.9		1	131.0
Do		2a-223					45.2		1	126.3
Do		2a-1923-103					48.9		1	136.6
Jusborne	1353						48.3		1	134.9
Lake City	1126						45.2		1	126.3
Unnamed		2a-1923-104					48.9		1	136.6
Manchuria	643						49.0		1	136.9
Unnamed		2a-376					46.3		1	129.3
Do		2a-401					46.9		1	131.0
Do		2a-269					46.1		1	128.8
Series 6-45							44.2		1	123.5
Unnamed		2a-161					44.7		1	124.9
Do		2a-135					47.7		1	133.2
Do		2a-233					43.7		1	122.1
Do		2a-1923-105					47.9		1	133.8
Do		2a-1923-383					47.4		1	132.4
Red River	973						46.4		1	129.6
Unnamed		2a-8					45.4		1	126.8
Surprise	171						49.1		1	137.2
Unnamed		2a-261					45.2		1	126.3
Do		2a-1923-436					47.3		1	132.1
Do		2a-252					43.1		1	120.4
Do		2a-254					43.6		1	121.8
Do		2a-433					46.1		1	128.8
Do		2a-1					44.0		1	122.9
Do		2a-1923-335					46.5		1	129.9
Do		2a-257					44.0		1	122.9
Do		2a-162					41.9		1	117.0
Do		2a-3					43.3		1	120.9
Do		2a-147					42.8		1	119.6
Do		2a-26-20-367					44.6		1	124.6
Do		2a-260					43.2		1	120.7
Do		2a-16					43.3		1	120.9
Do		2a-15					42.3		1	118.2
Do		2a-145					41.7		1	116.5
Featherston	911						42.5		1	118.7
Do		2a-114					43.6		1	121.8
Do		2a-138					42.4		1	118.4
Do		101-19					41.3		1	115.4
Do		2a-143					39.7		1	110.9
Do		2a-1923-354					41.3		1	115.4
Series 6-43							36.9		1	103.1
Eagle	913						36.5		1	102.0
Crocket	1094						35.3		1	98.6
Kolter	987						36.4		1	101.7
July	1082						34.9		1	97.5
Olonets	198						37.2		1	103.3
Abyssinian	943						32.7		1	91.0

TABLE 17.—*Acre yields of varieties of barley grown at the New York Agricultural Experiment Station at Cornell University, Ithaca, in one or more of the years from 1922 to 1926, inclusive*—Continued

Variety	C. I. No.	Cornell No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Featherston	
			1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Summit	929						30.5		1	85.2
Swedish Hull-less	623						27.3		1	76.3
Goldfoil	928						47.3		1	132.1
Horn	926						42.4		1	118.4
Unnamed		2a–1923–460					41.8		1	116.8
Caucasian White	714						47.1		1	131.6
Hanachen	531						41.9		1	117.0
Hanschen	1425						45.4		1	126.8
Abed Binder	1081						44.3		1	123.7
Hanna	24						40.8		1	114.0
Unnamed		2a–1923–461					39.3		1	109.8
Elder	993						43.4		1	121.2
Kirgizean	1428						43.2		1	120.7
Mahrische	912						38.9		1	108.7
Chevalier	156						40.5		1	113.1
Unnamed		2a–1923–488					38.1		1	106.4
Hanna	203						41.6		1	116.2
Series 6–6	2431						39.6		1	110.6
Series 6–21	2446						37.5		1	104.7
Kirgiz	1253						40.9		1	114.2
Benny	1288						41.1		1	114.8
Unnamed		2a–1923–111					36.0		1	100.6
Calotte	1102						37.8		1	105.6
Zero	1287						37.0		1	103.4
Svanhals	187						34.4		1	96.1
Claudia	1297						29.5		1	82.4

NORTH CAROLINA

AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE STATION, RALEIGH, N. C.

G. M. GARREN, *Cereal Agronomist*

The testing of barley varieties at Raleigh has been limited to winter sorts. There has been considerable interest in winter barley among the farmers in the Piedmont section in the last few years. As may be seen in Table 18, only three varieties have been tested at the station. These are all hooded barleys. Beardless 6 (C. I. No. 2746), a variety originating at Knoxville, Tenn., produced the highest average yield. It was only slightly better than North Carolina Hooded (C. I. No. 4655), a barley grown locally in North Carolina, but was distinctly superior to Beardless 5 (C. I. No. 3384), which originated at the Tennessee station.

TABLE 18.—*Acre yields of varieties of barley grown at the North Carolina Agricultural Experiment Station, State College Station, Raleigh, in the years from 1923 to 1926, inclusive*

(Data obtained through the courtesy of the North Carolina Agricultural Experiment Station. Each test was based on the yield of a single plot)

Variety	C. I. No.	Acre yield (bushels)					Number of comparable years and yield in comparison with Beardless 6	
		1923	1924	1925	1926	Average, 1923–1926	Number	Per cent
Beardless 6	2746	48.7	41.0	24.6	60.8	45.4	4	100
North Carolina Hooded	4655	50.2	37.7	25.5	59.4	43.2	4	95.2
Beardless 5	3384	44.5	37.8	28.7	55.2	41.6	4	91.6

NORTH DAKOTA

Varietal tests of barley were carried on in North Dakota at the agricultural experiment station at Fargo, the Northern Great Plains Field Station at Mandan, the Dickinson substation at Dickinson, and the Williston substation at Williston. The work at Dickinson is cooperative with the Office of Cereal Crops and Diseases, United States Department of Agriculture, and that at Mandan is cooperatively conducted by the Offices of Dry-Land Agriculture and Cereal Crops and Diseases of the United States Department of Agriculture. The work at Williston was discontinued following the crop of 1924.

AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE STATION, FARGO, N. DAK.

T. E. STOA, *Assistant Agronomist*

Yields are reported for only four years of the period 1922 to 1926, inclusive. Owing to excessive rains, stands were not uniform in 1925, and the results are not considered trustworthy. Seven varieties were grown in the four years for which yields are reported.

Manchuria (C. I. No. 244) is used as a basis of comparison in Table 19. This variety produced the highest yield of the seven grown for the entire period. This yield, however, was not significantly greater than that of Lion (C. I. No. 923). It was very little higher than those of Manchuria (C. I. No. 2330) and Manchuria (C. I. No. 2947). Of the varieties grown for less than four years Trebi (C. I. No. 936), produced the highest yield. For the three years in which it was grown its yield was 108 per cent of that of Manchuria (C. I. No. 244). High yields were also obtained from Odessa (C. I. No. 182) in the years in which it was grown. In 1926, the only year in which it was grown, O. A. C. 21 (C. I. No. 1470) gave a higher yield than Manchuria (C. I. No. 244). The hooded varieties did not produce good yields at Fargo. On the other hand, the smooth-awned sorts, Lion and Velvet (C. I. No. 4252), gave very satisfactory results.

NORTHERN GREAT PLAINS FIELD STATION, MANDAN, N. DAK.

Yields were secured in only four of the five years reported from Mandan. In 1926 the crop was a total failure due to drought. In Table 19 Svanhals (C. I. No. 187) is used as a basis of comparison, although its average yield is slightly less than that of Hannchen (C. I. No. 531). Of the varieties grown for four years, Coast (C. I. No. 690) is the only one that produced a yield more than 90 per cent of that of Svanhals. In 1925 almost as much grain was obtained from Odessa (C. I. No. 182) as from Svanhals.

DICKINSON SUBSTATION, DICKINSON, N. DAK.

Dickinson lies in an area well suited to growing two-rowed barleys. It will be noticed in Table 19 that four out of six distinct varieties with a yield as great as 90 per cent of that of the standard variety, Scholey (C. I. No. 962), as well as the standard itself, are two-rowed sorts. The two exceptions are Lion (C. I. No. 923), which was grown for two years, and Odessa (C. I. No. 182), which has been a standard commercial variety in South Dakota for many years. Scholey itself is a two-rowed barley which has shown up well at Dickinson both in

the nursery and in the plot tests. Manchuria is fairly well adapted, as is shown by the yield of Manchuria (C. I. No. 244). The North African type of barley, of which Club Mariout is the only representative, did not make a good showing during the 5-year period. The hooded varieties, Wing Pedigree (C. I. No. 1177) and Nepal (C. I. No. 262), were also inferior.

TABLE 19.—*Acre yields of varieties of barley grown at the North Dakota Agricultural Experiment Station, Fargo; at the Northern Great Plains Field Station, Mandan; at the Dickinson Substation; and at the Williston Substation in one or more of the years from 1922 to 1926, inclusive*

[Data for Fargo and Williston obtained through the courtesy of the North Dakota Agricultural Experiment Station, for Mandan in cooperation with the Office of Dry-Land Agriculture, and for Dickinson in cooperation with the North Dakota Agricultural Experiment Station]

Station and varieties compared	C. I. No.	N. Dak. No.	Number of plots and acre yield												Number of comparable years and yield in comparison with standard varieties named	
			1922		1923		1924		1925		1926		Average, 1922-1926 (bushels)			
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels			Number	Per cent
Fargo:[1]																
Manchuria[2]	244	871	3	71.9	3	44.1	3	63.7			3	54.0	58.6		4	100
Do	2947	2121	3	69.1	3	40.5	3	60.5			3	53.3	55.9		4	95.4
Do	2339	30010	3	72.1	3	40.9	3	61.3			3	52.5	56.7		4	96.8
Wisconsin Pedigree	823	2406	3	65.3	3	44.8	3	56.6							3	92.8
Minsturdi	1558	30011	3	75.7	3	32.5	3	57.3			3	46.5	53.0		4	90.4
Lion	923	31001	3	76.7	3	42.7	3	56.8			3	47.3	58.4		4	99.7
Manchuria	2945	2119	3	69.5											1	96.7
Wing Pedigree	1177	3101	3	53.2	3	31.4	3	46.9			3	39.7	42.8		4	73.0
Horsford	1271	3102	3	52.6											1	73.2
Hannchen	531	1399	3	60.5	3	32.4	3	44.4			3	36.5	43.5		4	74.2
Manchuria	2553	30012			3	33.2	3	48.7							2	85.3
Trebi	936	30013			3	42.5	3	71.0			3	62.9			3	108.1
Odessa	182	255					3	64.0			3	56.7			2	102.0
Velvet	4252	30015					3	61.4			3	52.9			2	96.6
Nepal	595	392					3	35.8			3	35.0			2	59.8
Mechanical Mixture	4115						3	59.4			3	52.7			2	94.8
Composite Cross	4116						3	60.7			3	55.0			2	97.8
O. A. C. 21	1470										3	57.3			1	104.9
Mandan:[3]																
Manchuria	244		5	34.8	5	15.4	3	18.0	3	32.5					4	82.9
Club Mariout	261		5	33.5	5	18.8	3	22.9	3	23.9					4	81.6
Coast	690		5	42.1	5	16.9	3	27.5	3	30.4					4	96.1
Hannchen	531	1399	5	43.5	5	16.6	3	29.0	3	33.6	3	0	24.5		5	100.8
Svanhals[2]	187		5	43.1	5	15.0	3	27.9	3	35.4	3	0	24.3		5	100
White Smyrna	195		5	40.8	5	15.4	3	21.8	3	30.6					4	89.1
Odessa	182	255							1	34.6	3	0			2	97.7
Featherston	1120								1	32.6	3	0			2	92.1
Meloy	1176										3	0				
Alpha	959										3	0				
Horn	926										3	0				
Orel	351										3	0				
Dickinson:																
Manchuria	244		4	49.3	4	30.6	4	32.7	4	26.5	4	8.0	29.4		5	89.6
Odessa	182	255	4	44.9	4	30.8	4	37.3	3	29.3	4	7.3	29.9		5	91.2
Club Mariout	932		4	47.4	4	18.1	4	26.8	3	19.1	4	0.6	24.2		5	73.8
Gatami	575		4	41.6	4	18.1	4	30.6	3	28.6					4	78.5
White Gatami	920		4	50.0	4	17.8	4	25.1	4	31.0	4	7.8	26.3		5	80.2
Wing Pedigree	1177	3101	4	48.3	4	25.1	4	24.8	4	20.2	4	7.8	25.2		5	76.8
Nepal	262	392	4	33.9	4	18.3	4	19.2	3	21.1	4	4.6	19.4		5	59.1
Hannchen	531	1399	4	51.5	4	30.2	4	25.0	3	16.9	4	4.3	27.4		5	83.5
Hanna	203	649	4	51.9	4	35.8	4	33.0	4	24.1	4	0.2	30.9		5	94.2

[1] Yields for 1925 at Fargo were unreliable because of excessive rains, resulting in poor and nonuniform stands.

[2] Standard variety with which others are compared.

[3] Crop failure in 1926 at Mandan due to drought.

TABLE 19.—*Acre yields of varieties of barley grown at the North Dakota Agricultural Experiment Station, Fargo; at the Northern Great Plains Field Station, Mandan; at the Dickinson Substation; and at the Williston Substation in one or more of the years from 1922 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	N. Dak. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard varieties named	
			1922		1923		1924		1925		1926				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Dickinson—Continued.															
Svanhals	187		4	43.9	4	37.3	4	25.5	3	19.4	4	4.2	26.1	5	79.6
Princess	529	1397	4	50.0	4	34.5	4	19.3	4	23.1				4	81.9
Steigum	907		4	49.8	4	37.4	4	39.9	4	21.5	4	9.6	31.6	5	96.3
Scholey [1]	962		4	53.4	4	42.6	4	32.0	4	26.9	4	9.1	32.8	5	100
White Smyrna	658		4	55.8	4	29.9	4	32.7	3	22.5	4	9.1	30.0	5	91.5
Do	2169		4	57.5	4	30.3	4	33.3	3	26.1				4	95.1
Hell Hanna 4	677		4	49.5					1	19.4				2	85.8
White Smyrna	2170		2	57.7										1	103.1
Lion	923	31001							1	29.0	4	6.6		2	98.9
Oderbrucker	1174								1	18.4				1	88.4
Gold	1145								1	12.0	4	3.9		2	44.4
Williston:															
Manchuria	882	966	38.6		27.5		50.6						38.9	3	104.6
Trebi [1]	936	30013	40.7		23.7		47.1						37.2	3	100
Manchurian	739		42.0											1	103.2
Oderbrucker	858		42.0											1	103.2
Gatami	575		23.5											1	57.7
Manchuria	2947	2121	41.1											1	101.0
Wing Pedigree	1177	3101	33.6											1	82.6
Himalaya	619		29.8		20.4		48.0						32.7	3	87.9
Hannchen	531	1399	40.7		22.1		43.5						32.1	3	86.3
Hanna	203	649	33.6											1	82.6
Svanhals	187		35.2											1	86.5
Primus	532	1400	33.8											1	82.6

[1] Standard variety with which others are compared.

WILLISTON SUBSTATION, WILLISTON, N. DAK.

The results of three years are available from the Williston substation. Only four varieties were grown during this entire period. Manchuria (C. I. No. 882) produced the highest yield. The next in point of yield was Trebi (C. I. No. 936) which is used as a basis of comparison in Table 19. Himalaya (C. I. No. 619) and Hannchen (C. I. No. 531) were inferior to Trebi. In the single test in 1922 three varieties of the Manchuria type slightly exceeded Trebi in yield.

OHIO

AGRICULTURAL EXPERIMENT STATION, WOOSTER, OHIO

L. E. THATCHER, *Associate Agronomist*

Two-thirds of the entire spring-barley crop of Ohio is grown in the northwestern two-fifths of the State. The acreage of barley follows fairly closely the acreage of sugar beets in Ohio. Highest yields are obtained in the area represented roughly by a triangle, of which Fulton, Erie, and Van Wert Counties are the corners and which includes practically all of the lacustrine-limestone soils in the State. Barley is an important crop, however, as far south as Logan County and northwest to Williams.

Winter barley is grown to some extent in eight counties in southwestern Ohio. Statistics gathered by township assessors in 1915, 1916, and 1917 reported the acreage and yield for both spring and winter barleys. Fifteen direct comparisons can be made of the yields of spring and winter barleys for this section of Ohio. On the average, spring barley yielded 27.4 bushels and winter barley 27.7 bushels per acre, which is not a significant difference.

Barley in southwestern Ohio is grown most successfully on fertile terrace and flood-plain soils bordering the Great Miami, Little Miami, and Ohio Rivers.

TABLE 20.—*Acre yields of varieties of barley grown at the Ohio Agricultural Experiment Station, Wooster, in one or more of the years from 1904 to 1926, inclusive*

[Data obtained through the courtesy of the Ohio Agricultural Experiment Station. Yields embodied in a series of averages, by years, singly or in groups]

Variety	C. I. No.	Acre yield (bushels)										
		3 years, 1904–1906	3 years, 1908–1910	14 years, 1912–1914, 1916–1926	4 years, 1923–1926	8 years, 1911, 1914–1920	5 years, 1911, 1914–1917	3 years, 1911, 1914, 1915	2 years, 1914, 1915	1915	3 years, 1918–1920	5 years, 1916–1920
Spring barley:												
Manchuria	2778	39.8										
Ohio Beardless	231	25.6										
Black Hull-less	596	31.4										
Oderbrucker	836		42.2	32.5	36.2						37.1	35.7
Primus	532		20.6									
Princess	529		31.2									
Wisconsin Pedigree	835			32.7	36.3						37.9	37.2
Featherston	1120				33.2							
Lion	923				40.3							
Velvet	4252											
Trebi	936											
O. A. C. 21	1470											
Winter barley:												
Texas Winter	554					49.8	57.5	55.3	57.4	61.2	37.0	47.7
Ohio Winter	2033					51.9	61.1	59.2	57.3	67.7	36.4	47.4
Maryland Winter	518						54.6	50.7	52.8	62.0		
Tennessee Winter	257							53.1	51.0	62.0		
Indiana Winter	2039								47.1	56.8		
Wakamatsu	570								44.5	54.7		
Orel	561									62.0		
Michigan Winter	2038										40.4	

Variety	C. I. No.	Acre yield (bushels)					Average, 1922–1926	Number of comparable years and yield in comparison with Oderbrucker	
		1922	1923	1924	1925	1926		Number	Per cent
Spring barley:									
Oderbrucker	836	22.2	45.7	37.1	25.8	36.2	33.4	5	100
Wisconsin Pedigree	835	20.8	40.6	40.1	24.3	40.4	33.2	5	99.4
Featherston	1120	24.1	32.2	34.2	22.1	44.3	31.4	5	94.0
Lion	923		50.9	36.6	30.3	43.5		4	111.3
Velvet	4252					54.2		1	149.7
Trebi	936					58.4		1	161.3
O. A. C. 21	1470					41.1		1	113.5

The discussion of barley varieties is based on a series of averages reported in Table 20. For the convenience of agronomists who may desire more specific data the actual yields of the past five years are

reported in the same table. Both spring and winter varieties have been grown experimentally at Wooster.

The 6-rowed awned sorts of the Manchuria group, such as Oderbrucker (C. I. No. 836) and Wisconsin Pedigree (C. I. No. 835), are apparently superior to the 6-rowed hooded Ohio Beardless (C. I. No. 231). The 14-year average yield of Oderbrucker and Wisconsin Pedigree are practically the same. The 2-rowed sorts, Primus (C. I. No. 532) and Princess (C. I. No. 529), did not equal Oderbrucker during a 3-year period.

The smooth-awned varieties are promising, as is indicated by the 4-year average yield of Michigan Barbless (Lion; C. I. No. 923), which outyielded the 6-rowed rough-awned varieties for the same period, and by the 1926 yield of Velvet (C. I. No. 4252).

Trebi (C. I. No. 936) gave the highest yield of the seven varieties grown in 1926 in the regular variety test at Wooster, but in the nursery tests it did not do so well. The straw of Trebi was short, being only 27 inches, as compared with 42 inches for Oderbrucker, 30 inches for Michigan Barbless (Lion), and 34 inches for Velvet.

Winter barley was grown for a period of eight years at Wooster. A comparison of spring and winter barley (two varieties of each) covering a 5-year period (1916–1920) showed higher yields for the winter sorts. Ohio Winter (C. I. No. 2033) gave the best results, although it was not much superior to Texas Winter (C. I. No. 554).

The results of rod-row tests are in line with the field-plot yields. The Manchuria type is superior. According to these tests, two special types were promising. One of these, Trebi, produced relatively high yields in a region and climate very different from that of the intermountain area where it is already established commercially. The smooth-awned varieties are of even more interest. These barleys yield well, and some barley of this type will some day occupy a place in Ohio agriculture.

OREGON

Most of the barley crop of Oregon is grown east of the mountains, and the most comprehensive varietal testing has been done at stations in that area. The work at Moro is particularly complete in the testing of the standard varieties. Many well-known sorts have been grown here for a considerable period of years, and superior selections of kinds less widely known have been made and later tested in field plots.

The work at Union has included considerable activity in the making and testing of hybrids. Many of the standard varieties also have been tested. At Burns only a few varieties have been grown.

AGRICULTURAL EXPERIMENT STATION, CORVALLIS, OREG.

G. R. Hyslop, *Agronomist*, D. D. Hill, *Assistant Agronomist*, and C. C. Ruth

At Corvallis both winter and spring varieties have been grown. Those varieties in Table 21 whose yields are designated zero, winterkilled in the years so indicated. Despite the total failure in two years out of five, the average yield of winter-sown O. A. C. Selection 7 (C. I. No. 2814) was greater than that of any spring-sown variety. Of the spring-sown sorts which were grown for the entire period the highest average yield was from Trebi (C. I. No. 936). Its yield, however, was not significantly greater than that of Hannchen (C. I.

No. 531), and its higher average was due largely to its yield in 1923. The agronomists at Corvallis feel that Hannchen is best suited to their conditions. Both Hannchen and Trebi produced appreciably higher yields than Coast (C. I. No. 690) and Flynn (C. I. No. 1311). Peruvian (C. I. No. 935), which was grown for only two years, compared favorably with Trebi. Of the fall-sown varieties, O. A. C. Selection 7 was the only one which was grown for the entire period. In 1923 O. A. C. Selection 38 (C. I. No. 1609) and Tennessee Winter (C. I. No. 257) produced yields approximately equal to that of O. A. C. Selection 7.

TABLE 21.—*Acre yields of varieties of barley grown at the Oregon Agricultural Experiment Station, Corvallis; at the Sherman County Branch Station, Moro; at the Eastern Oregon Branch Station, Union; and at the Harney Valley Branch Station, Burns, in one or more of the years from 1922 to 1926, inclusive*

[Data for Corvallis, Union, and Burns furnished through the courtesy of the Oregon Agricultural Experiment Station; those for Moro obtained in cooperation with the Oregon Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)		
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
CORVALLIS														
Spring barleys:														
Hannchen	531	3	23.2	...	[1] 37.4	...	[1] 20.2	3	17.4	...	[1] 23.6	24.4	5	98.8
Trebi [2]	936	3	21.0	2	46.6	2	20.0	3	16.3	3	19.5	24.7	5	100
Coast	690	3	17.2	2	39.1	2	17.1	3	16.9	3	14.8	21.0	5	85.0
Flynn	1311	3	11.3	2	38.9	2	18.0	3	14.4	3	12.9	19.1	5	77.3
Meloy	1176	...	...	2	30.3	2	14.7	3	14.3	3	13.9	...	4	71.5
Peruvian	935	...	...	...	...	...	...	3	19.4	3	18.2	...	2	105.0
Colsess	2792	...	...	...	...	...	...	3	16.9	3	8.9	...	2	72.1
Success	4565	...	...	...	...	...	...	3	14.2	3	11.5	...	2	72.1
O. A. C. Selection 7	2814	...	...	...	...	...	...	...	...	3	16.7	...	1	85.6
Unnamed	...	...	...	...	...	...	...	...	...	3	13.6	...	1	69.7
Winter barleys:														
O. A. C. Selection 38	1609	...	0	3	54.2	...	...	...	...	...	...	...	2	80.2
O. A. C. Selection 7	2814	...	0.	3	55.4	2	72.5	2	0	2	57.1	37.0	5	149.3
Tennessee Winter	257	...	...	3	54.2	...	...	...	...	...	...	...	1	116.3
Sacramento	4108	...	...	...	...	...	...	...	...	1	50.0	...	1	256.4
MORO														
Club Mariout [2]	261	2	37.3	2	59.5	3	29.0	4	53.1	4	42.6	44.3	5	100
Peruvian	935	2	28.2	2	66.5	3	29.4	4	50.8	4	34.8	41.9	5	94.6
Flynn	1311	2	31.9	2	60.2	3	30.6	4	50.7	4	32.8	41.2	5	93.0
Arequipa	1256	1	30.0	2	60.0	3	31.4	4	51.7	2	42.9	43.2	5	97.5
Peru	2302	2	23.8	2	63.3	3	29.7	4	49.8	4	39.4	41.2	5	93.0
Coast	2301	2	24.2	2	62.1	3	31.4	4	46.1	2	30.6	38.9	5	87.8
Trebi	936	2	24.4	2	70.0	3	29.7	4	42.1	2	32.1	39.7	5	89.6
Meloy	1176	2	28.9	2	58.8	3	31.9	4	41.9	2	33.9	39.1	5	88.3
Odessa	927	2	22.1	2	65.6	3	27.5	4	43.1	...	...	...	4	88.6
Himalaya	2200	2	25.5	2	57.1	3	20.3	4	40.9	...	...	...	4	80.5
White Smyrna	658	2	18.0	2	52.9	3	27.8	4	49.0	...	...	...	4	83.0
Hannchen	531	2	19.8	2	61.5	3	20.7	4	36.2	...	...	...	4	77.4
Beldi Dwarf	109	2	27.3	2	51.5	3	30.3	4	40.8	...	...	...	4	87.2
Hanna	906	2	19.2	...	...	...	...	...	...	...	...	...	1	51.5
Meloy Selection 3	4658	...	...	1	58.3	3	33.0	4	39.8	2	42.4	...	4	94.1
Horsford	1778	...	...	1	58.3	3	30.3	4	42.7	2	40.8	...	4	93.3
Meloy Selection 1	4657	...	...	1	47.5	...	...	...	...	...	...	...	1	70.8
Cape Coast Hybrid No. 11	4596	...	...	...	...	1	22.9	4	34.2	...	...	...	2	69.6
Atlas	4118	...	...	...	...	...	...	3	41.9	...	...	...	1	78.9
Coast	4117	...	...	...	...	...	...	4	45.2	2	35.9	...	2	84.8
Hero	1284	...	...	...	...	...	...	4	42.1	...	...	...	1	70.3

[1] Average of all check plots.

[2] Standard variety with which others are compared.

TABLE 21.—*Acre yields of varieties of barley grown at the Oregon Agricultural Experiment Station, Corvallis; at the Sherman County Branch Station, Moro; at the Eastern Oregon Branch Station, Union; and at the Harney Valley Branch Station, Burns; in one or more of the years from 1922 to 1926, inclusive*—Contd.

Station and varieties compared	C. I. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926				
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
UNION														
Odessa	927	1	23.6	2	62.2	2	81.3	3	85.8	3	87.8	68.1	5	101.0
Trebi [1]	936	1	33.3	2	71.0	2	82.6	14	85.9	3	64.3	67.4	5	100
White Smyrna	658	1	34.8	2	52.2	2	68.2	3	92.1	3	78.8	65.2	5	96.7
Hannchen	531	1	24.1	7	62.8	11	55.3	3	93.0	3	86.8	64.4	5	95.5
Blue	1247	1	27.1	2	68.1	2	44.0	3	94.4	3	52.2	57.2	5	84.9
Flynn	1311	1	29.3	2	41.6	2	53.6	---	---	---	---	------	3	66.6
Winter Club	592	---	------	2	69.1	2	26.9	3	77.0	3	75.5	------	4	82.0
Beldi Dwarf	190	---	------	2	30.4	2	54.6	---	---	---	---	------	2	55.3
Nepal	595	---	------	1	67.3	2	26.3	3	49.3	3	45.9	------	4	62.1
Coast	2301	---	------	2	43.3	2	46.1	3	94.2	3	76.3	------	4	85.5
Peruvian	935	---	------	---	------	2	28.8	3	85.9	3	73.3	------	3	80.8
Meloy	1176	---	------	---	------	2	30.7	3	78.7	3	60.6	------	3	73.1
BURNS														
Trebi [1]	936	---	------	7	70.4	3	36.6	28	70.6	3	(2)	59.2	3	100
Hannchen	531	---	------	15	60.0	10	37.4	52	74.4	49	(2)	57.3	3	96.8
Club Mariout	261	---	------	---	------	---	------	3	44.0	---	------	------	1	62.3

[1] Standard variety with which others are compared. [2] Consumed by grasshoppers.

SHERMAN COUNTY BRANCH STATION, MORO, OREG.

D. E. STEPHENS, *Superintendent*

The barleys of eastern Oregon ripen in a season of dry weather. Practically all of the 22 varieties reported in Table 21 are adapted to such conditions. Barleys of the Manchuria type gave very little competition to those of north African origin at this station. In the 5-year period covered by this bulletin Club Mariout (C. I. No. 261) produced the highest yields and is used as a basis of comparison. Arequipa (C. I. No. 1256) has shown promise at Moro for many years, and its average yield was only 1 bushel less than that of Club Mariout. Peruvian (C. I. No. 935) and Peru (C. I. No. 2302) are very similar in type to Arequipa and produced yields only slightly less than that of the latter variety. Flynn (C. I. No. 1311) is a smooth-awned hybrid one of the parents of which was Club Mariout. Its yield is slightly less than that of Club Mariout. The yield of Meloy (C. I. No. 1176) was not equal to that of the best awned varieties for the 5-year period. A selection of Meloy (C. I. No. 4656), which was grown for four years, produced a very satisfactory yield. It was not the equal of Club Mariout and Arequipa, but it was good. The Cape-Coast Hybrid No. 11 (C. I. No. 4595) was entirely too late for conditions at Moro. Hero (C. I. No. 1286) did not produce a relatively high yield in the one year in which it was grown.

EASTERN OREGON BRANCH STATION, UNION, OREG.

ROBERT WITHYCOMBE, *Superintendent*, H. N. WATENPAUGH, and A. H. WALKER

Five varieties of barley were tested for the full 5-year period at Union. Of these, Odessa (C. I. No. 927) produced the highest yield. This variety is not the same as the one grown in South Dakota under the name Odessa. Odessa (C. I. No. 927) is a dense-headed selection made from the Odessa of South Dakota. It is quite distinct in type. The yield of Trebi (C. I. No. 936) was essentially equal to that of Odessa, but the yields of White Smyrna (C. I. No. 658) and Hannchen (C. I. No. 531) were slightly less. Of those varieties which were grown for a shorter period the highest yields were produced by Coast (C. I. No. 2301) and Winter Club (C. I. No. 592). (Table 21.)

HARNEY VALLEY BRANCH STATION, BURNS, OREG.

OBIL SHATTUCK, *Superintendent*, and R. E. HUTCHISON

Three varieties of barley were tested in the years 1923 to 1926, inclusive. Of these, Club Mariout (C. I. No. 261) was grown but a single year, and in that year its yield was not relatively high. Trebi (C. I. No. 936) and Hannchen (C. I. No. 531) were grown in all four years, but no yields were obtained in 1926. For the three years in which yields were obtained there was little difference in the average yields of these two varieties. Trebi produced slightly more grain than Hannchen for the entire period, but in two of the three years the yield of Hannchen was the greater. (Table 21.)

PENNSYLVANIA

AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE, PA.

CHARLES F. NOLL, *Professor of Experimental Agronomy*

In the 5-year period 1922 to 1926, inclusive, seven spring and two winter varieties were tested for one or more years. Six of the spring varieties were grown for the entire period. Featherston (C. I. No. 1559) and Alpha (C. I. No. 959) produced the highest average yields. This was not surprising, since these varieties had already shown themselves to be valuable sorts in New York. In Table 22 Featherston is used as a basis of comparison. It is superior to Oderbrucker (C. I. No. 836) and Wisconsin Pedigree (C. I. No. 835), to which it is closely related. Nakano Wase (C. I. No. 754) was grown for two years. The first year it suffered more winter injury than Tennessee Winter (C. I. No. 257), but gave a slightly better yield. The second year Nakano Wase winterkilled nearly 100 per cent. Of the 2-rowed barleys, neither Michigan Two-Row (C. I. No. 2782) nor Charlottetown 80 (C. I. No. 2732) are the equal of Alpha. Tennessee Winter was grown for four years, but owing to winterkilling in some years did not produce a high average yield.

TABLE 22.—*Acre yields of varieties of barley grown at the Pennsylvania Agricultural Experiment Station, State College, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Pennsylvania Agricultural Experiment Station]

Variety	C. I. No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Featherston	
		1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Charlottetown 80	2732	28.1	29.9	45.1	28.4	50.4	36.4	5	89.7
Lion	923	29.1	25.9	27.1	------	------	------	3	72.5
Michigan Two-Row	2782	30.1	30.3	36.8	32.8	56.2	37.2	5	91.6
Wisconsin Pedigree	835	32.8	29.5	37.6	38.9	52.1	38.2	5	94.1
Oderbrucker	836	31.7	23.5	30.2	34.7	46.5	33.3	5	82.0
Featherston	1559	40.7	31.8	41.0	37.9	51.8	40.6	5	100
Alpha	959	42.5	25.5	49.0	36.3	47.8	40.2	5	99.0
Tennessee Winter	257	------	30.0	20.2	21.1	11.7	------	4	51.2
Nakano Wase	754	------	32.9	0	------	------	------	2	45.3

SOUTH CAROLINA

AGRICULTURAL EXPERIMENT STATION, CLEMSON COLLEGE, S. C.

W. B. ROGERS, *Assistant Agronomist*

Barley is not an important crop in South Carolina and until recently has received but little attention in an experimental way.

TABLE 23.—*Acre yields of varieties of barley grown at the South Carolina Agricultural Experiment Station, Clemson College, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the South Carolina Agricultural Experiment Station]

Variety	C. I. No.	Clemson No.	Number of plots and acre yield										Number of comparable years and yield in comparison with Virginia Hooded	
			1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)	
			Number [1]	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Virginia Hooded	648	------	30	16.9	4	25.9	2	28.8	5	13.3	4	34.2	23.8	5	100
Winter	------	------	10	15.0	4	19.7	6	36.6	4	10.5	2	30.6	22.5	5	94.5
Awnless	------	------	40	17.9	4	15.8	------	------	------	------	------	------	------	2	79.0
Do	4694	203–L	------	------	------	------	2	16.7	2	10.5	------	40.8	------	3	89.4
Do	4693	206–C	------	------	------	------	------	------	------	------	------	31.8	------	1	93.0
Tennessee Beardless	------	------	------	------	------	------	------	------	------	------	------	36.4	------	1	105.4

[1] Rod rows.

The results reported in Table 23 are useful mainly in determining the most suitable type for this section. The Winter variety is presumably Tennessee Winter, being certainly of that type. Its yield was not equal to that of Virginia Hooded (C. I. No. 648), a less distinctly winter type, which indicates that a high degree of winter hardiness is not only unnecessary but that winter dormancy that is too perfect may be a handicap for the conditions concerned. Among the varieties tested were two awnless ones produced at this station, namely, Awnless (C. I. No. 4693) and Awnless (C. I. No. 4694).

SOUTH DAKOTA

Tests of barley varieties have been conducted at Brookings and Highmore for many years under the direction of the agronomy department of the South Dakota Agricultural Experiment Station. At both places a considerable number of varieties have been grown. Brookings is located in the eastern part of the State on the edge of what is generally known as the Manchuria district, although Manchuria has never done so well at Brookings as has Odessa. The latter variety is adapted to somewhat drier conditions than Manchuria. Highmore, near the Missouri River in the central part of the State, is located in a section where rainfall is much less than at Brookings.

TABLE 24.—*Acre yields of varieties of barley grown at the South Dakota Agricultural Experiment Station, Brookings, at the Highmore substation, and at the United States Dry-Land Field Station, Ardmore, in one or more of the years from 1922 to 1926, inclusive*

[Data for Brookings and Highmore obtained through the courtesy of the South Dakota Agricultural Experiment Station and those for Ardmore through the courtesy of the Office of Dry-Land Agriculture]

Station and varieties compared	C. I. No.	S. Dak. No.	Number of plots and acre yield									Number of comparable years and yield in comparison with standard variety named	
			1922 yield (bushels)	1923		1924		1925		1926	Average, 1922–1926 (bushels)		
				Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		
												Number	Per cent
Brookings:													
Aca	1853	1173	21.9	2	17.7	2	41.1	2	63.5	2	34.3	35.7	5	67.5
Gatami	575	122	25.0	2	16.6	2	45.8	2	45.8	2	64.2	39.5	5	74.7
Gold	1145	466	20.8	2	9.4	2	25.0	2	57.3				4	56.5
Horsford	507	294	21.9	2	19.8	2	43.7	2	47.9	2	56.4	37.9	5	71.6
Manchuria	244	105	28.1	2	28.1	2	41.6	2	75.0	2	65.7	47.7	5	90.2
Nopal	262	262	26.0	2	9.4	2	27.1	2	46.8	2	44.5	30.8	5	58.2
Minsturdi	1556	1245	32.3	2	25.0	2	53.6	2	59.3	2	54.2	44.9	5	84.9
Oderbrucker	1529	1180	22.9	2	22.3	2	58.0	2	75.0	2	61.3	49.9	5	94.3
Odessa [1]	182	182	38.5	2	32.3	2	53.1	2	75.0	2	65.5	52.9	5	100
Poppenheim	314	442	15.6	2	11.5	2	25.0	2	45.8	2	42.3	28.0	5	52.9
White Gatami	920	889	30.2	2	20.8	2	42.7	2	62.5	2	54.8	44.2	5	83.6
White Smyrna	195	28	31.2	2	21.9	2	52.1	2	54.1	2	45.1	40.9	5	77.3
Binder	1909	1259						2	91.2	2	66.4		2	112.1
Prentice	917	1267						2	58.6	2	45.9		2	74.4
July	1563	1270						2	50.5	2	66.6		2	83.4
Rex	1388	1268						2	65.6	2	60.1		2	89.5
Highmore:													
Aca	1853	1173	40.6	2	34.4	2	58.3	2	31.7	2	1.8	33.4	5	88.1
Coast	690	126	42.7	2	31.2	2	71.3	2	29.2	2	2.1	35.3	5	93.1
Hannchen	531	20	27.1	2	38.5	2	51.0	2	32.2	2	0	29.8	5	78.6
Horsford	507	294	35.4	2	14.8	2	44.0	2	27.1	2	0	24.2	5	63.9
Manchuria	244	105	41.6	2	46.9	2	62.5	2	34.9	2	0	37.2	5	98.2
Minsturdi	1556	1245	36.4	2	28.1	2	64.5	2	25.5	2	0	30.9	5	81.5
Oderbrucker	1529	1180	34.4	2	42.7	2	62.5	2	33.3	2	0	34.6	5	91.3
Odessa [1]	182	182	51.1	2	45.8	2	55.0	2	37.5	2	0	37.9	5	100
Poppenheim	314	442	19.8	2	16.7	2	32.0	2	28.1	2	0	18.9	5	49.9
White Smyrna	195	28	34.4	2	20.0	2	62.5	2	31.7	2	1.7	31.3	5	82.6
Binder	1909	1259				2	62.5	2	39.5	2	0		3	110.4
Rex	1388	1268				2	57.0	2	25.0	2	0		3	88.6
Prentice	917	1267				2	44.5	2	15.6	2	3.1		3	68.5
July	1563	1270				2	60.5	2	42.3	2	0		3	111.4
Nepal	262	262						2	34.3				1	91.5
Ardmore:													
Hannchen	531			3	24.3	3	2.8	3	27.6	3	(2)		3	64.1
Trebi	936			3	52.8	3	3.3	3	31.3	3	10.7	24.5	4	86.9
White Gatami	920			3	34.6	3	1.8	3	23.3	3	9.3	17.3	4	61.3
Odessa	182			3	47.4	3	1.8	3	23.3	3	11.4	21.0	4	74.5
White Smyrna [1]	658			3	38.3	3	2.8	3	44.2	3	27.6	28.2	4	100
Horsford	507							3	22.5	3	6.4		2	40.4
Coast	690									3	16.5		1	59.8
Horn	926									3	18.3		1	59.1

[1] Standard variety with which others are compared. [2] Destroyed by hail.

AGRICULTURAL EXPERIMENT STATION, BROOKINGS, S. DAK.

A. N. HUME, *Agronomist*

Sixteen varieties of barley were grown in field plots at Brookings during the 5-year period 1922 to 1926, inclusive. Eleven of these were grown for all five years. Odessa (C. I. No. 182) produced the highest yield of those grown for the entire period and is used as the basis of comparison in Table 24. The yields of Manchuria (C. I. No. 244) and Oderbrucker (C. I. No. 1529) were good, yet significantly lower than Odessa. Minsturdi (C. I. No. 1556) and White Gatami (C. I. No. 920) were fairly promising, but all the other varieties were markedly inferior to Odessa and the Manchuria barleys. Four varieties were grown for only two years. Of these, Binder (C. I. No. 1909) produced a surprisingly high yield. Neither it nor Rex (C. I. No. 1388) would have been expected to do well in South Dakota, being adapted to a moist cool climate, and it remains to be seen whether their good performance will be continued over a long period of years.

HIGHMORE SUBSTATION, HIGHMORE, S. DAK.

Despite the crop failure of 1926, the 5-year period at Highmore has been characterized by fairly good yields of barley. Including the almost total crop failure of 1926 the average acre yield of the best varieties was nearly 40 bushels. Odessa (C. I. No. 182) was the best of the varieties which were grown for the entire period. Oderbrucker (C. I. No. 1529), Manchuria (C. I. No. 244), and Coast (C. I. No. 690) were almost as good. As may be seen in Table 24, Ace (C. I. No. 1853) and White Smyrna (C. I. No. 195) did not rank so high as in previous results reported from Highmore. Binder (C. I. No. 1909) and July (C. I. No. 1563), although grown for three years only, produced relatively high yields. Here again this was hardly to be expected. Despite the relatively high yields of these two varieties in 1924 and 1925, it remains to be proved, however, that they are superior to Odessa over a long period of years.

UNITED STATES DRY-LAND FIELD STATION, ARDMORE, S. DAK.

The 4-year period 1923 to 1926, inclusive, included no years which were particularly favorable to the growth of barley. This probably accounts for the fact that the yield of White Smyrna (C. I. No. 658) is relatively so high. As may be seen in Table 24, no other variety was at all comparable to it. White Smyrna is undoubtedly a very good variety in this section. In cool summers with adequate rainfall some varieties would probably yield as well or better than White Smyrna. This was evidenced in 1923 when yields higher than the average were obtained. Over a period of years, however, this variety is certain to rank among the best. The yield of Trebi (C. I. No. 936) was satisfactory for the entire period, although it was distinctly less than that of White Smyrna. None of the other varieties was particularly promising in the years reported.

TENNESSEE

AGRICULTURAL EXPERIMENT STATION, KNOXVILLE, TENN.

C. A. MOOERS, *Director*

Winter barley has been grown in Tennessee for many years. The varietal testing at Knoxville has been confined to winter varieties. Of these Tennessee Winter (C. I. No. 257) and Union Winter (C. I.

No. 583), reported in Table 25, are old standard varieties. The Tennessee Winter is used as a basis of comparison. For the five years reported, its yield slightly exceeded that of Union Winter. Two other varieties were grown for the entire period. These were Beardless 5 (C. I. No. 3384) and Beardless 6 (C. I. No. 2746). Both varieties were originated from hybrids made at the Tennessee station. The yields as shown in the table are inferior to those of Tennessee Winter and Union Winter. The varietal tests were conducted on fertile land. On poorer soils the yields of the beardless hybrids are relatively higher. In the past few years these hybrids have become generally distributed in eastern Tennessee. During the last three years Wisconsin Winter (C. I. No. 2159), Orel (C. I. No. 351), and a Tennessee Winter selection (C. I. No. 3543) were grown in comparison with the four varieties mentioned above. All produced good yields. That of the Tennessee Winter selection was particularly high. A test of three years, however, is not of sufficient duration to give an adequate idea of the relative value of the varieties.

TABLE 25.—*Acre yields of varieties of barley grown at the Tennessee Agricultural Experiment Station, Knoxville, in some or all of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Tennessee Agricultural Experiment Station. The yields of two plots were taken as the basis of each test]

Variety	C. I. No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Tennessee Winter	
		1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Union Winter	583	20.7	31.3	18.2	16.2	63.4	30.0	5	95.8
Tennessee Winter	257	28.6	31.4	26.1	10.3	60.0	31.3	5	100
Beardless 5	3384	28.5	18.2	8.8	13.7	53.4	23.3	5	74.4
Beardless 6	2746	21.6	16.6	10.3	11.0	47.0	21.3	5	68.1
Wisconsin Winter	2159	----	----	24.6	14.6	65.1	----	3	108.4
Orel	351	----	----	6.3	11.7	70.8	----	3	92.2
Tennessee Winter (Selection 52)	3543	----	----	22.3	18.8	69.8	----	3	116.3

TEXAS

SUBSTATION NO. 6, DENTON, TEX.

E. B. REYNOLDS, *Chief, Division of Agronomy, Agricultural Experiment Station, College Station, Tex.*

A large number of selections of Tennessee Winter and of a Horsford barley known locally as McDowell's Spring were tested at Denton. As may be seen in Table 26, the seasons were such as to give a good comparison. There was one year of low yields, one of high yields, and two which might be considered average. Only the Tennessee Winter selections were grown in all four years. The best of these, Selection 643–63, has been accessioned as C. I. No. 4692 for purposes of record. The yields are high enough to permit the conclusion that barley may properly be considered in the farm cropping system of the

section. An early grain crop is often useful wherever a satisfactory yield is possible, and the yields at Denton compare well with those of several barley sections. The low yield of Nakano Wase (C. I. No. 754) indicates that a degree of winter hardiness is essential.

TABLE 26.—*Acre yields of varieties of barley grown at Denton, Tex., Substation No. 6, and at the United States San Antonio Field Station in one or more of the years from 1922 to 1925, inclusive*

[Data for Denton obtained through the courtesy of the Texas Agricultural Experiment Station and for San Antonio through the courtesy of the Office of Western Irrigation Agriculture. Yields for 1926 at Denton are not reported, as the crop was severely damaged by hail]

Station and variety compared	C. I. No.	Texas No.	Number of plots and acre yield								Average, 1922–1925 (bushels)	Number of comparable years and yield in comparison with Tennessee Winter (C. I. No. 4692)	
			1922		1923		1924		1925				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Denton:													
Tennessee Winter	------	Sel. 643–1	2	17.0	1	36.4	1	51.5	1	30.8	33.9	4	88.5
Do	------	Sel. 643–2	2	13.9	1	31.5	1	64.9	1	24.7	33.8	4	88.3
Do	------	Sel. 643–3	2	14.7	1	32.8	1	60.4	1	23.6	32.9	4	85.9
Do	------	Sel. 643–4	2	15.7	1	31.7	1	67.4	1	24.5	34.8	4	90.9
Do	------	Sel. 643–5	2	13.7	1	30.1	1	60.0	1	20.0	31.0	4	80.9
Do	------	Sel. 643–6	2	13.4	1	34.8	1	60.9	1	23.0	33.0	4	86.2
Do	------	Sel. 643–10	2	13.4	1	32.6	1	63.5	1	29.8	34.8	4	90.9
Do	------	Sel. 643–11	2	12.9	1	34.9	1	65.3	1	27.4	35.1	4	91.6
Do	------	Sel. 643–20	2	12.2	1	31.2	1	60.9	1	27.6	33.0	4	86.2
Do	------	Sel. 643–22	2	15.2	1	27.8	1	66.7	1	27.8	34.4	4	89.8
Do	------	Sel. 643–28	2	14.4	1	32.2	1	68.9	1	32.5	37.0	4	96.6
Do	------	Sel. 643–30	2	13.7	1	31.0	1	61.7	1	17.6	31.0	4	80.9
Do	------	Sel. 643–32	2	10.6	1	28.7	1	76.6	1	24.9	35.2	4	91.9
Do	------	Sel. 643–33	2	10.6	1	32.7	1	68.9	1	24.2	34.1	4	89.0
Do	------	Sel. 643–35	2	12.2	1	24.9	1	67.5	1	25.0	32.4	4	84.6
Do	------	Sel. 643–50	2	14.2	1	26.3	1	65.2	1	19.9	31.9	4	83.3
Do	------	Sel. 643–52	2	12.7	1	30.4	1	62.7	1	27.6	33.4	4	87.2
Do	------	Sel. 643–57	2	15.7	1	25.3	1	67.0	1	30.0	34.5	4	90.1
Do	------	Sel. 643–60	2	19.2	1	31.4	1	62.9	1	26.1	34.9	4	91.1
Do	------	Sel. 643–61	2	18.6	1	33.5	1	60.7	1	25.2	34.4	4	89.8
Do	4692	Sel. 643–63	2	18.5	1	38.9	1	73.6	1	24.3	38.3	4	100
Do	------	Sel. 643–74	2	16.7	1	33.2	1	56.5	1	23.9	32.6	4	85.1
Horsford	------	Sel. 7368–4	1	16.5	1	34.9	3	31.7	------	------	------	3	64.4
Do	------	Sel. 7368–13	1	9.5	1	46.4	3	32.4	------	------	------	3	68.4
Do	------	Sel. 7368–17	1	17.3	1	39.0	3	24.1	------	------	------	3	70.0
Do	------	Sel. 7368–18	1	14.2	1	50.8	3	30.1	------	------	------	3	73.7
Do	4867	Sel. 7368–20	1	29.1	1	44.1	3	31.1	------	------	------	3	80.9
Do	------	Sel. 7368–10	1	21.3	1	40.0	3	32.6	------	------	------	3	72.8
Do	------	Sel. 7368–19	1	21.3	1	51.9	3	30.0	------	------	------	3	80.0
Do	------	Sel. 7368–12	1	16.5	1	50.8	3	30.6	------	------	------	3	75.8
Do	------	Sel. 7368–21	1	11.8	1	46.0	3	31.2	------	------	------	3	69.1
Do	------	Sel. 7368–6	1	4.7	1	37.7	3	34.6	------	------	------	3	59.8
Texas Winter	554	3075	1	12.1	1	26.1	2	39.4	------	------	------	3	60.2
Tennessee Winter	257	643	1	9.4	1	17.3	2	62.7	------	------	------	3	69.3
Nakano Wase	754	2539	------	------	1	16.1	2	24.8	------	------	------	2	37.1
Tennessee Winter	------	643 [1]	------	------	1	25.3	2	57.3	------	------	------	2	74.7
San Antonio:													
Texas Winter Beardless	------	------	1	10.4	------	------	------	------	------	------	------	------	------
Texas Winter Bearded	------	------	1	18.1	------	------	------	------	------	------	------	------	------
Texas Winter	554	------	------	------	1	7.3	1	28.2	------	------	------	------	------
Hannchen	531	------	------	------	------	------	1	42.7	------	------	------	------	------
Stavropol	2103	------	------	------	------	------	1	32.1	------	------	------	------	------
Tennessee Winter	257	------	------	------	------	------	1	28.3	------	------	------	------	------
Winter Club	592	------	------	------	------	------	1	4.2	------	------	------	------	------

[1] Pure line massed.

The tests of 1926 were ruined by hail, but from the yield of plots which were not injured it was evident that the yields would have been equal to those of the best year, 1924.

UNITED STATES SAN ANTONIO FIELD STATION, SAN ANTONIO, TEX.

GEORGE T. RATLIFFE, *Associate Agronomist, Office of Western Irrigation Agriculture*

The results in Table 26 constitute a fair picture of the barley situation in the region of San Antonio. It is not a barley country. In favorable years good yields may be obtained, but there is a large element of chance. This chance may affect all varieties, or it may be favorable to certain ones. Probably over a period of years the best yields would be obtained from a bearded winter variety. As is often the case in the South, a spring variety fall sown, when it survives the winter, is likely to produce a higher yield than the winter sorts.

UTAH

NEPHI SUBSTATION, NEPHI, UTAH

A. F. BRACKEN, *Superintendent*

The barleys at the Nephi Substation have been grown under dry-land conditions. High yields are rather exceptional, for two reasons: The spring rainfall is insufficient for the growing of spring barleys, and winter injury usually reduces the yields of fall-sown varieties. Both winter and spring barleys were grown at Nephi. The higher yields were from the winter sorts. Tennessee Winter (C. I. No. 257), because it is well known, is used in Table 27 as a standard of comparison. The highest average yield was from Bulgarian (C. I. No. 521). Turkestan (C. I. No. 711) and Winter Club (C. I. No. 592), as well as Bulgarian, were superior to Tennessee Winter. The yields of the spring varieties were low. White Smyrna (C. I. No. 195) was somewhat less productive than Coast (C. I. No. 690).

TABLE 27.—*Acre yields of varieties of barley grown at the Nephi, Utah, substation in some or all of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Utah Agricultural Experiment Station]

Variety	C. I. No.	Acre yield (bushels)						Number of comparable years and yield in comparison with Tennessee Winter	
		1922	1923	1924	1925	1926	Average, 1922–1926	Number	Per cent
Winter barley:									
Winter Club	592	11.9	16.4	18.1	32.9	41.0	24.1	5	113.7
Bulgarian	521	15.1	18.6	19.3	35.7	45.3	26.8	5	126.4
Turkestan	711	13.2	17.2	17.6	33.4	42.6	24.8	5	117.0
Tennessee Winter	257	10.0	11.5	13.2	31.5	39.6	21.2	5	100
Spring barley:									
Coast	690	-------	11.7	5.0	21.6	4.5	-------	4	45.4
White Smyrna	195	-------	10.8	6.2	19.9	3.1	-------	4	41.7

VIRGINIA

ARLINGTON EXPERIMENT FARM, ROSSLYN, VA.

The most extensive work with winter barleys with which the United States Department of Agriculture has had any connection has been carried on at Arlington Experiment Farm, Rosslyn, Va. The varieties tested in field plots have included both old standard sorts and pedigreed selections. Wisconsin Winter (C. I. No. 2159), during recent years, has proved to be the best of the standard varieties and is used as a basis of comparison in Table 28. The average yield of this variety for the past five years has been high. No varieties have winterkilled entirely during the period reported. Orel (C. I. No. 351) has produced very high yields and a superior quality of grain. Tenkow (C. I. No. 646), Han River (C. I. No. 2163), and Wisconsin Winter (C. I. No. 2167) have produced yields as great as 80 per cent of that of the standard, Wisconsin Winter. The yields of the Tennessee Winter selections marked with an asterisk (*) in Table 28 were not comparable with those of other varieties for the same year and are not included in the averages. During the following four years a selection of Tennessee Winter (C. I. No. 3546) produced an average yield higher than that of the standard, Wisconsin Winter, for the same period. Alaska (C. I. No. 4106) was equal to Wisconsin Winter. All other varieties were inferior. A selection from Nakano Wase (C. I. No. 4690) produced a high yield in 1926. This variety, doubtless of hybrid origin, promises to be a valuable winter barley.

AGRICULTURAL EXPERIMENT STATION, BLACKSBURG, VA.

T. K. WOLFE, *Agronomist*, and M. S. KIPPS, *Assistant Agronomist*

At Blacksburg, Va., only winter varieties were grown in the years 1922 to 1925, inclusive. In 1926 only spring varieties were grown in field plots. There was little difference in the average yields of the winter barleys during the preceding four years and the annual yields of the spring barleys grown in 1926. Tennessee Winter (C. I. No. 257) is used as a basis of comparison in Table 28. Its average yield was identical with that of Scottish Pearl (C. I. No. 277). Four varieties produced yields equal to or greater than the yield of Tennessee Winter. The highest yield was obtained from Greece (C. I. No. 221), the second highest from Union Winter (C. I. No. 4688), and the third highest from Wisconsin Winter (C. I. No. 2167).

The beardless varieties from Tennessee did not produce satisfactory yields at Blacksburg. In 1923 Beardless 5 (C. I. No. 3384), Beardless 6 (C. I. No. 2746), and Union Winter (C. I. No. 4688) produced yields of 3.3, 5.0, and 43.5 bushels, respectively. These yields were not comparable with those of other varieties grown the same year, and they are therefore not included in the table.

The 2-rowed spring varieties were better than the 6-rowed spring sorts. Alpha (C. I. No. 959) and Horn (C. I. No. 926) gave the highest yields. A single test, of course, is insufficient evidence from which to draw conclusions.

TABLE 28.—*Acre yields of varieties of barley grown at the Arlington Experiment Farm, Rosslyn, Va., and at the Virginia Agricultural Experiment Station, Blacksburg, in one or more of the years from 1922 to 1926, inclusive*

[The yields at Rosslyn in 1922 marked with an asterisk (*) were obtained from 1/64-acre plots; being not comparable, they are not included in the averages. No yields were recorded on winter varieties at Blacksburg in 1926, owing to uneven stands. Data for Blacksburg obtained through the courtesy of the Virginia Agricultural Experiment Station]

Station and varieties compared	C. I. No.	Arlington selection No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
			1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)		
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
ROSSLYN															
Tennessee Winter	257		5	32.2	13	38.9	2	27.3	2	27.6	2	36.4	32.5	5	62.6
Wisconsin Winter [1]	2159		2	50.2	2	58.3	15	49.6	10	38.0	12	62.4	51.7	5	100
Tenkow	646		2	34.5	2	54.7	2	50.8	2	34.2	2	43.6	43.6	5	84.3
Scottish Pearl	277		2	20.5	2	47.3	2	34.3	2	28.9	2	54.6	37.1	5	71.8
Han River	2163		2	30.9	2	47.7	2	45.0	2	42.2	2	48.1	42.8	5	82.8
Nakano Wase	754		2	29.5	2	41.4	2	27.4	2	23.5	2	35.5	31.5	5	60.9
Do	2166		2	36.7	2	45.1	2	26.7	1	19.0	2	32.4	32.0	5	61.9
Wisconsin Winter	2167		2	34.8	2	46.2	2	45.3	2	39.7	2	55.1	44.2	5	85.5
Pidor	901		1	23.8	2	32.3	2	45.9	2	39.9	2	40.6	36.5	5	70.6
Orel	351		1	37.8	2	47.2	2	43.1	2	48.1	2	59.8	47.2	5	91.3
Tennessee Winter	3539	28	1	*31.0	2	37.3	2	43.5	1	21.3				3	70.0
Do	3541	46	1	*36.0	2	46.0	2	45.8	1	12.5				3	71.6
Do	3543	52	1	*40.0	2	53.4	2	45.3	2	32.5	2	41.4		4	82.9
Do	257		4	*39.6											
Do	3540	45	1	*40.0	2	35.1	2	29.8	2	21.9				3	59.5
Do	3546	66	1	*39.8	2	55.3	2	58.2	2	39.4	2	64.5		4	104.4
Do	3535	21 and 23	1	*27.8	2	39.9	2	17.1	1	13.3				3	48.1
Do	3534	12	1	*37.0	2	49.7	2	52.6	2	30.4	2	49.5		4	87.5
Do	3538	27	1	*42.0	2	49.3	2	37.8	2	27.7				3	78.8
Do	3544	57	1	*43.0	2	50.6	2	39.8	2	29.2				3	82.1
Do	3545	61	1	*43.0	2	52.1	2	43.5	2	39.8	2	56.9		4	89.4
Do	3542	47	1	*37.8	2	58.0	2	23.9	2	41.1				3	84.1
Alaska	4106		1	*35.4	2	60.6	2	48.9	2	40.1	2	57.6		4	99.4
Tennessee Winter	3537	25	1	*36.0	2	45.1	2	28.6	2	24.1				3	67.1
Do	3536	24	1	*36.0	2	43.1	2	42.6	2	25.1				3	75.9
Beardless 6	2740				2	25.7	4	36.4	2	34.0	2	54.1		4	72.2
Beardless 5	3384						2	24.5	2	32.6	2	50.6		3	71.8
Mechanical Mixture	4115								2	15.2	2	23.2		2	38.2
Composite Cross	4116								2	10.1	2	16.5		2	26.5
Nakano Wase	4090	754–A									2	61.7		1	98.9
BLACKSBURG															
Winter barleys:															
Winter	3160		3	19.4	3	12.2	3	41.3	3	24.9			24.5	4	102.9
Tennessee Winter [1]	257		3	15.7	3	8.3	3	58.4	3	12.9			23.8	4	100
Union Winter	583		3	8.4	3	12.0	3	37.8	3	13.8			18.0	4	75.6
Pidor	901		3	15.7	3	19.3	3	34.8	3	18.1			22.0	4	92.4
Scottish Pearl	277		3	19.6	3	15.6	3	48.1	3	12.0			23.8	4	100
Greece	221		3	28.5	3	19.9	3	44.7	3	18.1			27.8	4	116.8
Nakano Wase	2166		3	28.3	3	7.7	3	44.7	3	12.9			23.4	4	98.3
Wisconsin Winter	2167		3	18.8	3	23.1	3	43.0	3	16.3			25.3	4	106.3
Cusado	895		3	17.7	3	21.2	3	37.8	3	12.9			22.4	4	94.1
Squarehead Winter	252		3	18.3	3	11.2	3	51.6	3	6.9			22.0	4	92.4
Orel	351		3	26.2	3	14.9	3	29.2	3	4.3			18.7	4	78.6
Beardless 5	3384						3	29.2	3	3.4				2	45.7
Beardless 6	2740						3	20.6	3	3.4				2	33.6
Union Winter	4088						3	63.6	3	13.8				2	108.4
Spring barleys:															
Orel	351										3	20.5			
Manchuria	244										3	14.8			
Hannchen	531										3	23.8			
Horn	926										3	24.6			
Alpha	950										3	24.8			
Featherston	1120										3	14.0			
Michigan	4080										3	11.9			

[1] Standard variety with which others are compared.

WASHINGTON

AGRICULTURAL EXPERIMENT STATION, PULLMAN, WASH.

E. G. SCHAFER, *Agronomist*

During the 5-year period 1922 to 1926, inclusive, six spring varieties and two winter varieties were included in the tests at the Washington Agricultural Experiment Station at Pullman. A plot each of Composite Cross (C. I. No. 4116) and Mechanical Mixture (C. I. No. 4115) were grown in 1925 and 1926. Five of the spring barleys and the two winter varieties were grown for the entire period. (Table 29.) There was very little choice between the three highest yielding spring sorts and the higher yielding winter variety, but Beldi Giant (C. I. No. 2777) and Blue (C. I. No. 1247) produced average yields slightly in excess of that of Trebi (C. I. No. 936), and all were slightly lower in yield than Winter Club (C. I. No. 592). None of the other varieties offered serious competition.

TABLE 29.—*Acre yields of varieties of barley grown at the Washington Agricultural Experiment Station, Pullman, at the Waterville Branch Station, and at the Adams Branch Station, Lind, Wash., in one or more of the years from 1919 to 1926, inclusive*

[Data obtained through the courtesy of the Washington Agricultural Experiment Station. At Pullman and at Lind the yields of two plots were taken as the basis of each test]

Station and varieties compared	C. I. No.	Wash. No.	Acre yield (bushels)								Number of comparable years and yield in comparison with standard variety named	
			1919	1920	1921	1922	1923	1924	1925	1926	Average, 1919–1926	Number	Per cent
PULLMAN													
Beldi Giant	2777	967	------	------	------	34.1	70.5	37.9	66.0	67.0	55.1	5	104.8
Blue	1247	973	------	------	------	34.1	83.7	34.2	56.5	66.0	54.9	5	104.4
Horsford	1775	873	------	------	------	34.6	59.8	30.0	47.5	57.9	46.0	5	87.5
Trebi [1]	936	1176	------	------	------	29.9	75.1	31.2	57.1	69.5	52.6	5	100
Eureka	1250	958	------	------	------	19.2	39.7	19.6	34.2	35.1	29.6	5	56.3
Colsess	2792	2410	------	------	------	------	------	25.4	43.8	39.0	------	3	68.6
Composite Cross	4116	2485	------	------	------	------	------	------	47.3	55.8	------	2	81.5
Mechanical Mixture	4115	2486	------	------	------	------	------	------	46.9	55.3	------	2	80.7
Fall sown:													
Winter Club	592	957	------	------	------	43.0	53.2	46.2	73.8	66.7	55.4	5	105.3
Wisconsin Winter	519	971	------	------	------	32.2	35.6	44.6	69.0	53.9	47.1	5	89.5
WATERVILLE													
Horsford [1]	1775	873	17.7	11.8	37.9	33.1	28.2	26.6	20.0	23.9	24.9	8	100
Club Mariout	261	1175	20.4	12.4	26.6	34.1	23.1	------	------	------	------	5	90.7
White Smyrna	658	1068	13.8	11.6	25.6	------	------	------	------	------	------	3	75.6
Blue	1247	973	12.3	10.8	20.4	------	------	------	------	------	------	3	73.3
Beldi Giant	2777	967	------	10.8	28.9	------	------	------	------	------	------	2	79.9
Winter Club	592	957	------	------	------	------	------	------	------	14.9	------	1	62.3
LIND													
California [1]	1270	959	------	------	------	3.0	41.9	8.2	20.9	10.6	16.9	5	100
Meloy	1176	1343	------	------	------	3.2	41.4	8.9	16.8	17.1	17.5	5	103.6
Flynn	1311	------	------	------	------	------	------	------	------	9.4	------	1	88.7

[1] Standard variety with which others are compared.

WATERVILLE BRANCH STATION, WATERVILLE, WASH.

C. E. Hill, *Superintendent*

Only a limited number of barleys have been tested in field plots at Waterville. The results for eight years are reported in Table 29. Horsford (C. I. No. 1775) was the only variety grown in all of the eight years. As is the case in many areas of low rainfall, this variety produced comparatively high yields. It is used as a basis of comparison in the last column of the table. Club Mariout (C. I. No. 261) was the only variety that produced a yield as great as 90 per cent of that of Horsford. Winter Club (C. I. No. 592) was grown in only one year and its yield was not encouraging.

ADAMS BRANCH STATION, LIND, WASH.

H. M. Wanser, *Superintendent*

Two varieties were grown during the entire 5-year period at Lind. Flynn (C. I. No. 1311) was included in the test in 1926, but it was sown unseasonably late and the yield is hardly comparable. The returns from California (C. I. No. 1279) and Meloy (C. I. No. 1176) were practically the same, although the average yield of Meloy was 0.6 bushel higher than that of California. (Table 29.)

WEST VIRGINIA

AGRICULTURAL EXPERIMENT STATION, MORGANTOWN, W. VA., AND LAKIN SUBSTATION, LAKIN, W. VA.

R. J. Garber, *Head of Department of Agronomy*

Varietal experiments have been conducted in West Virginia at the West Virginia Agricultural Experiment Station at Morgantown and at the substation at Lakin. Both winter and spring varieties were grown at Morgantown. At Lakin only winter sorts have been tested. At Morgantown the winter varieties, as shown in Table 30, have not given yields as satisfactory as those of the spring sorts. Alpha (C. I. No. 959) was distinctly the best spring barley. In this respect the conditions about Morgantown seem to resemble those in New York State, where Alpha does particularly well. Four barleys of the Manchuria–Oderbrucker group were grown. These produced good yields, but lower than those of Alpha. Nepal (C. I. No. 262) and Himalaya (C. I. No. 620) were obviously not adapted. One variety listed in the table as "Two-Rowed" contained a mixture of two 2-rowed sorts. It was obviously mixed when received at the station. The yield, however, indicates that neither type was suited to conditions in West Virginia. Tennessee Winter (C. I. No. 257) apparently was superior to Union Winter (C. I. No. 583) at both Morgantown and Lakin.

TABLE 30.—*Acre yields of varieties of barley grown at the West Virginia Agricultural Experiment Station, Morgantown, and at the Lakin Substation in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the West Virginia Agricultural Experiment Station]

Station and varieties compared	C. I. No.	W. Va. No.	Number of plots and acre yield										Average, 1922–1926 (bushels)	Number of comparable years and yield in comparison with standard variety named	
			1922		1923		1924		1925		1926				
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
MORGANTOWN															
Alpha [1]	959	7	5	44.1	5	26.3	5	23.7	5	40.4	4	33.4	33.6	5	100
Manchuria	244	6	5	35.8	5	25.2	5	19.7	5	38.0	4	29.9	29.3	5	87.2
Oderbrucker	1174	9	5	34.3	5	22.3	5	23.5	5	38.5	4	28.2	29.4	5	87.5
Featherston	1120	8	5	31.4	5	21.3	5	20.5	5	39.9	4	25.7	27.8	5	82.7
Two-Rowed	----	4	5	28.1	5	22.4	5	12.2	5	30.5	4	24.4	23.6	5	69.9
Himalaya	620	3	5	19.0	5	10.7	5	7.9	5	20.5	4	16.7	15.0	5	44.6
Nepal	262	5	5	10.7	5	4.3	5	4.6	5	17.4	4	9.7	9.3	5	27.7
Wisconsin Pedigree	835	10	----	----	----	----	----	----	5	34.3	4	33.4	----	2	91.9
Winter barleys:															
Tennessee Winter	257	1	5	29.8	4	17.7	4	21.3	4	9.5	----	----	----	4	58.3
Union Winter	583	2	5	38.3	4	12.9	4	6.2	4	1.8	----	----	----	4	44.0
LAKIN															
Winter barleys:															
Tennessee Winter [1]	257	1	----	12.8	----	16.0	----	21.4	----	23.4	4	20.5	18.8	5	100
Union Winter	583	2	----	17.0	----	13.2	----	18.8	----	5.9	4	22.6	15.5	5	82.4

[1] Standard variety with which others are compared.

WISCONSIN

AGRICULTURAL EXPERIMENT STATION, MADISON, WIS.

R. A. MOORE, *Agronomist*

The five years 1922 to 1926, inclusive, have marked the transitional stage in varietal testing at Madison. Several selections of the standard varieties adapted to the State had been tested in previous years, and a few of the outstanding ones were distributed to the farmers as pure lines. New material from the breeding nurseries was not ready for plot tests until 1925. For this reason only three varieties were grown for the full five years. Of these, Odessa (C. I. No. 182) produced the highest average yield. The average yields of Manchurian (C. I. No. 739) and Oderbrucker (C. I. No. 1529), however, almost equaled that of Odessa. (Table 31.) July (C. I. No. 1563), grown for three years, gave a yield 111 per cent of that of Oderbrucker (C. I. No. 1529), used as a standard. A number of smooth-awned varieties were tested during 1925 and 1926. Several of these produced high average yields. Relative percentages, however, are somewhat misleading, as the yield of the standard, Oderbrucker, was relatively low in 1926. Making due allowance, however, these varieties appear promising.

TABLE 31.—*Acre yields of varieties of barley grown at the Wisconsin Agricultural Experiment Station, Madison, in one or more of the years from 1922 to 1926, inclusive*

[Data obtained through the courtesy of the Wisconsin Agricultural Experiment Station]

Variety	C. I. No.	Wis. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with Oderbrucker	
			1922		1923		1924		1925		1926		Average, 1922-1926 (bushels)		
			Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Oderbrucker	1520	Ped. 6	2	51.7	2	15.6	[1] 1	33.3	1	58.5	1	41.5	40.1	5	100
Do	4666	Ped. 5-1	2	53.4	2	20.2	1	33.7			1	39.2		4	103.1
Manchurian	739	96-8	2	54.0	2	14.9	1	33.2	1	64.0	1	43.5	41.9	5	104.5
Odessa	182	103	2	50.1	2	21.0	1	33.3	1	58.2	1	52.2	43.0	5	107.2
Minsturdi	1556	105			2	16.1	1	32.1	1	43.0	1	41.1		4	89.0
Reed Triumph	839	98-10			2	14.4	1	21.8	1	62.6	1	33.8		4	89.2
July	1563	106					1	40.1	1	59.4	1	48.6		3	111.3
Korsbyg	918	97-3							1	60.0	1	45.6		2	105.6
Smooth White	4658	× 39-5							1	69.0	1	60.3		2	129.4
Do	4659	× 39-2							1	60.4	1	55.7		2	116.0
Do	4660	× 39-9							1	65.4	1	52.0		2	117.4
Short Awned	4661	× 10-6-4-1							1	54.3	1	48.2		2	102.6
Smooth White	4662	× 39-11							1	52.5	1	42.9		2	95.4
Short Awned	4663	× 4-3-3-1-1							1	47.9	1	42.1		2	90.0
Colsess	2792	107									1	36.7		1	88.4

[1] One plot; every other plot a check of Oderbrucker.

WYOMING

Barley varietal tests have been conducted at three points in Wyoming. At Laramie the work is directly under the supervision of the Wyoming Agricultural Experiment Station. At Archer the Wyoming Agricultural Experiment Station is in cooperation with the Office of Dry-Land Agriculture of the United States Department of Agriculture. The Sheridan station is under direct control of the Office of Dry-Land Agriculture.

AGRICULTURAL EXPERIMENT STATION, LARAMIE, WYO.

A. F. VASSE, *Professor of Agronomy*, and GLEN HARTMAN, *Assistant Agronomist*

Twelve varieties of barley were grown during the 5-year period 1922 to 1926, inclusive, at Laramie. Of these, eight were grown in all five years. The highest average yield was obtained from Coast (C. I. No. 690). This yield, however, was not significantly greater than that of Odessa (C. I. No. 182) and Trebi (C. I. No. 936). Trebi is recognized as a valuable variety in this region, but the yield of Odessa is rather surprising. Odessa has given high yields in South Dakota, but elsewhere has usually been inferior to other varieties. It may be that Laramie falls within the western limit of the most favorable range of Odessa. It may also be that Odessa has not been so widely tested as its merits deserve. The yield of Colsess (C. I. No. 2792) was disappointing. Since this variety has been so productive in near-by Colorado, it should be a good variety at Laramie. (Table 32.) The yield of O. A. C. 21 (C. I. No. 1470) is omitted for 1926, being not comparable because of the influence of outside factors.

TABLE 32.—*Acre yields of varieties of barley grown at the Wyoming Agricultural Experiment Station, Laramie, at the Cheyenne Experiment Farm, Archer, Wyo., and at the United States Dry-Land Field Station, Sheridan, Wyo., in one or more of the years from 1922 to 1926, inclusive*

[Data for Laramie obtained through the courtesy of the Wyoming Agricultural Experiment Station, for Archer through the courtesy of the Office of Dry-Land Agriculture cooperating with the Wyoming Agricultural Experiment Station, and for Sheridan through the courtesy of the Office of Dry-Land Agriculture]

Station and varieties compared	C. I. No.	Number of plots and acre yield										Number of comparable years and yield in comparison with standard variety named	
		1922		1923		1924		1925		1926		Average, 1922–1926 (bushels)		
		Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		Number	Per cent
Laramie:														
O. A. C. 21	1470	8	43.8	5	67.2	7	47.5	2	34.0				4	78.7
Manchuria		2	46.7	1	59.8	2	43.7	2	33.3	1	60.5	48.8	5	68.7
White Smyrna	658	2	43.1	1	65.9	2	60.0	2	46.4	1	81.0	59.3	5	83.5
Hannchen	531	2	52.2	1	67.8	2	63.6	2	49.5	1	86.3	63.9	5	90.0
Trebi	936	2	56.1	2	80.1	2	76.5	3	34.0	5	100.5	69.4	5	97.7
Coast [1]	690	2	39.5	2	82.6	2	69.9	2	59.2	1	103.8	71.0	5	100
Nepal	595	2	39.5	1	49.6	2	49.9	2	39.2	1	73.6	50.4	5	71.0
Odessa	182	2	54.6	2	87.6	2	67.1	2	41.8	1	100.5	70.3	5	99.0
Beldi Giant	2777					1	73.6	3	49.6	1	90.9		3	92.0
Colsess	2792							3	35.5	1	67.8		2	63.4
Horn	926							1	23.7	1	103.8		2	78.3
Archer:														
White Smyrna	658			4	11.3	4	12.7	4	17.4	4	24.4	16.5	4	90.2
Sandrel	937			4	15.6	4	8.6						2	81.2
Coast	690			4	16.4	4	7.6	4	13.7	4	31.5	17.3	4	94.5
Trebi [1]	936			4	19.2	4	10.5	4	13.1	4	30.5	18.3	4	100
Flynn	1311			4	16.9	2	13.0	4	18.2	4	22.5	17.6	4	96.2
Black Hull-less	1106			4	11.8	4	11.6	6	3.7	4	18.4	11.4	4	62.3
Hannchen	531			4	7.2	4	9.1	6	9.8	4	25.0	12.8	4	69.9
Horn	926			4	9.6	4	12.5	4	11.5	4	28.6	15.1	4	82.5
Meloy	1176			4	7.4	4	4.6	4	7.5	4	25.6	11.3	4	61.7
Franconian	680							2	6.0	4	17.6		2	54.1
Svanhals	187							2	5.4	4	15.3		2	47.7
Himalaya	620							2	10.9	4	18.0		2	86.5
Nepal	595							2	2.9	4	8.1		2	25.2
White Smyrna	910							2	13.3	4	25.0		2	88.1
Sheridan:														
White Smyrna	195	3	22.9	3	52.8	3	33.9	3	57.5	3	39.7	41.4	5	73.4
Coast	690	3	27.1	3	57.0	3	43.9	3	58.9	3	53.3	48.0	5	85.1
Manchuria	244	3	26.2	3	57.5	3	34.1	3	50.5	3	45.0	42.7	5	75.7
Hannchen	531	3	30.2	3	45.0	3	40.6	3	51.1	3	50.8	43.5	5	77.1
Club Mariout	261	3	15.5	3	46.1	3	42.8	3	49.7	3	50.0	40.8	5	72.3
Trebi [1]	936	3	31.3	3	68.1	3	48.1	3	65.8	3	68.9	56.4	5	100
Svanhals	187	3	25.8	3	51.1	3	41.7	3	56.1	3	47.5	44.4	5	78.7
Flynn	1311	3	18.2	3	44.7	3	39.5	3	55.0	3	45.6	40.6	5	72.0
Horn	926	3	33.8	3	55.6	3	41.9	3	58.3	3	49.2	47.8	5	84.8
Meloy	1176					3	41.7	3	56.1	3	50.3		3	81.1
Nepal	595							3	40.0	3	35.3		2	55.9
California Hull-less	4682							3	43.4	3	30.6		2	54.9

[1] Standard variety with which others are compared.

CHEYENNE EXPERIMENT FARM, ARCHER, WYO.

In all, 14 varieties were tested during the four years 1923 to 1926, inclusive. Eight of these were grown for the entire period. None of the four years was a good barley year. The highest individual yield was 30.5 bushels produced by Trebi (C. I. No. 936) in 1926. In Table 32 Trebi is used as a basis of comparison. This variety also produced the highest average yield. Flynn (C. I. No. 1311), Coast (C. I. No. 690), and White Smyrna (C. I. No. 658) all gave yields more than 90 per cent of that of Trebi. Of the varieties grown only in 1925 and 1926, none showed much promise, White Smyrna (C. I. No. 910) and Himalaya (C. I. No. 620) being the best.

UNITED STATES DRY-LAND FIELD STATION, SHERIDAN, WYO.

The results at Sheridan were quite definite. The superiority of Trebi (C. I. No. 936) during the 5-year period was marked. Coast (C. I. No. 690), while second in order of productivity, produced only 85 per cent as much grain as Trebi. The yield of Horn (C. I. No. 926) was essentially the same as that of Coast. A satisfactory yield was secured from Meloy (C. I. No. 1176) in the three years in which it was grown. (Table 32.) This yield, however, was only 81 per cent of that of Trebi for the same years. The yield of Hannchen (C. I. No. 531) in 1926 suffered a probable 10 per cent loss from injury by grasshoppers. Naked varieties were unsatisfactory.

ALBERTA

EXPERIMENTAL STATION, LETHBRIDGE, ALBERTA (IRRIGATED LAND)

W. H. FAIRFIELD, *Superintendent*

The yields obtained under irrigation at Lethbridge are reported in Table 33. O. A. C. 21 (C. I. No. 1470) is used as a standard of comparison. Although it produced high yields, it was not outstanding. Gold (C. I. No. 1145), one of the four varieties tested in all of the 11 years, exceeded the standard in yield. Swedish Chevalier (C. I. No. 4837), another 2-rowed sort, gave higher yields over a period of 10 years. Bark (C. I. No. 2793) and Invincible (C. I. No. 590) were very much better than the standard in the eight years in which they were grown. Trebi (C. I. No. 936) was very promising over a period of four years.

EXPERIMENTAL STATION, LETHBRIDGE, ALBERTA (DRY-LAND TESTS)

The data from dry-land experiments at Lethbridge recorded in Table 33 indicate that the station is not in an area particularly favorable to the growing of Manchuria types without irrigation. O. A. C. 21 (C. I. No. 1470) is again used as a standard of comparison, but its yield is exceeded by those of two-thirds of the varieties tested. Of the four varieties tested in all of the 11 years, 1916 to 1926, inclusive, Gold (C. I. No. 1145) produced the highest average. The yields of Bark (C. I. No. 2793) were very high in six of the eight years in which it was grown. Of those varieties grown in only five years Chinese (C. I. No. 4696) gave the highest yield. Trebi (C. I. No. 936) gave a yield 117.2 per cent of that of the standard in the four years in which it was tested. Hannchen (C. I. No. 531) was the best of the varieties which were grown for a 3-year period.

EXPERIMENTAL STATION, LACOMBE, ALBERTA

F. H. REED, *Superintendent*

Thirty varieties were tested for one or more years at Lacombe, Alberta, during the period 1916 to 1926, inclusive. O. A. C. 21 (C. I. No. 1470) is used as a standard of comparison in Table 33 and its yield was exceeded by only 6 of the 30 varieties. Bearer (C. I. No. 4707) gave a yield 108.8 per cent of that of the standard during the 11-year period. In 10 years, Bark (C. I. No. 2793) was superior to O. A. C. 21, and Gold (C. I. No. 1145) was slightly but not significantly better. Trebi (C. I. No. 936) was promising for a period of seven years. Canadian Thorpe (C. I. No. 740) produced a high average in three years, and Star (C. I. No. 1701) was better than the standard in 1925 and 1926.

TABLE 33.—*Acre yields of barley varieties grown at the experimental stations at Lethbridge, Lacombe, Beaverlodge, and Fort Vermilion, Alberta, and at the University of Alberta, Edmonton, in one or more of the years from 1916 to 1926, inclusive*

[Data for the first four stations obtained through the courtesy of the Dominion Experimental Farms and for Edmonton through the courtesy of the University of Alberta]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
LETHBRIDGE																
Under irrigation																
Swedish Chevalier	4837		78.7	82.2	91.4	85.0	76.9	75.6	64.1		56.3	62.4	71.5		10	104.9
Gold	1145		81.2	73.7	88.8	77.5	85.0	66.6	61.3	51.9	82.6	81.2	55.0	71.3	11	103.6
Bark	2793		109.7	79.6	107.5	101.3	116.7	95.0	95.0	76.9					8	152.7
Invincible	590		99.1	70.3	83.9	86.2	74.4	70.0	71.0	52.9					8	118.8
Duckbill	1916	Ott. 57	65.0	61.8	83.2						63.6	48.0	45.3		6	87.7
Himalayan	4838	Ott. 59	78.7	55.3	86.7	85.0	78.0	45.6	64.7	39.3	78.1	73.5	57.6	65.7	11	95.5
Early Chevalier	2725	Ott. 51	56.6	41.2	63.5	63.0	75.5	42.5	51.3	38.8	47.9	53.0	59.4	53.9	11	78.3
Odessa	4699		54.7	39.1	87.4	62.5	73.6	84.7	65.6	49.9					8	101.1
Clifford	4845		57.2	36.8	65.9										3	91.7
O. A. C. 21 [1]	1470		69.1	23.4	81.7	69.4	57.6	84.7	78.7	47.7	85.8	81.3	77.6	68.8	11	100
Manchurian	4832	Ott. 50	71.5	14.7	80.6	75.3	59.0	58.1							6	93.2
Trebi	930						151.3	86.6	74.4	52.7					4	135.9
California Mariout	1455						51.8	72.5	63.1	41.8					4	85.3
Cape	557							72.5	70.3	44.8					3	88.8
Bearer	4707	Ott. 475							76.3	78.2	57.1	84.5	83.2		5	102.3
Chinese	4696	Ott. 60							57.7	37.8	67.1	81.7	78.8		5	87.1
Junior	4698	Ott. 471									71.7	76.0	64.5		3	88.6
Feeder	4697	Ott. 561									23.4	61.9	43.4		3	52.6
O. A. C. 21	4708	Sask. 228									89.1	74.2	75.5		3	97.5
Hannchen	4841	Sask. 229									79.4	72.6	78.4		3	94.1
Charlottetown 80	2732										66.0	69.6	73.7		3	85.5
Albert	4852	Ott. 54									28.9	53.4	59.7		3	58.0
Star	1701											89.9	65.2		2	97.6
Pearl	4834											55.0	37.8		2	58.4
Dry-land tests																
Bark	2793		87.5	41.2	17.5	0	29.2	0	46.3	37.5					8	128.1
Swedish Chevalier	4837		64.3	40.0	17.5	0	21.9	0	47.5		22.2	35.5	43.0		10	109.4
Gold	1145		73.1	40.0	20.0	0	27.7	0	30.9	20.3	32.0	22.2	45.8	28.3	11	105.6
Duckbill	1916	Ott. 57	75.6	39.6	16.3	0	11.6	0			23.9	13.5	36.4		9	90.3
O. A. C. 21 [1]	1470		61.2	35.6	12.5	0	37.9	0	27.5	27.8	27.3	27.2	38.2	26.8	11	100
Early Chevalier	2725	Ott. 51	65.6	35.0	12.5	0	24.8	0	25.0	33.4	19.8	34.0	57.2	27.9	11	104.1
Clifford	4845		61.2	35.0	8.7										3	96.2
Invincible	590		88.5	33.9	15.6	0	20.4	0	22.5	29.1					8	104.0
Odessa	4699		52.5	33.7	13.7	0	35.0	0	35.0	39.7					8	103.6
Himalayan	4838	Ott. 59	70.0	28.3	2.5	0	23.3	0	15.6	30.3	27.5	44.6	43.4	25.8	11	96.3
Manchurian	4832	Ott. 50	68.7	23.7	8.7	0	30.6								5	89.5
Trebi	936						43.7	0	36.3	29.1					4	117.2
Stella	4851	Ott. 58					26.3								1	69.4
California Mariout	1455						13.1	0	16.3	24.5					4	57.9
Bearer	4707	Ott. 475							38.7	33.1	20.1	19.6	39.6		5	102.0
Chinese	4696	Ott. 60							25.0	32.2	24.7	21.2	59.4		5	109.8
Cape	557								23.7	20.6					2	80.1
Junior	4698	Ott. 471									24.9	42.0	34.6		3	109.4
Feeder	4697	Ott. 561									22.5	29.9	51.6		3	112.3
Hannchen	531										32.8	34.6	44.6		3	120.7
O. A. C. 21	4708	Sask. 228									32.2	29.5	40.4		3	110.0
Charlottetown 80	2732										26.0	18.1	50.7		3	102.3
Albert	4852	Ott. 54									20.0	37.8	19.4		3	83.2
Star	1701												40.0		1	104.7

[1] Standard variety with which others are compared.

TABLE 33.—*Acre yields of barley varieties grown at the experimental stations at Lethbridge, Lacombe, Beaverlodge, and Fort Vermilion, Alberta, and at the University of Alberta, Edmonton, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
LACOMBE																
Gold	1145		70.4	84.2	109.2	69.9	60.0	80.0	35.4	51.0		48.5	75.5		10	100.6
Svanhals	187		45.2	78.7											2	93.5
Odessa	182		54.6	76.2	87.5	43.1	53.7								5	88.5
Mansfield	2241		64.6	67.9	83.7										3	96.5
Invincible	590		48.9	67.2	73.3										3	84.9
O. A. C. 21 [1]	1470		64.7	87.9	91.6	61.6	70.0	76.9	34.2	56.7	34.2	55.4	101.0	64.9	11	100
Himalayan	4838	Ott. 59	51.6	87.1	93.3	43.3	49.2	70.1	29.6	65.6	25.0	58.5	60.0	55.8	11	86.0
Early Chevalier	2725	Ott. 51	37.9	59.2	70.4	41.8	43.8	45.5				50.6	71.8		8	73.1
Manchurian	4832	Ott. 50	69.5	58.7	90.0	51.6	48.3	70.1	18.1	52.6		38.1	91.0		10	86.5
Success	2707		32.1	39.5	65.0	37.1	47.9	44.2	19.4	59.3		40.5	67.1		10	66.5
Bearer	4707	Ott. 475	45.7	85.4	101.2	67.2	58.5	103.3	33.2	89.7	30.0	76.4	94.8	70.6	11	108.8
Bark	2793			84.5	111.2	90.0	65.4	94.2	31.6	73.4	27.5	54.1	33.6		10	102.5
Charlottetown 80	2732			83.3	80.0							28.6	96.4		4	91.3
Stella	4851	Ott. 58		67.9	87.1	50.8	51.6	67.0	22.3	58.3		55.8	70.8		9	86.4
Wing Pedigree	1177			48.3	55.4										2	65.0
Albert	4852	Ott. 54		44.2	58.3	40.1	41.5	41.6	14.9	58.3					7	65.1
Duckbill	1916	Ott. 57			100.0	60.2	42.5	51.9	18.3	55.7	27.5	16.5	37.0		9	70.4
Junior	4698	Ott. 471				45.4	60.9	66.0	33.3	71.3	19.2	37.6	85.8		8	81.2
Trebi	936						85.4	74.6	34.2	71.9	17.5	75.5	99.4		7	107.0
Feeder	4697	Ott. 561					49.2	47.9	25.4	51.6	33.3	40.1	59.2		7	71.6
Hannchen	531								41.6			31.9	78.6		3	79.8
O. A. C. 21	4708	Sask. 228							37.1			40.1	88.0		3	89.9
Canadian Thorpe	740								32.9		33.3	30.6			3	118.4
Chinese	4696	Ott. 60							32.5	61.4	35.0	36.1	94.8		5	92.4
Swedish Chevalier	4837										25.8	48.4	68.5		3	73.9
Alberta Beardless	4865											78.1	42.1		2	76.9
Eureka	1250											28.2	32.5		2	38.9
Malting	4835											49.1	81.3		2	83.4
Pearl	4834											33.7	53.8		2	55.6
Star	1701											71.6	96.9		2	107.2
BEAVERLODGE																
O. A. C. 21 [1]	1470		30.6	30.5	7.9		71.7	51.9	25.1	45.6		43.8	56.6	41.4	9	100
Manchurian	4832	Ott. 50	24.1	38.6	2.2		64.7	42.6							5	85.4
Early Chevalier	2725	Ott. 51	21.2	35.2	19.4		55.1	46.3	24.7	44.4		42.6	92.1	42.3	9	102.2
Albert	4852	Ott. 54					34.8	23.3	14.5	29.4			59.6		5	64.3
Himalayan	4838	Ott. 59					52.9	44.0	20.2	52.7		35.0	58.9		8	89.6
Hannchen	531						59.1	57.3	28.8	63.3		42.3	86.9		6	114.7
Nepal	595						58.7								1	81.9
Bark	2793							66.1	30.2	57.7		41.4	85.6		5	126.0
Eureka	1250							45.1	24.9	55.2		37.9	60.7		5	100.4
Success	2707							17.1	22.0	36.0		29.8	58.5		5	73.3
Trebi	936							72.4	26.9	53.4		45.3	93.0		5	130.5
Chinese	4696	Ott. 60							20.0	46.7		48.5	70.3		4	108.4
Bearer	4707	Ott. 475							27.2	70.1		43.7	101.6		4	141.8
Canadian Thorpe	740								21.0	59.1			88.5		3	132.5
Charlottetown 80	2732								24.1	56.4		50.8	81.9		4	124.5
Alberta Beardless	4865											34.3	87.6		2	101.8
Star	1701											49.1	93.9		2	112.5
Feeder	4697	Ott. 561										30.3			1	39.2
Stella	4851	Ott. 58										32.3			1	73.7
Gold	1145											54.5	96.7		2	150.6
Junior	4698	Ott. 471										32.9	75.6		2	108.2
O. A. C. 21	4708	Sask. 228										41.4	62.0		2	103.0
Pearl	4834											36.6	53.4		2	89.6
Duckbill	1916	Ott. 57											66.0		1	116.6

[1] Standard variety with which others are compared.

TABLE 33.—*Acre yields of barley varieties grown at the experimental stations at Lethbridge, Lacombe, Beaverlodge, and Fort Vermilion, Alberta, and at the University of Alberta, Edmonton, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
FORT VERMILION																
Manchurian [1]	4832	Ott. 50	71.3	77.5	60.0	62.5	32.5	61.4	62.5	76.3	51.3	68.8	78.3	63.9	11	100
Mensury	2657		70.0												1	98.2
Champion	2683		62.5	65.0	47.5	60.0	41.7	55.0	35.0						7	85.8
Nepal	595		61.3	62.4	45.0	47.5	30.0	65.0	62.5	58.7	48.7	58.7	80.0	56.3	11	88.1
Success	2707		61.3	61.0	41.5	57.5	42.5	58.7	30.0			73.6	70.0		9	86.2
Canadian Thorpe	740			96.3	53.7	52.5									3	101.3
Albert	4852	Ott. 54			42.5	51.3	29.4	60.0	38.7	55.0	30.0	42.5	68.7		9	75.1
Duckbill	1916	Ott. 57					46.3	65.0	65.0	80.0	58.7	57.5	80.0		7	104.9
O. A. C. 21	1470						40.0	62.5	66.3	71.3	45.0	60.0	75.9		7	97.6
Black Hull-less	596						31.3								1	96.3
Bark	2703								61.3	70.0	44.1	63.7	83.0		5	95.5
Chinese	4696	Ott. 60								55.4	38.7	73.7	75.7		4	88.9
Charlottetown 80	2732										35.0	58.7	68.3		3	81.7
Alberta Beardless	4865										47.5	55.0	62.5		3	83.2
Eureka	1250												67.5		1	86.2
EDMONTON																
Manchurian	4832	Ott. 50			63.5	48.3	79.0	44.1	36.9	47.6	70.5	50.9	42.3	53.7	9	109.4
Mansfield	2241				66.6	40.1	75.3	36.3	39.1						5	95.9
Odessa	4699				47.3	51.0	76.0	46.6	46.7						5	99.6
O. A. C. 21 [1]	1470				69.8	49.1	74.9	38.1	36.4	38.7	52.5	44.3	38.1	49.1	9	100
Canadian Thorpe	740				80.2	64.3	81.3	54.0	38.8	50.4	68.9	48.7	30.0	58.4	9	118.9
Hannchen	531				72.9	62.2	83.5	47.0	41.2	37.1	63.0	47.4			8	112.5
Nepal	595				15.8										1	22.6
Eureka	1250				11.2	34.3									2	38.3
Guy Mayle	4839	M.C.312			32.9	23.3	52.0	32.9	34.7	38.8	43.2	40.3			8	73.9
Mensury	2657					45.2	71.8	38.8	41.2						4	99.4
Claude	1557					61.2	84.2	45.6	46.7						4	119.8
Maltster	585					55.7	72.7	37.9	39.1						4	103.6
Clifford	4845					68.3	81.6	44.7	40.2						4	118.3
French Chevalier	175					41.2	60.7	39.8	33.6						4	88.3
Invincible	590					50.0									1	101.8
Primus	532					67.6	93.6	58.7	30.4						4	126.2
Princess	529					73.9	103.6	39.8	30.4						4	124.8
Svanhals	187					66.5	88.1	42.7	39.1						4	119.2
Standwell	584					56.9	76.2	44.7	26.0						4	102.8
Bark	2793						89.6	45.1	40.2	39.2	90.8	66.4	49.8		7	127.8
Alberta Beardless	4865						65.5	27.2	28.2						3	80.9
Trebi	936									30.2	49.7	39.5			3	88.1

[1] Standard variety with which others are compared.

EXPERIMENTAL STATION, BEAVERLODGE, ALBERTA

W. D. ALBRIGHT, *Superintendent*

At Beaverlodge, as at many other Canadian stations, O. A. C. 21 (C. I. No. 1470) was used as a basis of comparison. As may be seen in Table 33, its relative yield at this point was not so high as at many other places. It was exceeded not only by Early Chevalier (C. I. No. 2725) the only other variety grown for the full period, but also by 14 of the 22 varieties tested for shorter periods. Hannchen (C. I. No. 531) during a period of six years yielded 114.7 per cent of that of the standard. Of the varieties grown for five years the highest

yield was from Trebi (C. I. No. 936) a yield 130.5 per cent of that of the check. The performance of Bark (C. I. No. 2793) in the same years was almost as promising as that of Trebi. Bearer (C. I. No. 4707) gave the highest yield of the varieties tested for four years. This variety also gave the highest individual yield, 101.6 bushels, in 1926. Gold (C. I. No. 1145) while grown in only two years yielded 150.6 per cent of that of O. A. C. 21.

EXPERIMENTAL STATION, FORT VERMILION, ALBERTA

ROBERT JONES, *Superintendent*

Only two varieties were grown for the entire period of 11 years at Fort Vermilion. Of these Manchurian (C. I. No. 4832) was used as a standard of comparison. As can be seen in Table 33, it is considerably better than Nepal (C. I. No. 595), which was also grown for the full period. Only two of the varieties grown for a shorter period are superior to the standard. These were the almost indistinguishable varieties, Canadian Thorpe (C. I. No. 740) and Duckbill (C. I. No. 1916).

UNIVERSITY OF ALBERTA, EDMONTON, ALBERTA

R. NEWTON, *Professor of Field Crops*

Yields are reported from Edmonton in some or all of the years 1918 to 1926, inclusive. Only three varieties were grown for the entire 9-year period. One of these, O. A. C. 21 (C. I. No. 1470) is used as a standard of comparison in Table 33. Its average yield was 49.1 bushels, whereas that of Manchurian (C. I. No. 4832) was 53.7 bushels and that of Canadian Thorpe (C. I. No. 740) 58.4 bushels. Hannchen (C. I. No. 531), grown for eight years, also produced better than the standard. The best individual performance was probably that of Bark (C. I. No. 2793), which gave a yield 127.8 per cent of that of the standard for a period of seven years. Most of those varieties grown in the 4-year period 1919 to 1922, inclusive, were superior to O. A. C. 21. Primus (C. I. No. 532) produced surprisingly, as this variety has shown little promise at most places where it has been tested. The yield of Trebi is of particular interest and clearly indicates that Edmonton is beyond the range of adaptation of this variety, one of the few clear-cut limitations so far evident.

BRITISH COLUMBIA

EXPERIMENTAL STATION, SUMMERLAND, BRITISH COLUMBIA

W. HUNTER, *Superintendent*

At Summerland, as may be seen in Table 34, only two varieties were grown in all of the 11 years 1916 to 1926, inclusive. One of these, O. A. C. 21 (C. I. No. 1470), was used as a standard of comparison. Its average yield was 3 bushels greater than that of Early Chevalier (C. I. No. 2725) also grown for the same period. Of the varieties grown in fewer years California Marlout (C. I. No. 1455) and Feeder (C. I. No. 4697) gave relatively high yields for a period of three years. The highest single yield was obtained from Trebi (C. I. No. 936) in 1926, the only year in which it was grown.

TABLE 34.—*Acre yields of varieties of barley grown at the experimental station at Summerland, British Columbia, at the experimental farm at Agassiz, and at the experimental stations at Sydney (Saanichton) and Invermere, in one or more of the years from 1916 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Station and varieties compared	O.I. No.	Canadian (Ott.) No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Summerland:																
Early Chevalier	2725	51	29.4	36.3	39.1	54.4	40.6	55.0	39.4	48.7	48.1	55.8	86.5	48.5	11	93.8
Manchurian	4832	50	28.1	34.0	41.6	28.4	21.5	53.7							6	83.6
O. A. C. 21 [1]	1470		25.5	48.7	35.4	46.7	9.8	82.5	56.9	60.0	64.4	50.8	88.4	51.7	11	100
Charlottetown 80	2732				38.3	29.3	10.7	21.0	49.4	48.1	38.7	48.5	71.5		9	71.8
Himalayan	4838	59						47.5	45.6	64.4	61.6	64.4	82.5		6	90.8
Gold	1145								92.5	81.8	45.4	54.4	70.8		5	107.6
Chinese	4696	60							26.5	56.4	47.5	63.4	98.4		5	95.2
Success	2707									59.4	43.1	74.6	93.1		4	102.6
Hannchen	531										77.7	43.3			2	105.0
California Mariout	1455										56.3	61.5	109.0		3	111.3
Feeder	4607	561									53.4	76.0	89.2		3	107.4
Duckbill	1916	57									46.3	28.3	40.0		3	56.3
French Chevalier	175										45.2	39.2	45.6		3	63.8
Bark	2703										32.3	36.6	36.3		3	51.7
Bearer	4707	475									23.5	50.0	62.9		3	67.0
Albert	4852	54									15.0	47.3			2	54.2
Trebi	936												136.6		1	154.5
Star	1701												83.5		1	94.5
Agassiz:																
Bearer	4707	475	47.5	47.5	33.7	24.4									4	99.5
Danish Chevalier	180		38.7	50.8	33.1	26.0		55.0	36.9	32.5				40.0	7	103.9
Swedish Chevalier	4837		36.8	53.7	33.7										3	94.3
Invincible	590		40.0	58.1	26.1										3	95.9
Oderbrucker	2700		38.1	44.7	38.1	26.6		57.5	33.7	25.0				37.7	7	97.9
Manchurian	4832	50	35.0	40.5	30.0	23.4		55.0	46.9						6	98.3
Odessa	4699		41.3	55.0	35.0	22.2		56.3	37.5						6	100.5
O. A. C. 21 [1]	1470		42.5	52.8	36.3	21.5		51.3	41.3	23.7				38.5	7	100
Success	2707		39.3	45.6	26.3	22.5		38.7	21.3	15.0				29.8	7	77.4
Gold	1145		50.0	58.4	43.1	25.6		58.7	39.4	32.5				44.0	7	114.3
Nepal	595		31.3												1	73.6
Canadian Thorpe	740			46.8											1	88.8
Charlottetown 80	2732			41.8											1	79.2
Duckbill	1916	57			35.6	19.4		57.5	27.5	26.3					5	95.7
Albert	4852	54				17.0		37.5	13.2	8.5					4	55.4
Himalayan	4838	59				18.2		26.3	25.0	21.3					4	65.8
Stella	4851	58				15.0		56.3	38.7	18.7					4	93.3
Bark	2703							71.3	35.0						2	114.9
Chinese	4696	60							29.4	15.0					2	68.3
Hannchen	531									35.0					1	147.7
Sydney:																
Nepal	595		10.3	35.7												
O. A. C. 21	1470		36.0						24.4							
Cape	557		29.3													
Canadian Thorpe	740		32.4													
Early Chevalier	2725	51	36.1										37.0			
Manchurian	4832	50	30.3			20.7	32.7									
Success	2707			38.2												
Charlottetown 80	2732			34.3												
Stella	4851	58		39.9												
Blue Hull-less	4980			33.7			29.0									
Duckbill	1916	57				22.5	38.1		14.2				36.0			
Albert	4852	54				18.1	38.7		13.3							
Odessa	4699					16.5	35.4									
Hannchen	531						36.4									
Oderbrucker	2700						36.6									
Chinese	4696	60							15.0				32.5			
Himalayan	4838	59							18.3							
Bark	2703												20.1			
Bearer	4707	475											40.8			

[1] Standard variety with which others are compared.

TABLE 34.—*Acre yields of varieties of barley grown at the experimental station at Summerland, British Columbia, at the experimental farm at Agassiz, and at the experimental stations at Sydney (Saanichton) and Invermere, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Canadian (Ott.) No.	Acre yields (bushels)											Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Invermere: [1]																
Manchurian	4832	50	32.9	18.0	16.4	46.6	54.2	52.5							6	62.9
Success	2707		15.4	15.8	11.4	45.8	41.7	50.0	41.7	51.6	35.0			34.3	9	62.5
Early Chevalier	2725	51	60.0	23.7	23.9										3	66.6
Gold	1145		80.3	45.4	30.4	68.3	50.3	76.4	33.3	52.1	57.5			64.9	9	100
Himalayan	4838	59				48.3	84.2	54.0	45.8	61.6	34.6				6	99.1
Chinese	4696	60							51.6	70.8	47.9				3	119.3

[1] Yields at Invermere for 1925 and 1926 are not reported, as the crop suffered from drought due to shortage of irrigation water.

EXPERIMENTAL FARM, AGASSIZ, BRITISH COLUMBIA

W. H. HICKS, *Superintendent*

Results covering seven years are reported from Agassiz, British Columbia, in Table 34. Five varieties were grown in all of the seven years. Although O. A. C. 21 (C. I. No. 1470) is used as the standard of comparison, its average yield was exceeded by that of Gold (C. I. No. 1145) and by that of Danish Chevalier (C. I. No. 180). The yields of Odessa (C. I. No. 4699) were slightly higher than those of the standard for a period of six years. The yield of O. A. C. 21 was exceeded by that of only two other varieties. These were Bark (C. I. No. 2793), grown for two years, and Hannchen (C. I. No. 531), grown only in 1923.

EXPERIMENTAL STATION, SYDNEY (SAANICHTON), BRITISH COLUMBIA

E. M. STRAIGHT, *Superintendent*

The yields from Sydney (Saanichton) are reported in Table 34. These yields were such that averages or a standard of comparison were without value. Vancouver is obviously not particularly suited to the growing of barley. The highest single yield reported was 40.8 bushels, obtained from Bearer (C. I. No. 4707) in 1926. In two of the six years reported no acre yields as high as 25 bushels were obtained.

EXPERIMENTAL STATION, INVERMERE, BRITISH COLUMBIA

R. G. NEWTON, *Superintendent*

Six varieties of barley were tested for periods of three to nine years at Invermere, British Columbia. Gold (C. I. No. 1145) is used as a standard of comparison in Table 34. Its yield was exceeded by that of Chinese (C. I. No. 4696) in the three years in which the latter was grown and was almost equaled by Himalayan (C. I. No. 4838) for a period of six years. Success (C. I. No. 2707), Manchurian (C. I. No. 4832), and Early Chevalier (C. I. No. 2725) were much inferior to the standard.

MANITOBA

EXPERIMENTAL FARM, BRANDON, MANITOBA

M. J. TINLINE, *Superintendent*

Yields from Brandon in all of the 11 years 1916 to 1926, inclusive, are reported in Table 35. O. A. C. 21 (C. I. No. 1470), which is used as a standard of comparison, is one of four varieties grown in all 11 years. Its yield for this period was exceeded by that of Bearer (C. I. No. 4707) and was almost equaled by that of Manchurian (C. I. No. 4832). Five varieties grown for shorter periods produced higher yields than O. A. C. 21. The most promising varieties were Bark (C. I. No. 2793), grown in six years, and Trebi (C. I. No. 936), grown in four years. Two varieties grown in only three years exceeded the standard in yield. These were O. A. C. 21 (C. I. No. 4708) and Mandscheuri (C. I. No. 4700). Both of these varieties are of the Manchuria type. It is quite evident that Brandon is in an area well suited to barleys of the Manchuria group.

TABLE 35.—*Acre yields of varieties of barley grown at the experimental farm at Brandon, Manitoba, and at the experimental station at Morden, in one or more of the years from 1916 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with O. A. C. 21	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Brandon:																
Canadian Thorpe	740		36.4	47.5											2	84.5
O. A. C. 21	1470		53.9	45.5	55.0	57.5	45.8	50.8	50.0	57.9	59.6	55.0	48.2	52.7	11	100
Manchurian	4832	Ott. 50	59.4	45.0	53.4	54.1	41.3	44.2	59.5	60.5	46.9	43.0	38.8	51.5	11	97.7
Manchuria	244		55.8	42.1	41.8	43.3	33.7	39.2	63.4						7	89.1
Gold	1145		39.2	40.0	40.8							46.0	51.0		5	84.3
Success	2707		52.3	29.2	50.0	21.3									4	72.1
Himalayan	4838	Ott. 59	41.6			45.8	38.8	45.0	80.0	40.5	57.8	58.2	43.7		9	95.3
Bearer	4707	Ott. 475	40.4	47.0	70.8	54.1	37.5	60.8	77.9	67.9	44.8	47.3	52.3	54.7	11	103.8
Junior	4698	Ott. 471	54.6	38.8	56.6	32.5	22.5	35.8	36.3	33.8	57.1	56.4	34.2	41.7	11	79.1
Charlottetown 80	2732			47.5	62.5	55.0	34.2	37.5	60.0	48.8	33.1	40.6	51.5		10	89.7
Stella	4851	Ott. 58		39.2	43.4	48.3	35.0	48.3	55.5	63.6	48.9	40.4	47.3		10	89.7
Albert	4852	Ott. 54		26.8	32.5	25.8	20.0	43.3	27.9	37.1	49.0	45.5	35.0		10	67.2
Duckbill	1916	Ott. 57			55.8	50.8	41.3	39.2	87.9	38.8	30.9	23.5	27.6		9	82.6
Odessa	4696					45.8	38.7								2	81.6
Bark	2793							40.0	77.1	55.8	49.5	62.5	71.7		6	110.8
Chinese	4696	Ott. 60							67.1	70.5	45.0	52.0	47.7		5	104.4
Trebi	936									44.5	58.3	80.3	59.6		4	110.0
O. A. C. 21	4708	Sask. 228									63.4	48.4	65.2		3	103.7
Feeder	4697	Ott. 561									41.5	42.5	38.4		3	75.1
Mandscheuri	4700	M. C. 809									59.4	55.3	52.0		3	102.8
Guy Mahle	4839	M. C. 312									56.8	45.3	48.9		3	92.6
Mensury	4701	M. C. 320									55.3	48.1	52.5		3	95.8
Lion (A)	4846										48.6	63.8	45.2		3	96.7
Mandscheuri	4702	M. C. 1807									48.3	56.4	49.3		3	94.5
Swedish Chevalier	4837										47.6	37.8	58.4		3	88.2
Hannchen	531										44.1	45.2	66.4		3	95.6
Early Chevalier	2725	Ott. 51									42.9	49.0	42.2		3	81.8
Manchurian (Cap Rouge)	4833										39.9	56.2	47.6		3	88.2
Pearl	4834											38.5	54.9		2	90.5
Velvet	4252											48.7	49.3		2	94.0
Star	1701											39.2	44.7		2	81.4

TABLE 35.—*Acre yields of varieties of barley grown at the experimental farm at Brandon, Manitoba, and at the experimental station at Morden, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with O. A. C. 21	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Morden:																
Albert	4852	Ott. 54									64.5	36.5	42.9	48.0	3	63.2
Success	2707										53.0	33.3	47.5	44.6	3	58.7
Junior	4698	Ott. 471									55.7	66.6			2	78.4
Himalayan	4838	Ott. 59									84.6	63.1	48.8	65.5	3	86.2
Early Chevalier	2725	Ott. 51									61.8	45.3			2	68.6
Stella	4851	Ott. 58									87.0				1	112.7
O. A. C. 21	1470										77.2	79.0	71.9	76.0	3	100
Feeder	4697	Ott. 561									78.4	41.6	47.0	55.7	3	73.3
Chinese	4696	Ott. 69									88.9	71.0	72.8	77.6	3	102.1
Bearer	4707	Ott. 475									77.0	91.7	76.5	82.7	3	108.8
Charlottetown 80	2732										52.8	84.3	68.0	68.4	3	90.0
Gold	1145										41.4	76.0	69.0	62.3	3	82.0
Hannchen	531										61.0	74.0	78.8	71.3	3	93.8
Duckbill	1916	Ott. 57									52.7	49.1	52.4	51.4	3	67.6
Swedish Chevalier	4837										54.3	31.0	50.1	61.8	3	81.3
Star	1701											50.7	77.4		2	88.9
Svanbals	187											54.2	46.8		2	66.9
Pearl	4834											46.0	35.8		2	54.2
Manchurian	4832	Ott. 50										70.7	72.6		2	95.6

EXPERIMENTAL STATION, MORDEN, MANITOBA

W. R. LESLIE, *Superintendent*

Varietal tests were not begun at Morden until 1924, but for the three years reported in Table 35 the highest yielding sorts are six rowed. O. A. C. 21 (C. I. No. 1470) is used as a basis of comparison. Its 3-year average yield was exceeded by Bearer (C. I. No. 4707) and Chinese (C. I. No. 4696). Hannchen (C. I. No. 531) was superior to the other 2-rowed sorts, producing an average of 93.8 per cent of that of O. A. C. 21. Manchurian (C. I. No. 4832) was only slightly inferior to O. A. C. 21 in the two years in which it was grown. Varieties of types such as Success (C. I. No. 2707) and Duckbill (C. I. No. 1916) were obviously unsuited, the results seeming conclusive even in a test of only three years.

NEW BRUNSWICK

EXPERIMENTAL STATION, FREDERICTON, NEW BRUNSWICK

C. F. BAILEY, *Superintendent*

Yields from Fredericton, New Brunswick, are reported in all the 11 years 1916 to 1926, inclusive. Three varieties were grown during the entire period. One of these, O. A. C. 21 (C. I. 1470), is used as a standard of comparison in Table 36. Its average yield was 2 bushels less than that of Early Chevalier (C. I. No. 2725). Seven of the varieties grown for less than 11 years were relatively better than the standard. Charlottetown 80 (C. I. No. 2732) and Chinese (C. I. No. 4696) were the best varieties for a period of six years. Of those grown only in the last three years, the highest yielders were Mandscheuri (C. I. No. 4702) and Mensury (C. I. No. 4701). Star (C. I. No. 1701) was very promising in 1925 and 1926, the only years in which it was tested.

TABLE 36.—*Acre yields of varieties of barley grown at the experimental station at Fredericton, New Brunswick, in some or all of the years from 1916 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Variety	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with O. A. C. 21	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Early Chevalier	2725	Ott. 51	25.5	14.6	28.3	35.5	28.8	36.2	40.5	42.5	41.4	65.4	34.2	35.7	11	105.3
Canadian Thorpe	740		20.0	10.9											2	78.3
O. A. C. 21	1470		22.5	17.1	32.9	35.6	28.8	29.5	41.9	28.4	56.0	56.7	24.0	33.9	11	100
Gold	1145		21.4	7.8	20.6	33.3	24.6	25.8	32.8	34.2	37.3	59.6	22.9	29.7	11	87.6
Manchurian	4832	Ott. 50	11.4	16.2	34.5		28.0				62.6	61.1	27.4		7	101.5
Duckbill	1916	Ott. 57			25.0		29.6	35.6	22.4	31.5	30.6	25.2	9.0		8	70.0
Stella	4551	Ott. 58			35.4	38.3	27.1	32.5	38.0	33.7					6	104.0
Chinese	4696	Ott. 60						35.2	33.2	41.0	52.6	65.1	18.8		6	105.3
Charlottetown 80	2732							35.0	45.5	41.8	49.5	51.0	31.6		6	108.1
Himalayan	4838	Ott. 59						23.7	28.3	20.3	35.8	35.4	11.0		6	69.3
Mandscheuri	4702	M. C. 1807									60.8	65.5	21.1		3	107.7
Do	4760	M. C. 800									59.1	56.6	18.0		3	97.8
Mensury	4701	M. C. 3207									58.4	60.4	20.8		3	102.0
Hannchen	4841	Sask. 229									53.8	56.6	16.8		3	93.0
Manchurian (Cap Rouge)	4833										51.1	56.7	25.1		3	97.1
Beaver	4707	Ott. 475									47.1	57.3	23.9		3	93.0
Duckbill	4864	M. C. 207									42.5	52.1	10.0		3	76.5
Swedish Chevalier	4837										39.1	51.9	19.0		3	80.5
Feeder	4097	Ott. 561									38.6	54.2	20.5		3	82.9
Guy Mayle	4839	M. C. 312									36.0	50.3	10.0		3	70.4
French Chevalier	175										35.0	42.5	23.4		3	73.7
Star	1701											63.4	27.1		2	112.1

NOVA SCOTIA

EXPERIMENTAL FARM, NAPPAN, NOVA SCOTIA

W. W. BAIRD, *Superintendent*

At Nappan, Nova Scotia, three varieties were grown for the 10 years of the experiment. (Table 37.) One of these, O. A. C. 21 (C. I. No. 1470), was used as the basis for comparison. It was exceeded by French Chevalier (C. I. No. 175), which gave an average yield of 3.2 bushels higher than the standard. The most promising variety tested at Nappan was Charlottetown 80 (C. I. No. 2732). For a period of nine years its yield was 129.1 per cent of that of the standard. It is true that Star (C. I. No. 1701) shows a higher percentage for two years, but even in these years its actual yield did not exceed that of Charlottetown 80. Good yields were obtained from Chinese (C. I. No. 4696), Early Chevalier (C. I. No. 2725), and Hannchen (C. I. No. 531).

EXPERIMENTAL STATION, KENTVILLE, NOVA SCOTIA

W. S. BLAIR, *Superintendent*

The results at Kentville, Nova Scotia, reported in Table 37 are not easily comparable. But few varieties were tested before 1924. In the years 1924 to 1926, inclusive, a large number were grown. Only one variety was grown in all of the years for which yields are reported. This variety, Charlottetown 80 (C. I. No. 2732), is used as a basis of comparison. Its yield was exceeded by that of only one variety. Manchurian (C. I. No. 4833) produced more grain in the three years in which it was tested than did the standard in the same years.

TABLE 37.—*Acre yields of varieties of barley grown at the experimental farm at Nappan and at the experimental station at Kentville, Nova Scotia, in one or more of the years 1916 and from 1918 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)											Number of comparable years and yield in comparison with standard variety named	
			1916	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Nappan:															
Odessa	4699		28.1		22.5	51.8	37.2							4	89.0
French Chevalier	175		21.2	24.9	51.9	59.8	54.4	65.6	56.9	83.1	70.2	47.5	51.6	10	106.6
Stella	4851	Ott. 58	24.4	22.2	35.0	59.0	36.2	65.3	46.9					7	101.5
Nugent	4706		25.6											1	78.8
Invincible	590		35.6											1	109.5
O. A. C. 21 [1]	1470		32.5	21.0	25.0	44.4	55.0	64.8	41.9	89.6	46.8	62.8	48.4	10	100
Manchuria	4832	Ott. 50	34.4	20.5	23.8	53.2	45.6	65.8	51.8	69.7	39.0	65.0	46.9	10	96.9
Gold	1145		31.8							87.1	41.0	62.7		4	96.2
Canadian Thorpe	740		39.3											1	120.9
Swedish Chevalier	4837		24.7							63.1	33.9	62.0		4	79.3
Beaver	1915		23.1											1	71.1
Oderbrucker	2700		34.1											1	104.9
Charlottetown 80	2732			33.1	50.6	68.7	58.1	67.5	55.0	97.8	84.6	61.3		9	129.1
Duckbill	1916	Ott. 57		26.5	33.1	68.7	46.6	54.2	43.8	70.7	24.1	44.7		9	91.4
Albert	4852	Ott. 54			12.5	43.8	29.0	41.2	23.8	92.0	21.5	45.2		8	71.7
Himalayan	4838	Ott. 59					37.0	39.8	[2] 52.2	52.4	26.2	65.0		6	76.6
Chinese	4696	Ott. 60						60.0	46.9	106.7	42.8	57.0		5	102.5
Bearer	4707	Ott. 475								85.0	39.0	66.0		3	95.3
Duckbill	4864	M. C. 207								88.6	26.4	48.0		3	81.8
Early Chevalier	2725	Ott. 51								79.4	72.8	55.8		3	104.4
Feeder	4697	Ott. 561								66.5	40.5	51.0		3	79.4
Hannchen	531									93.1	45.8	69.7		3	104.7
Manchurian (Cap Rouge)	4833									81.6	48.2	66.8		3	98.6
Guy Mahle	4835	M. C. 312								56.5	24.4	58.2		3	69.9
Star	1701										80.8	65.0		2	133.0
Kentville: [2]															
Manchurian	4832	Ott. 50		30.0	33.1	23.3				21.8	28.9	33.6		6	78.0
Canadian Thorpe	740			24.9										1	73.7
Charlottetown 80 [1]	2732			33.8	39.0	37.4	39.8	45.2		24.1	41.0	41.0	37.7	8	100
Duckbill	1916	Ott. 57			36.7	20.0	24.6	30.8		13.4	26.8	19.4		7	66.5
Chinese	4696	Ott. 60						31.4		29.9	37.1	35.6		4	88.6
O. A. C. 21	1470									21.0	26.9	33.8		3	78.8
Gold	1145									22.4	35.0	35.0		3	87.0
Early Chevalier	2725	Ott. 51								23.8	33.0	32.5		3	84.2
Himalayan	4838	Ott. 59								18.3	24.8	20.0		3	59.3
Bearer	4707	Ott. 475								23.3	33.0	33.2		3	84.2
Swedish Chevalier	4837									17.0	24.7	26.8		3	64.4
Manchurian (Cap Rouge)	4833									25.3	41.0	40.1		3	105.9
Duckbill	4864	M. C. 207								17.0	28.7	20.0		3	61.9
French Chevalier	175									19.0	39.2	34.3		3	87.0
Hannchen	531									23.4	26.8	33.2		3	78.5
Star	1701										41.0	31.3		2	88.3

[1] Standard variety with which others are compared.
[2] Data for 1923 at Kentville not reported.

ONTARIO

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONTARIO

The administrative center of the Canadian Experimental Farms is located at Ottawa, and as a natural result the list of barleys reported in Table 38 is an extensive one. In Table 38 O. A. C. 21 (C. I. No. 1470) is used as a basis of comparison. Altogether 11 varieties were grown in all of the 11 years 1916 to 1926, inclusive,

and 12 others were grown in 10 of the 11 years. Of the varieties grown for the entire period 8 produced a higher average than O. A. C. 21. The yields of these better varieties differed but little from one another. The highest average yield was that of Star (C. I. No. 1701), 54.7 bushels. This was only 2.6 bushels more than those of Stella (C. I. No. 4851) and Himalayan (C. I. No. 4838). The average yield of O. A. C. 21 was 49.8 bushels. Most of the varieties tested for a shorter period than 11 years were inferior to O. A. C. 21. Charlottetown 80 (C. I. No. 2732), grown for 10 years, produced a yield 106.2 per cent of that of the standard. The yields of Hannchen (C. I. No. 4841) and Manchuria (C. I. No. 2330) were greater than those of the check for periods of four and three years, respectively. One of the most promising varieties was a smooth-awned barley, Velvet (C. I. No. 4252). It was grown in the last three years of the test and produced a yield 110 per cent of that of O. A. C. 21.

ONTARIO AGRICULTURAL COLLEGE, GUELPH, ONTARIO

W. J. SQUIRREL, *Professor of Agronomy*

The more important varieties tested at Guelph are included in Table 38. Results for 11 years are reported. It was the original plan to present all Canadian yields since 1915, so that they might be available to agronomists. The 11-year plan was readily adapted to Guelph. The yields at Guelph were quite uniform from year to year. The season of 1921 was the only one in which the maximum yield was less than 50 bushels. Binder (C. I. No. 4703), used as a basis of comparison, produced the highest average yield for the 11 years. This yield, however, was not significantly greater than those produced by California Brewing (C. I. No. 4870), O. A. C. 21 (C. I. No. 1470), and Chevalier × Mandscheuri (C. I. No. 4875). French Chevalier (C. I. No. 175), Manchuria (C. I. No. 244), O. A. C. Selection 620 (C. I. No. 4872), and O. A. C. Selection 726 (C. I. No. 4873), also produced high yields. The naked varieties were all low-yielding ones, Nepal (C. I. No. 4878) being inferior to Black Hull-less (C. I. No. 596) and Himalaya (C. I. No. 620).

EXPERIMENTAL STATION, KAPUSKASING, ONTARIO

S. BALLANTYNE, *Superintendent*

Yields are reported from Kapuskasing, Ontario, in six of the seven years 1920 to 1927, inclusive. Only three varieties were grown in all six years. One of these, O. A. C. 21 (C. I. No. 1470), is used in Table 38 as a standard of comparison. Duckbill (C. I. No. 1916) produced the highest average for the period mentioned. Two varieties were grown for five years. One of these, Manchurian (C. I. No. 4832), exceeded the standard in yield. Of the varieties grown in three years, Bearer (C. I. No. 4707) and Duckbill (C. I. No. 4864) gave very high yields. Star (C. I. No. 1701) and Manchurian (C. I. No. 4833) were quite promising in the last two years of the test, and Mensury (C. I. No. 4701) was outstanding in 1926, the only year in which it was grown.

TABLE 38.—*Acre yields of varieties of barley grown at the Central Experimental Farm, Ottawa, at the Ontario Agricultural College, Guelph, and at the experimental station at Kapuskasing, Ontario, in one or more of the years from 1916 to 1926, inclusive*

[Data for Ottawa and Kapuskasing obtained through the courtesy of the Dominion Experimental Farms and for Guelph through the courtesy of the Ontario Agricultural College]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)											Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Ottawa:																
Goldthorpe	327		37.5	40.0	60.0	35.0									4	91.3
Oderbrucker	2700		38.7	43.7	65.0	32.5	51.3	32.5	40.0	61.3	42.3	54.0			10	90.7
French Chevalier	175		21.3	30.0	58.8	45.0	53.8	27.5	55.0	54.4	43.2	46.9			10	85.8
Odessa	4699		19.4	58.7	76.3	25.0	61.3								5	101.7
Duckbill	1916	Ott. 57	37.5	41.3	62.5	30.0	51.3	18.0	45.0	37.5	31.8	53.4	24.3	39.3	11	78.9
Canadian Thorpe	740		32.7	42.5	58.8							55.4			4	84.5
Stella	4851	Ott. 58	50.0	42.5	67.5	22.5	63.8	51.3	47.5	67.5	48.8	62.1	39.8	52.1	11	104.6
Beaver	1915		46.2	41.3	46.3	27.5									4	85.4
Success	4840		48.1	33.8	50.0	20.0	35.0	46.3	35.0	38.8	32.0	60.6			10	78.7
Jarvis	2072		30.0	42.5	48.8	26.8									4	79.4
Gordon	4842		42.5	36.3	65.0	38.8	51.8	42.5	55.0	58.8	42.0	61.0	39.2	48.4	11	97.2
Yale	4844		32.5	50.0	63.8	21.0	51.3	37.5	37.5	51.3	40.4	58.5			10	88.0
Albert	4852	Ott. 54	30.6	40.0	48.8	16.3	22.5	20.0	30.0	26.3	28.9	61.5			10	85.0
Blue Short Head	2680		47.5	38.7	62.5										3	89.4
Clifford	4845		46.8	46.3	62.5	26.3	46.3	26.3	58.8	68.8	39.8	65.9			10	94.1
Standwell	581		30.0	37.5	68.8	30.0	52.5								5	92.6
Invincible	590		32.5	47.5	50.0										3	78.0
Escourgeon	2716		15.6	51.3	71.3	50.0	58.8	38.8	75.0	51.3	47.4	65.2	49.8	52.2	11	104.8
Black Japan	2717		65.0	50.0	52.5										3	100.5
Svanhals	187		30.0	27.5	53.8										3	68.8
Primus	532		18.6	37.5	67.5	25.0									4	78.8
Taganrog	2721		47.5	46.3	71.3	21.0									4	98.5
Manchurian	4832	Ott. 50	53.8	47.5	62.5	31.3	52.5	57.5			42.7	63.3	44.3		9	104.8
Caucasian	2724		42.5	43.7	57.5	33.8	56.8	21.3							6	88.0
Black	2720		20.6	30.0	52.5										3	62.0
Early Chevalier	2725	Ott. 51	22.5	43.7	67.5	41.3	51.3	41.3	48.8	46.8	36.5	42.8			10	88.2
O. A. C. 21 [1]	1470		43.8	51.3	71.3	22.5	47.5	53.8	42.5	71.3	45.0	58.0	40.6	49.8	11	100
Early Indian	1570		17.5	25.0	46.3										3	53.3
Kutais	2728		49.4	40.0	67.5										3	94.2
Gold	1145		35.6	37.5	67.5	52.5	68.8	50.0	70.0	69.4	47.0	47.5	45.0	53.8	11	108.0
Himalayan	4838	Ott. 59	53.1	52.5	70.0	48.8	42.5	35.0	55.0	68.2	42.5	55.9	49.2	52.1	11	104.6
Star	1701		41.2	43.7	70.0	22.5	70.0	58.8	55.0	78.6	46.6	70.7	44.3	54.7	11	109.8
Binder	1900		53.8	52.5	46.3	25.0	58.8								5	100
Nugent	4706		58.8	52.5	77.5	25.0	56.3	51.3	43.8	73.1	50.0	67.6	44.1	53.7	11	107.8
July	1563		44.4	50.0	61.3	35.0	50.0	60.0	63.8	73.8	42.0	76.2			10	109.6
Finnish Six-Row	4704		43.1	37.5	65.0	45.0	75.0	15.0	63.8	70.0	43.0	73.3			10	104.5
Finnish Two-Row			28.1	31.3	50.0	35.0	61.3	38.8							6	84.3
Swedish Chevalier	4837		26.8	22.5	57.5						36.4	33.5			5	65.2
Arlington Awnless	702		25.0	37.5	30.0										3	65.5
Chinese	4696	Ott. 60	58.8	47.5	76.3	38.8	67.5	15.3	66.3	67.5	39.0	68.1	43.0	53.5	11	107.4
Bearer	4707	Ott. 475	28.8	40.0	68.8	50.0	68.8	30.0	70.0	62.5	51.8	69.6	39.5	52.7	11	105.8
Feeder	4697	Ott. 561	37.0	35.0	76.3	30.0	52.5	42.5	58.8	31.3	36.2	60.8			10	90.6
Junior	4698	Ott. 471	31.9	33.8	68.8	25.0	47.5	28.8	48.8	59.3	35.3	63.8			10	85.2
Mansfield	2241			40.0	67.5	22.5	32.5								4	84.2
Charlottetown 80	2732			56.3	73.8	41.3	68.8	26.3	70.0	63.8	48.7	48.2	37.8		10	106.2
Forage	4705	Ott. 575		27.5	45.0	23.8	30.0	26.8	46.3	69.0	26.2	35.6			9	69.5
Bark	2793						67.5	8.0	40.0		49.3	59.5			5	90.7
California Mariout	1455						26.3	25.0	31.3	40.7	40.5	53.0			6	68.0
Chevalier II (Swedish 0403)	200							31.3	25.0	44.4	48.1	40.0			5	69.7
Blue Hull-less	4848								25.3	37.5	15.5	27.6			4	48.5
Duckbill	4864	M. C. 207							57.5	48.8	34.3	50.6	30.6		5	86.0
Hannchen	4841	Sask. 229							68.8	70.0	47.6	45.8			4	108.8
Lion (A)	4846								62.5	50.0	47.0	50.1			4	99.1
Guy Mayle	4839	M. C. 312								47.5	39.6	47.2	31.9		4	78.8
Mandscheuri	4700	M. C. 809								71.3	44.2	56.2			3	98.1
Do	4702	M.C. 1807								58.8	39.3	50.6			3	86.5

[1] Standard variety with which others are compared.

TABLE 38.—*Acre yields of varieties of barley grown at the Central Experimental Farm, Ottawa, at the Ontario Agricultural College, Guelph, and at the experimental station at Kapuskasing, Ontario, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Ottawa—Continued.																
Mensury	4701	M.C.3207								65.0	49.0	59.9	43.3		4	100.6
Manchuria	2330									71.4	42.8	66.2			3	103.1
Quebec Hull-less	4847									48.1	38.3	40.6			3	72.2
Velvet	4252										49.7	67.0	41.9		3	110.0
Mandscheuri	4849	M. C. 909										46.7			1	79.7
Alberta Beardless	4865											29.0			1	49.5
Eureka	1250											38.4			1	65.5
Pearl	4834											55.4			1	94.5
Black Hull-less	596											30.1			1	51.4
Guelph:																
California Brewing	4870		52.5	72.2	83.2	54.6	37.6	24.7	53.5	71.7	39.4	54.3	50.3	54.0	11	98.2
Manchuria	244		47.2	76.1	68.7	51.4	38.6	26.5	46.1	64.9	38.3	57.0	45.9	52.8	11	96.0
Common Six-Row	184		35.9	59.3	50.1	46.0	36.8	21.3	44.4	70.2	28.4	42.2	38.7	43.0	11	78.2
Oderbrucker	2700		47.0	69.7	52.8	49.5	42.5	26.6	53.4	78.4	34.6	51.8	41.5	50.7	11	92.2
O. A. C. 21	1470		52.8	74.0	62.3	57.6	49.2	34.0	49.2	81.9	47.7	46.3	39.3	54.0	11	98.2
Oregon	4871		24.2	62.3	60.0	51.8	37.7	14.5	39.2	67.6	49.0	56.3	56.2	47.2	11	85.8
O. A. C. Sel. 620	4872		57.6	53.6	62.4	52.6	43.0	35.2	46.3	85.7	51.7	48.3	43.6	52.7	11	95.8
O. A. C. Sel. 726	4873		52.4	58.5	60.6	55.2	53.7	30.0	47.0	74.8	52.3	51.6	43.8	52.5	11	95.5
Chevalier × Mandscheuri No. 11137	4874		51.2	62.5	68.3	46.1	43.7	26.0	52.1	75.8	50.6	49.5	48.7	52.2	11	94.9
Chevalier × Mandscheuri No. 13211	4875		47.2	68.0	72.1	37.3	56.3	28.9	48.0	65.6	48.2	74.7	50.1	54.2	11	98.5
Duckbill	1916		16.2	50.3	59.2	35.4	30.2	18.9	27.6	64.4	32.0	44.6	29.2	37.1	11	67.5
French Chevalier	175		52.4	56.3	74.5	57.2	41.3	39.6	38.0	68.6	55.0	44.9	45.9	53.1	11	96.5
Binder [1]	4703		38.7	80.1	74.3	63.1	47.0	34.3	37.7	71.5	60.5	48.9	48.4	55.0	11	100
Gold	1145		42.0	77.6	75.3	55.4	41.7	30.5	36.9	71.2	45.4	46.1	32.9	51.4	11	93.5
Guy Mayle (Himalaya)	620		43.0	46.6	49.3	41.1	28.7	30.6	44.4	56.8	36.2	46.5	44.1	42.5	11	77.3
Black Hull-less	596		39.9	49.8	50.3	36.6	25.1	22.7	37.1	53.2	40.4	43.5	49.5	40.7	11	74.0
Purple (Black Hull-less)	4876		39.2	46.9	49.6	44.3	29.0	26.9	40.4	58.5	41.9	49.9	47.7	43.1	11	78.4
Winnipeg No. 2	4877		40.0	46.4	48.6	39.7	29.9	27.5	31.4	47.0	37.2	42.4	40.1	39.7	11	72.2
New White Hull-less (Nepal)	4878		25.3	31.0	45.0	21.5	16.9	7.2	31.8	35.5	20.6	31.3	18.0	25.8	11	46.0
Kapuskasing:																
Duckbill	1916	Ott. 57					28.4		35.4	61.7	46.0	72.3	31.7	45.9	6	104.3
O. A. C. 21 [1]	1470						23.0		23.3	68.3	50.0	63.0	36.1	44.0	6	100
Albert	4852	Ott. 54					18.7		20.0	40.0	26.1	54.3	37.3	32.7	6	74.3
Manchurian	4832	Ott. 50							30.4	65.0	50.6	65.4	48.8		5	108.1
Himalayan	4838	Ott. 59							23.3	59.2	30.5	56.6	34.2		5	84.8
Early Chevalier	2725	Ott. 51									32.1	65.3	34.4		3	88.3
Feeder	4097	Ott. 561									29.7	60.3	41.0		3	87.9
Chinese	4696	Ott. 60									49.3	74.4	32.5		3	104.8
Beaver	4707	Ott. 475									43.4	74.5	64.0		3	121.9
Charlottetown 80	2732										42.7	60.9	39.5		3	96.0
Hannchen	531										38.2	57.8	39.4		3	90.7
Guy Mayle	4839	M. C. 312									21.4	38.6	33.0		3	62.4
Duckbill	4804	M. C. 207									54.4	85.1	36.8		3	118.3
French Chevalier	175										38.8	71.5	38.8		3	93.6
Swedish Chevalier	4837										44.5	66.6	45.4		3	105.0
Gold	1145										50.0	59.0	41.8		3	101.2
Manchurian (Cap Rouge)	4833											69.5	51.4		2	122.0
Star	1701											78.4	48.2		2	127.6
Mensury	4701	M.C.3207											50.8		1	140.7
Binder	4703												41.0		1	113.6

[1] Standard variety with which others are compared.

PRINCE EDWARD ISLAND

EXPERIMENTAL STATION, CHARLOTTETOWN, PRINCE EDWARD ISLAND

J. A. CLARK, *Superintendent*

The results from Charlottetown are reported in Table 39. Although this station produced Charlottetown 80 (C. I. No. 2732), this variety is not used as the standard in the table. Since O. A. C. 21 (C. I. No. 1470) was grown in all the years of the test, it was chosen as the basis of comparison because of its frequent use at other points. The latter is a good variety at Charlottetown, and although five varieties were grown for the entire period of 11 years Charlottetown 80 alone exceeded the standard. Of the varieties grown less than 11 years, Stella (C. I. No. 4851) gave good yields in the seven years it was tested, and Hannchen (C. I. No. 531) was even better for a period of three years. The highest relative yield was from Horn (C. I. No. 926). Although grown in 1923 only, its yield for the single season was 166.7 per cent of that of the standard.

TABLE 39.—*Acre yields of varieties of barley grown at the experimental station at Charlottetown, Prince Edward Island, in one or more of the years from 1916 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Variety	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with O. A. C. 21	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average, 1916–1926	Number	Per cent
Albert	4852	Ott. 54	62.9	25.6	53.4	40.0	44.0	28.5	31.9	18.5	31.4	36.2	14.0	35.1	11	68.8
Nugent	4706		58.7	53.2	54.5		62.7	35.5	55.0	40.0					7	98.3
Stella	4851	Ott. 58	72.5		51.4	28.7	75.0	53.0	56.2	47.0					7	109.9
Odessa	4699		48.7	48.7	56.3		52.5								4	90.2
O. A. C. 21	1470		49.6	49.6	71.1	63.5	58.3	48.5	47.5	41.5	40.0	51.8	31.9	50.3	11	100
Oderbrucker	2700		54.1		52.6										2	88.4
Invincible	590		32.9	40.7	60.2										3	78.5
Early Chevalier	2725	Ott. 51	45.0	37.0	42.5						40.0	43.8	29.6		6	81.2
Manchurian	4832	Ott. 50	47.8	44.4	63.2	54.7	71.0	34.0	49.8	52.0	31.3	44.0	37.4	48.2	11	95.8
Gold	1145		58.0	48.2	50.6	60.0	57.8	46.4	43.5	37.0	40.4	47.4	32.6	47.4	11	94.2
Charlottetown 80	2732		85.3	52.2	48.7	38.6	69.8	51.1	43.2	59.0	44.4	55.7	36.0	53.1	11	105.6
Swedish Chevalier	4837		61.8		50.0	55.8	59.5	43.8	57.2	52.8	36.6	38.3	29.5		10	96.2
July	1503		56.6												1	114.1
Duckbill	1916	Ott. 57			28.6	45.5	52.5	58.0	42.5	44.0	33.0	23.2	19.8		9	75.8
Pedigree Beardless							44.4	46.3	42.0	46.8					4	91.6
Chinese	4696	Ott. 60						56.8	50.9	38.0	38.1	48.1	29.8		6	100.7
Himalayan	4838	Ott. 59						43.8	41.9	32.1	38.8	37.5	24.6		6	83.9
Horn	926									69.2					1	166.7
Hannchen	531										49.8	47.1	35.4		3	107.0
Bearer	4707	Ott. 475									36.5	41.5	34.5		3	91.0
French Chevalier	175										35.2	40.5	30.0		3	85.4
Feeder	4697	Ott. 561									33.3	42.2	22.3		3	79.1
Duckbill	4864	M. C. 207									34.4	28.2	22.3		3	68.7
Guy Mayle	4839	M. C. 312									32.7	39.2	26.4		3	79.6
Manchurian (Cap Rouge)	4833										32.3	43.2	32.7		3	87.6
Star	1701											46.0	39.0		2	101.4
Velvet	4252												29.2		1	91.5
Sacramento	4108												26.4		1	82.8

QUEBEC

MACDONALD COLLEGE, STE. ANNE DE BELLEVUE, QUEBEC

R. SUMMERBY, *Professor of Agronomy*

Data are reported in Table 40 for all of the years 1906 to 1926, inclusive. No single variety was grown in all of the 21 years. For the purpose of studying the results they are divided into two periods. The most natural division is from 1906 to 1922, inclusive. However, as special emphasis is placed throughout this bulletin on the 5-year period 1922 to 1926, inclusive, the first period is made to include the year 1921 but not the year 1922. In this first period no single selection was grown in all years, but essentially the same variety is carried through as Duckbill (C. I. No. 1916). This was accomplished by combining the yields of two accessions of this barley. In Table 40 it is apparent that Duckbill was not the best of the varieties. It does, however, afford a measure of comparison. Most of the superior varieties in the early years were of the Manchuria group. The important exceptions were Star (C. I. No. 1701), comparable for 4 years, and Gold (C. I. No. 1145), comparable for 10 years.

In the five years 1922 to 1926, inclusive, the various varieties are compared with Bark (C. I. No. 2793). This was the only variety grown in all of the five years. Two varieties comparable with Bark in four years exceeded it in yield. These were Charlottetown 80 (C. I. No. 2732) and Chinese (C. I. No. 4696). Bearer (C. I. No. 4707) produced high yields in the three years in which it was grown.

EXPERIMENTAL STATION, STE. ANNE DE LA POCATIÈRE, QUEBEC

J. A. ST. MARIE, *Superintendent*

Manchurian (C. I. No. 4832) was the only variety grown at Ste. Anne de la Pocatière in all of the 11 years 1916 to 1926, inclusive. It is used as a standard of comparison in Table 41. That this station is in an area well suited to barleys of the Manchuria type is evident from the fact that only four varieties gave higher relative yields than the standard. Only 2 of these were grown for as many as five years. These were O. A. C. 21 (C. I. No. 1470) and Chinese (C. I. No. 4696), both of the Manchuria type. Gold (C. I. No. 1145) and Star (C. I. No. 1701) were promising for periods of three and two years, respectively.

EXPERIMENTAL STATION, LENNOXVILLE, QUEBEC

The yields from Lennoxville reported in Table 41 definitely indicate that this station is in a Manchurian district. O. A. C. 21 (C. I. No. 1470), Chinese (C. I. No. 4696), Mensury (C. I. No. 4701), Manchurian (C. I. No. 4833), and Manchurian (C. I. No. 4832) are the five outstanding barleys of those grown three years or more. Star (C. I. No. 1701) produced a high average for the years 1925 and 1926. Barleys of the Coeleste group, such as Himalayan (C. I. No. 4838) and Guy Mayle (C. I. No. 4839) are characterized by low yields, as is often the case where the best varieties are of the Manchurian group. The yields of the 2-rowed sorts were also relatively low.

TABLE 40.—*Acre yields of varieties of barley grown at MacDonald College, Ste. Anne de Bellevue, Quebec, in one or more of the years from 1906 to 1926, inclusive*

[Data obtained through the courtesy of MacDonald College]

Variety	C.I. No.	Canadian No.	Acre yield (bushels)																					Number of comparable years and yield in comparison with—			
																								Duckbill, 1906–1921		Bark, 1922–1926	
			1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Number	Per cent	Number	Per cent
Canadian Two-Row (G).	1916		36.7	49.2	42.0	40.4	78.1	33.4			60.3	75.0	56.8	58.1										10	94.3		
Mensury (O)	4853		44.2	64.2	61.7	34.0	93.5	61.9			76.1	68.7	67.2	68.0	103.1	64.3	50.0	50.0	65.6					14	110.8	1	157.3
Mandscheuri (G)	4854		29.6	67.5	56.8	34.6	89.4	72.1			69.2	72.9	73.9	67.4	84.9	66.7	55.2	51.6	64.6					14	108.9	1	154.9
Oderbrucker (G)	2700		33.7	56.7	50.8	41.8	94.8	58.6			62.5	68.2	70.3	75.5										10	109.1		
Odessa (O)	4855		36.7	61.7	53.7	47.8	91.2	57.9			69.2	70.8	72.9	70.6										10	112.6		
Common Six-Row (G).	4856		38.3	54.2	45.7	47.1	83.5	58.7			57.9	72.4	73.9	69.8										10	107.1		
Stella (O)	2678		43.7	50.2	47.7	42.0	95.4	55.5			57.5	74.0	74.0	80.5										10	112.1		
Duckbill (Gerin)	1916		35.0	45.8	48.1	30.7	82.3	36.6	63.8	57.0	60.4	99.0	67.7	56.0	89.6	54.7	72.4	40.6						16	100		
French Chevalier (G).	175		30.4	41.7	53.1	43.5	70.0				61.4	74.5	58.8	45.6										9	91.3		
New Zealand (Chevalier).	2656		31.0	42.7	49.4	45.4	59.4				61.5	70.8	54.7	47.9										9	88.2		
Success (G)	2707				31.9	40.5	72.7	56.0			33.7	70.3	64.6	58.6										8	89.0		
Black Hull-less (G)	596				37.5	42.0	73.3	41.2			42.7	66.7	69.8	63.8										8	90.8		
Purple (Black Hull-less).	4862				35.5	39.7	74.2	45.0			60.8	68.7	67.7	58.8										8	93.7		
Guy Mayle	4839	M. C. 312			44.0	46.6	81.0	57.1			66.0	77.6	63.5	61.2	82.8	58.3	55.7	42.7						12	99.8		
Hog (G)	1756				32.3	37.9	82.5	44.5			34.1	65.1	63.0	59.6										8	87.2		
O. A. C. 21 (G)	1470					40.6	91.9	63.4			63.5	71.3	70.8	76.0	86.4	71.6	59.4	53.1	70.8					11	108.5	1	169.8
Mandscheuri	4702	M. C. 1807						92.7	54.3	60.9	40.7	61.5	73.9	81.2	75.0	84.9	73.2	62.5	51.6	66.7				12	104.2	1	160.0
Mensury	4858	M. C. 4207						81.8	54.0	59.9	43.7	77.1	72.9	70.3	60.8	79.2	68.0							10	100.1		
Stella	4859	M. C. 407						87.0	44.3	52.6	39.4	70.8	70.3	76.0	68.5	96.3	71.3							10	100		
Common Six-Row	4860	M. C. 4307						83.3	38.9	68.6	54.9	66.7	79.7	80.2	72.1	87.0	65.9	64.6	56.8	47.9				12	104.9	1	114.9
Mensury	4701	M. C. 3207						85.4	59.8	59.0	40.6	64.6	89.6	79.7	69.0	92.7	67.4	71.9	51.0	52.1				12	106.5	1	124.9
Canadian Two-Row.	4863	M. C. 4807						80.2	41.7	60.7	50.0	57.3	91.7	55.2	63.5	89.6	48.9							10	95.8		
Hannchen (Sv.)	531							55.8			59.8	88.0	66.7	57.8	84.9	65.1	66.1	40.6						9	101.4		
Gold (Sv.)	1145							49.0			61.7	81.2	73.4	69.8	100.5	64.3	69.8	43.7						9	106.4		

Mandscheuri	4700	M. C. 809							52.7	80.6	50.0	89.6	87.5	75.3	98.9	70.8	70.8	55.7	60.4					10	110.7	1	144.8
Do	4849	M. C. 909							52.7	76.4	50.0	93.7	83.3	70.8	98.9	68.7	70.8	62.0	60.4					10	110.0	1	144.8
Mensury	4801	M.C.1010								64.8	58.3	91.7	81.2	71.9	91.1	64.6								7	108.1		
Manchurian Six-Row.	4857										61.0	62.0	77.6	68.5	93.2	68.2	69.8	45.8	69.8	51.6				8	101.0	2	152.5
Star (Sv.)	1701														99.5	64.8	84.9	61.4	64.6					4	120.8	1	154.9
Binder (D)	4703														94.3	54.9	72.9	58.3	48.9					4	109.0	1	117.3
Himalayan	4838	Ott. 59																51.0		46.4	40.7	63.3	61.0	1	125.6	4	93.1
Caucasian Hull-less	4866																	40.6		42.2	38.2	56.3	55.9	1	100	4	85.2
Bark (C. S. G. A.)	2793																		41.7	37.8	47.4	72.4	69.7			5	100
California Mariout	1455																		39.6		28.5					2	76.5
Chinese	4696	Ott. 60																		60.9	47.8	73.3	66.1			4	109.2
Charlottetown 80 (O).	2732																			68.8	45.5	73.1	71.7			4	114.1
Bearer (O)	4707																				63.0	81.0	77.5			3	116.8

TABLE 41.—*Acre yields of varieties of barley grown at the experimental stations at Ste. Anne de la Pocatière, at Lennoxville, and at Cap Rouge, Quebec, in one or more of the years from 1916 to 1926, inclusive*

[Data obtained through the courtesy of the Dominion Experimental Farms]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Ste. Anne de la Pocatière:																
Manchurian [1]	4832	Ott. 60	45.2	41.2	46.0	36.2	30.4	18.2	96.6	[2]0	36.5	51.9	53.0	38.7	11	100
Success	2707		38.2	36.1	32.4	24.2	20.5	15.5	35.0						7	71.1
Albert	4852	Ott. 54				31.1	24.0		30.8	[2]0	12.2	27.7	43.5		7	61.7
Charlottetown 80	2732					28.2					32.3	52.2	56.0		4	95
Himalayan	4838	Ott. 59						21.0			30.1	41.9	52.5		4	91.2
O. A. C. 21	1470								77.7	[2]0	31.0	49.4	65.0		5	107.5
Chinese	4690	Ott. 60							73.7	[2]0	31.9	50.7	70.0		5	108.9
Duckbill	1916	Ott. 57							60.5	[2]0	19.7	39.0	40.5		5	81
Beaver	4707	Ott. 475									36.1	53.4	50.5		3	99.2
Manchurian (Cap Rouge)	4833										35.2	48.4	47.5		3	92.8
Duckbill	4864	M. C. 207									27.2	49.3	49.0		3	88.7
Hannchen	531										25.3	56.2	59.0		3	99.4
Feeder	4697	Ott. 581									19.2	39.1	41.5		3	70.7
Early Chevalier	2725	Ott. 51									23.8	45.8	45.0		3	81.1
French Chevalier	175										22.8	47.9	44.0		3	81.1
Swedish Chevalier	4837										20.7	48.1	54.0		3	86.8
Guy Mayle	4839	M. C. 312									34.7	42.5	58.0		3	95.8
Gold	1145										30.1	51.7	65.5		3	104.2
Star	1701											56.2	58.0		2	108.8
Lennoxville:																
O. A. C. 21 [1]	1470								60.7	82.3	85.3	53.7	17.0	59.8	5	100
Chinese	4690	Ott. 60							52.4	87.0	71.2	54.0	15.3	59.0	5	93.6
Himalayan	4838	Ott. 59							39.8	54.7	49.4	36.3	17.6	39.6	5	66.2
Charlottetown 80	2732									85.4	33.7	50.2	19.7		4	79.4
Mensury	4701	M. C. 3207								80.3	36.3	60.0	16.8		4	93.8
Duckbill	1916	Ott. 57								70.3	26.3	31.1	12.1		4	58.7
Feeder	4697	Ott. 581									51.0	34.0	21.5		3	68.3
Early Chevalier	2725	Ott. 51									64.7	42.0	16.9		3	78.7
Beaver	4707	Ott. 475									62.5	52.3	19.1		3	85.8
Hannchen	531										48.9	28.7	15.0		3	59.4
Manchurian (Cap Rouge)	4833										75.7	55.1	15.3		3	93.7
Guy Mayle	4839	M. C. 312									39.6	24.2	11.2		3	48.1
Manchurian	4832	Ott. 60									84.8	59.4	17.5		3	103.7
French Chevalier	175										52.3	52.0	15.5		3	76.7
Swedish Chevalier	4837										27.3	22.8	9.8		3	38.5
Gold	1145										43.0	43.3	13.0		3	63.7
Duckbill	4864	M. C. 207									37.3	29.6	10.8		3	49.8
Star	1701											65.2	21.2		2	122.0
Cap Rouge:																
Early Chevalier	2725	Ott. 51	18.6	36.8	36.3	26.8	41.8	34.4	52.5	37.5	30.7	43.0	45.2	36.7	11	98.7
Manchurian	4832	Ott. 60	16.2	30.0	40.9	17.0	44.4	28.6	60.0						7	91.0
O. A. C. 21 [1]	1470		26.3	30.0	35.0	20.6	45.0	41.7	50.0	37.0	37.0	40.3	46.0	37.2	11	100
Stella	4851	Ott. 58	25.6	26.8	31.8	22.5	36.6	31.8	46.6	29.6					8	88.0
Gold	1145		19.4	28.6	19.4										3	73.5
Swedish Chevalier	4837		14.3	28.1	18.1										3	66.0
Success	2707		21.2	21.8	25.0	20.0	27.5	32.9	45.3						7	77.8
Duckbill	1916	Ott. 57	13.1	16.8	21.8						34.6	25.6	34.7		6	88.0
Manchurian (Cap Rouge)	4833			42.3	38.8	49.3	24.3		32.3	30.0	41.0	50.4			8	103.7
Albert	4852	Ott. 54				21.3	25.0	25.0	46.9	22.4					5	72.2
Escourgeon	4843					18.2	43.2	31.8	50.5	31.3					5	90.0
Chinese	4690	Ott. 60						33.3	44.3	33.3	33.8	44.0	48.8		6	94.3
Himalayan	4838	Ott. 59						29.6	42.7	39.0	39.0	42.3	44.8		6	94.3
Charlottetown 80	2732										41.8	41.0	48.1		3	106.1
Beaver	4707	Ott. 475										52.0	48.1		2	116.6
Hannchen	531											35.5	52.1		2	101.4
Star	1701											46.5	46.9		2	103.1

[1] Standard variety with which others are compared.
[2] Crop failure at Ste. Anne de la Pocatière in 1923 due to drought.

EXPERIMENTAL STATION, CAP ROUGE, QUEBEC

O. A. LANGELIER, *Superintendent*

At Cap Rouge, Quebec, two varieties were grown in all of the 11 years 1916 to 1926, inclusive. Of these, O. A. C. 21 (C. I. No. 1470) is used in Table 41 as a standard of comparison. Its yield was only slightly greater than that of Early Chevalier (C. I. No. 2725), also grown for the full period. Of the varieties tested for more than three years but less than 11, the highest relative yield was obtained from Manchurian (C. I. No. 4833). Charlottetown 80 (C. I. No. 2732) produced a yield 106 per cent of that of the standard for a period of three years. Bearer (C. I. No. 4707) gave the highest yield of the varieties tested in two years, and in these years it was significantly better than O. A. C. 21.

SASKATCHEWAN

EXPERIMENTAL STATION, ROSTHERN, SASKATCHEWAN

W. A. MUNRO, *Superintendent*

The results obtained at Rosthern, Saskatchewan, are reported in Table 42. Yields were obtained in 9 of the 10 years 1917 to 1926, inclusive. Four varieties were grown for the entire period. Of these four, O. A. C. 21 (C. I. No. 1470) was used as a standard of comparison. The three other varieties tested in all nine years were Junior (C. I. No. 4698), Albert (C. I. No. 4852), and Success (C. I. No. 2707). None of these compared favorably with O. A. C. 21. Gold (C. I. No. 1145) produced a relatively high yield in the eight years in which it was grown. Swedish Chevalier (C. I. No. 4837) gave high yields in a period of six years. Possibly the most promising variety was Hannchen (C. I. No. 531), grown in only five years. Trebi (C. I. No. 936) was very promising for a similar period. Of the varieties grown in only two years the highest relative yield was obtained from Star (C. I. No. 1701).

EXPERIMENTAL STATION, SWIFT CURRENT, SASKATCHEWAN

J. G. TAGGART, *Superintendent*

Barley varieties were tested at Swift Current in the years 1924, 1925, and 1926. On the basis of a 3-year test, Hannchen (C. I. No. 531) gave the highest average yield and is used as a basis of comparison in Table 42. The yield of O. A. C. 21 (C. I. No. 1470) was almost as great as that of Hannchen, and that of Charlottetown 80 (C. I. No. 2732) was only slightly less. None of the other varieties grown in all three years gave evidence of much promise. Trebi (C. I. No. 936), grown for two years, was among the better varieties each year. Seven other barleys were incorporated in the test in 1926. The two highest yielding varieties among these were Star (C. I. No. 1701) and Gold (C. I. No. 1145), in the order named. The yield of Hannchen in 1926 was less than either of these.

TABLE 42.—*Acre yields of varieties of barley grown at the experimental stations at Rosthern, Swift Current, and Scott, at the experimental farm at Indian Head, and at the University of Saskatchewan, Saskatoon, Saskatchewan, in one or more of the years from 1916 to 1926, inclusive*

[Data for Rosthern, Swift Current, Scott, and Indian Head obtained through the courtesy of the Dominion Experimental Farms and for Saskatoon through the courtesy of the University of Saskatchewan]

Station and varieties compared	C. I. No.	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916 [1]	1917	1918	1919 [1]	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Rosthern:																
Svanhals	187			62.3	30.0		14.3	43.3							4	111.3
Swedish Chevalier	4837			58.5	35.8		17.1	48.3				50.0	35.4		6	109.6
O. A. C. 21 [2]	1470			58.3	27.1		11.9	37.4	60.4	52.0	12.5	60.0	38.4	39.8	9	100
Stella	4851	Ott. 58		57.9	26.0		12.5	43.3	42.1	36.3		66.2	40.2		8	94.0
Gold	1145			55.8	32.5		13.8	46.0	56.3	60.8		68.5	39.5		8	108.1
Odessa	4699			55.0	21.2		6.8	37.9							4	89.0
Charlottetown 80	2732			54.2								62.8	40.2		3	100.4
Manchurian	4832	Ott. 50		52.5	29.2							63.3	39.0		4	100
Duckbill	1916	Ott. 57		52.1	17.5		14.3	35.4	30.8		17.6	57.6	26.6		8	82.2
Black Japan	2717			50.6	33.3										2	98.4
Early Chevalier	2725	Ott. 51		50.0	32.5		11.8	40.0	39.2	46.6		49.1	45.5		8	91.8
Junior	4698	Ott. 471		49.6	30.8		7.6	32.1	42.5	35.4	7.3	56.7	52.4	34.9	9	87.7
Taganrog	2721			47.3	35.4		16.7	37.5							4	101.5
Beaver	1915			43.5	20.0										2	74.5
Albert	4852	Ott. 54		33.3	13.3		12.5	27.0	27.9	28.2	7.6	38.3	40.2	25.5	9	94.1
Success	2707			21.5	18.3		14.3	27.5	22.5	44.6	12.9	53.8	49.0	29.4	9	73.9
Feeder	4697	Ott. 561					18.1	29.6	42.9	48.4		60.0	34.3		6	89.6
Hannchen	531							65.4	55.0	59.7		70.4	45.5		5	110.4
Bark	2703							64.6	47.5	55.6		65.6			4	111.6
Trebi	936							53.3	47.5	60.0		81.3	41.4		5	114.3
Chinese	4690	Ott. 60						46.2	45.0	52.4	10.0	74.2	40.2		6	102.8
Himalayan	4838	Ott. 59						40.4	45.8	39.6	15.0	65.2	43.8		6	95.6
Bearer	4707	Ott. 475									11.6	69.0	34.3		3	107
Pearl	4834											50.1	40.2		2	8
Star	1701											74.6	47.3		2	12.
Keystone	4708	Sask. 228										74.6	40.2		2	116.7
Guy Mayle	4839	M. C. 312										67.1	49.0		2	118.1
Manchurian (Cap Rouge)	4833											62.4			1	104.0
Swift Current:																
Trebi	936										33.4	21.0			2	94.4
O. A. C. 21	1470										32.3	19.8	44.2	32.1	3	97.0
Charlottetown 80	2732										31.6	21.0	39.2	30.9	3	93.4
Hannchen [1]	531										23.8	33.8	41.3	33.1	3	100
Chinese	4690	Ott. 60									22.6	13.5	40.0	25.4	3	76.7
Bearer	4707	Ott. 475									21.5	21.4	32.4	25.1	3	75.8
Junior	4698	Ott. 471									20.8	18.0	36.6	25.1	3	75.8
Duckbill	1916	Ott. 57									17.4	18.6	20.0	19.0	3	57.4
Feeder	4697	Ott. 561									17.1	16.8	20.0	18.0	3	54.4
Bark	2703										15.1	18.0			2	57.6
Albert	4852	Ott. 54									15.0	20.0	18.3	17.8	3	53.8
Himalayan	4838	Ott. 59									12.3	17.9	41.8	24.0	3	72.5
Success	2707												28.0		1	67.0
Early Chevalier	2725	Ott. 51											39.2		1	93.8
Pearl	4834												33.1		1	79.2
Star	1701												45.6		1	109.1
Stella	4851	Ott. 58											32.6		1	78.0
Gold	1145												42.5		1	101.7
Swedish Chevalier	4837												41.3		1	98.8
Scott:																
Black Japan	2717			63.0	21.3	3.7									3	116.3
O. A. C. 21 [2]	1470			51.6	19.3	4.8	9.2	22.1	42.6	13.7	51.6	12.8	51.0	34.1	11	100
Early Chevalier	2725	Ott. 51		47.9	18.1	6.6	13.0	15.3	37.1			14.2	49.4	37.0	9	96.4
Duckbill	1916	Ott. 57		68.4	17.4	5.0	16.7	30.1	34.2	14.6	55.6	11.8	39.5	20.0	28.5	11	100.4
Gold	1145			77.9	17.1	5.8	12.8	18.4	35.4	20.7	50.4	18.4	56.5	44.6	32.5	11	114.4
Manchurian	4832	Ott. 50		50.4	14.8		9.2	16.6						35.2		5	91.9

[1] Crop at Rosthern destroyed by hail in 1916 and 1919.
[2] Standard variety with which others are compared.

TABLE 42.—*Acre yields of varieties of barley grown at the experimental stations at Rosthern, Swift Current, and Scott, at the experimental farm at Indian Head, and at the University of Saskatchewan, Saskatoon, Saskatchewan, in one or more of the years from 1916 to 1926, inclusive*—Continued

Station and varieties compared	C.I. No.[1]	Canadian No.	Acre yield (bushels)												Number of comparable years and yield in comparison with standard variety named	
			1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average	Number	Per cent
Scott—Continued.																
Success	2707		36.7	12.1	4.6	7.0									4	71.2
Charlottetown 80	2732			21.5	3.5	15.4	26.6				20.5	39.5	37.7		7	107.3
Albert	4852	Ott. 54		17.7	1.5	2.4	26.0	10.2	11.7	54.2	8.7	36.7	22.2		10	76.6
Stella	4851	Ott. 58		16.5	3.3	8.4	17.0	40.8	10.7	40.2	6.5	47.0	32.3		10	85.4
Hannchen	531					19.0	29.0		21.3		20.8	56.8	42.7		6	132.8
Odessa	4690					7.1	15.0								2	70.7
Gordon	4842						25.4	29.4	11.0	44.0					4	84.6
Bark	2703							45.7	18.2	49.8			33.0		4	103.4
Chinese	4696	Ott. 60						44.1	12.7	42.1	14.8	50.5	31.8		6	95.3
Himalayan	4838	Ott. 59						35.0	22.6	48.1	9.4	49.4	19.3		6	89.2
Keystone	4708	Sask. 228								47.7	17.6	45.3	37.2		4	98.9
Bearer	4707	Ott. 475									13.6	58.8	36.8		3	111.7
Feeder	4697	Ott. 561									7.7	31.5			2	61.4
Junior	4698	Ott. 471									14.4	43.5	24.7		3	84.4
Swedish Chevalier	4837										17.5	53.5	41.5		3	115.0
Star	1701											57.0	40.5		2	114.6
Pearl	4834											41.8	26.0		2	79.6
Trebi	936												38.9		1	114.1
Canadian Thorpe	740												35.1		1	102.9
Indian Head:																
Stella	4851	Ott. 58	64.2	56.7	50.0	59.6	46.8	60.0	75.8	42.5	24.2	45.1	57.3	52.9	11	97.4
Swedish Chevalier	4837		67.5	61.7	56.3						38.9	47.4	53.6		9	98.9
Danish Chevalier	180		68.3	63.3	54.2	59.1									4	101.9
O. A. C. 21[2]	1470		71.8	62.1	40.7	49.6	45.8	60.4	70.8	39.2	42.9	43.4	64.3	54.3	11	109
Canadian Thorpe	740		54.2	54.6	52.5										3	89.4
Invincible	590		55.0	56.7											2	83.4
Early Chevalier	2725	Ott. 51	50.0	48.3	37.1						25.9	55.4	61.3		6	83.9
Gold	1145		53.3	52.1	44.2								63.0		4	86.9
Manchurian	4832	Ott. 50	61.3	54.6	44.2	45.8	45.0								5	90.9
Success	2707		40.8	17.9	25.0	25.4	15.0	37.5	62.5	35.0					8	58.1
Bearer	4707	Ott. 475	78.3	68.7	58.3	76.0	45.0	45.0	87.5	45.8	38.4	46.4	57.2	58.7	11	108.1
Junior	4698	Ott. 471	60.4	40.0	35.8	30.0	40.0	47.5	77.5	38.8	36.9	53.2	70.3	48.2	11	88.8
Charlottetown 80	2732			47.1	54.2	54.1	36.7	60.8	79.2	48.3	30.1	54.6	62.5		10	100.6
Wing Pedigree	1177			29.2											1	47.0
Albert	4852	Ott. 54		35.8	31.7	0.5	32.2	35.8	43.8	22.1	45.2	39.4	60.3		10	71.0
Duckbill	1916	Ott. 57			50.8	67.1	39.2	55.8	67.5	31.8	30.1	25.9	55.2		9	91.3
Binder	1909					69.6									1	140.3
July	1503					56.7									1	114.3
Himalayan	4838	Ott. 59				48.3	45.8	59.2	76.8	35.8	39.9	52.8	58.6		8	99.6
Odessa	4090					40.8	40.0								2	84.7
Feeder	4697	Ott. 561					26.8	40.8	53.3	35.8	12.0	57.6	50.5		7	75.4
Chinese	4696	Ott. 60						65.8	76.7	34.5	46.1	33.0	78.1		6	104.1
Hannchen	4841	Sask. 229							92.5	39.2	36.2	49.5	70.5		5	110.6
Keystone	4708	Sask. 228									39.2	55.5	55.0		3	99.4
Star	1701											54.0	53.3		2	99.6
Pearl	4834											26.3	29.5		2	51.8
Saskatoon:																
O. A. C. 21	1470	155			31.5	24.8	16.7	45.4	35.0	73.1		46.5			7	130.9
Bark	2703	218			46.0	21.8	18.8	46.7	34.2	69.4		39.0	39.8	39.5	8	125.4
Nepal (White Hull-less)[2]	595	171			28.6	17.6	12.4	40.4	28.5	36.0		44.6	43.5	31.5	8	100
Hannchen	531	150			40.7	26.4	18.8	59.2	42.7	50.5					6	144.9
Keystone	4708	Sask. 228							36.9	68.0		51.5	51.5		4	135.8
Manchuria	2330	867								71.0		49.0	46.9		3	134.9
Hannchen	4841	Sask. 229										50.7	66.3		2	139.5
Canadian Thorpe	740	1276										43.1	51.0		2	106.8
Gatami	575	865											50.4		1	115.9

[1] Standard variety with which others are compared.

EXPERIMENTAL STATION, SCOTT, SASKATCHEWAN

V. MATHEWS, *Superintendent*

The yields obtained at Scott, Saskatchewan, reported in Table 42, show relatively high returns from the 2-rowed varieties, most of them being better than the standard of comparison, O. A. C. 21 (C. I. No. 1470). Only two varieties other than O. A. C. 21 were grown in all of the 11 years, 1916 to 1926, inclusive. Both exceeded the latter in yield. They were the 2-rowed sorts, Duckbill (C. I. No. 1916) and Gold (C. I. No. 1145). Charlottetown 80 (C. I. No. 2732) produced relatively high yields for a period of seven years, and in six years the yield of Hannchen was 132.8 per cent of that of the standard. The best 6-rowed variety grown in the last three years was Bearer (C. I. No. 4707). Its yield was exceeded by that of Swedish Chevalier (C. I. No. 4837), grown in the same years. Star (C. I. No. 1701) gave high yields in two years, and Trebi (C. I. No. 936) was promising in the single year in which it was tested.

EXPERIMENTAL FARM, INDIAN HEAD, SASKATCHEWAN

W. H. GIBSON, *Superintendent*

The results at Indian Head, Saskatchewan, are reported in Table 42, wherein the variety O. A. C. 21 (C. I. No. 1470) is used as a standard of comparison. Four varieties including the standard were grown in all of the 11 years, 1916 to 1926, inclusive. One of these, Bearer (C. I. No. 4707), produced an average yield almost 4½ bushels greater than that of O. A. C. 21. Stella (C. I. No. 4851) was slightly inferior to the standard. Junior (C. I. No. 4698) was obviously inferior to the others tested for the full period. Of those varieties tested for more than 5 years but less than 11, only two were better than the standard. These were Charlottetown 80 (C. I. No. 2732) and Chinese (C. I. No. 4696). Hannchen (C. I. No. 4841) for a period of five years produced a yield of 110.6 per cent of that of O. A. C. 21.

UNIVERSITY OF SASKATCHEWAN, SASKATOON, SASKATCHEWAN

MANLEY CHAMPLIN, *Senior Professor, Department of Field Husbandry*

Most of the yields reported from Canada have been contributed by the Dominion of Canada Experimental Farms. The results from Saskatoon are obtained through the courtesy of the University of Saskatchewan. Yields are reported in Table 42 for all of the years 1918 to 1926, excepting 1924. Only two varieties were grown in all of the eight years. Of these, Nepal (C. I. No. 595) is used as a basis of comparison, although it is the lowest yielding variety tested. Bark (C. I. No. 2793) was a much better yielder than Nepal during the entire 8-year period, but was hardly so good as O. A. C. 21 (C. I. No. 1470) for the seven years in which the latter was grown. Hannchen (C. I. No. 531) produced a high average yield for a period of six years, and this creditable performance was continued in 1925 and 1926 by a local selection from Hannchen, namely, Saskatchewan No. 229 (C. I. No. 4841). The data show Hannchen to be the highest yielding variety.

OUTSTANDING VARIETIES

A partial digest of the results in the United States and Canada is given in Table 43. This table is a summary of the highest yielding sorts at each station. In selecting the best and second-best varieties only those grown in all of the five years 1922 to 1926, inclusive, are considered. At many places varieties grown for a shorter period have produced very high yields. Barleys which have yielded best in the shorter period are included in separate columns of the table.

Data so extensive and diverse as these are difficult to grasp in their entirety, but a number of facts become apparent when considered carefully. The most obvious feature is the dissimilarity between the records for the United States and those for Canada. As for climate and soil, the boundary line follows no natural features west of the Great Lakes, and the agricultural regions are without dividing lines. As for the experiment stations, there is no trace of correlation of their experiments. The best varieties originating south of the boundary line have received little attention in Canada, and the best Canadian sorts of recent origin are unknown at the stations in the United States. The results in the two countries may as well be considered separately.

In the United States the most spectacular performance is that of Trebi (C. I. No. 936). A sort of an index of the value of a variety may be arrived at by counting the number of times it is mentioned in Table 43. Trebi is one of the two best varieties at 14 stations in the United States. It was the best variety at 8 stations, the second best at 5, and a promising variety at 9 stations where it was grown for less than five years but more than one year. It was the leading variety by totals in each of the three classes. The second variety in order of prominence is Club Mariout (C. I. No. 261), with a total of nine places. This is a little more than a third of the total of Trebi. Coast (C. I. No. 690) was third when evaluated by the same formula.

Of the varieties less widely tested Glabron (C. I. No. 4577) and Svansota (C. I. No. 1907) obviously deserve to be tried more extensively. They have proved to be superior in Minnesota. It is desirable to determine their limits of adaptation, especially in the case of Glabron, as early as possible. Meloy (C. I. No. 1176) and selections from this variety are holding up well in the West. Horn (C. I. No. 926) continues to give high yields for a 2-rowed sort. The performance of Lion is very encouraging. This variety in itself will hardly prove to be a suitable commercial barley, but the fact that it occupies five places in Table 43 shows that it has not introduced much in the way of weaknesses into the smooth-awned hybrid varieties now coming into prominence.

The Canadian results are characterized by the widespread promise of Bearer (C. I. No. 4707) and Chinese (C. I. No. 4696). These varieties have given high yields at many Canadian stations and should by all means be thoroughly tested in the northern tier of States in the United States. Two of the older varieties continue to show up well in Canada. These are O. A. C. 21 (C. I. No. 1470) and Early Chevalier (C. I. No. 2725).

In recent years two dense-spiked barleys which have been rather inadequately tested have given high yields. These are Bark (C. I. No. 2793) and Star (C. I. No. 1701). Both of these probably have some objectionable features from an agronomic standpoint, but they seem to have a capacity for high production.

TABLE 43.—*Outstanding varieties grown at the experiment stations in the United States and Canada in the years 1922 to 1926, inclusive*

Station	5-year period, 1922–1926				Showing promise in less than 5 years but more than 1 year		
	Best variety	C. I. No.	Second best variety	C. I. No.	Number of years	Variety	C. I. No.
Mesa, Ariz.	Club Mariout	261	Common Six-Row.	4625	3	Trebi	936
Sacaton, Ariz.					3	Coast	690
Fayetteville, Ark.					3	Orel	351
Davis, Calif.	Hero	1286	Club Mariout	261	2	Vaugha	1367
Fort Collins, Colo.	Lion	923	Trebi	936	2	Comfort	4578
Akron, Colo.	Blackhull	878	Smyrna	2642	4	Club Mariout	261
Athens, Ga.	Orel (351–4)	4592	(Greece (221–4) Argentine (223–0)	4593 4594			
Moscow, Idaho (winter).	Michigan Winter.[1]	2036	Winter Club [1]	488	4	Wisconsin Winter.[1]	519
Moscow, Idaho (spring).	Trebi	936	Peruvian	935			
Aberdeen, Idaho	do	936	Beldi Giant	2777	2	Horn	926
Felt, Idaho	Baker	975	Trebi	936			
Sandpoint, Idaho	White Smyrna [1]	940	do.[1]	936	3	Winter Club	488
Urbana, Ill.	Lion	923	Wisconsin Pedigree.	835	4	Silver King	890
De Kalb, Ill.	do.[2]	923			4	Wisconsin Pedigree.	835
La Fayette, Ind. (winter).	Tennessee Winter.	[3] 257	Purdue 1101	[3] 4583			
La Fayette, Ind. (spring).	Manchuria	2330	Featherston	1120	4	Golden Queen	1511
Bedford, Ind.					4	Purdue 1101	4582
North Vernon, Ind.	Purdue 21	4581			4	do	4582
Hays, Kans. (spring)	Club Mariout [1]	261	White Smyrna [1]	195	4	Flynn	1311
Hays, Kans. (winter)					2	Tennessee Winter.	257
Colby, Kans.	Club Mariout	261	Ellis	2107	4	Odessa	182
Garden City, Kans.	do.[1]	261	Coast [1]	690	4	White Smyrna	195
Tribune, Kans.	do	261	Stavropol	2103	4	Local	4645
St. Paul, Minn.	Glabron	4577	Svansota	1907	4	Trebi	936
Duluth, Minn.	Velvet	4252	Glabron	4577	4	do	936
Waseca, Minn.	Svansota	1907	Manchuria	2330	4	do	936
Grand Rapids, Minn.	Glabron	4577	do	2330	3	do	936
Morris, Minn.	Svansota	1907	Glabron	4577	4	do	936
Crookston, Minn.	Glabron	4577	Svansota	1907	4	do	936
Bozeman, Mont.	Trebi	936	Horn	926	3	Union Hybrid	4674
Moccasin, Mont.	Horn	926	Meloy	1176	4	Hurst	1304
Havre, Mont.	do	926	Trebi	936	3	Goldfoil	928
Huntley, Mont.					4	Trebi	936
Lincoln, Nebr.	White Smyrna [1]	658	Odessa [1]	182	3	Minnesota 450	4646
North Platte, Nebr.	Six-Row Common.[1]	4610	McClymont [1]	2126	3	Sandrel	937
State College, N. Mex.		4673		4672	2	Hanna	2788
Ithaca, N. Y.	Miscellaneous Selection 104–14.		Miscellaneous Selection 106–181.		4	Swiss Spring	
Raleigh, N. C.	Beardless 6 [1]	2746	North Carolina Hooded.[1]	4665			
Fargo, N. Dak.	Manchuria [1]	244	Lion [1]	923	3	Trebi	936
Mandan, N. Dak.	Hannchen	531	Svanhals	187	4	Coast	690
Dickinson, N. Dak.	Scholey	962	Steigum	907	4	White Smyrna	2169
Wooster, Ohio	Oderbrucker	836	Wisconsin Pedigree.	835	4	Lion	923
Corvallis, Oreg.	Trebi	936	Hannchen	531	2	Peruvian	935
Moro, Oreg.	Club Mariout	261	Arequipa	1256	4	Meloy Selection 3.	4656
Union, Oreg.	Odessa	927	Trebi	936	4	Coast	2301
Burns, Oreg.	Trebi [1]	936	Hannchen [1]	531			
State College, Pa.	Featherston	1550	Alpha	959			
Clemson, S. C.	Virginia Hooded	648	Winter Barley		3	Awnless	4694
Brookings, S. Dak.	Odessa	182	Oderbrucker	1529	2	Binder	1909
Highmore, S. Dak.	do	182	Manchuria	244	3	July	1563
Ardmore, S. Dak.	White Smyrna [1]	658	Trebi [1]	936			
Knoxville, Tenn.	Tennessee Winter.	257	Union Winter	583	3	Tennessee Winter (Sel. 52).	3543
Denton, Tex.	Tennessee Winter Selection 643–63.[1]	4692	Tennessee Winter Selection 643–28.[1]				
Nephi, Utah	Bulgarian	521	Turkestan	711			
Rosslyn, Va. (Arlington Experiment Farm).	Wisconsin Winter.	2159	Orel	351	4	Tennessee Winter (Sel. 66).	3546

[1] Only 4 years reported.
[2] Only variety grown for 5-year period, 1922–1926.
[3] Average yields identical.
[4] Only 3 years reported.

TABLE 43.—*Outstanding varieties grown at the experiment stations in the United States and Canada in the years 1922 to 1926, inclusive*—Continued

Station	5-year period, 1922–1926				Showing promise in less than 5 years but more than 1 year		
	Best variety	C. I. No.	Second best variety	C. I. No.	Number of years	Variety	C. I. No.
Blacksburg, Va	Grecce [1]	221	Wisconsin Winter.[2]	2167	2	Union Winter	4688
Pullman, Wash	Beldi Giant	2777	Blue	1247			
Waterville, Wash	Horsford [1]	1775			2	Club Mariout	261
Lind, Wash	Meloy	1176	California	1279			
Morgantown, W. Va	Alpha	959	Oderbrucker	1174	2	Wisconsin Pedigree.	835
Lakin, W. Va	Tennessee Winter.	257	Union Winter	583			
Madison, Wis	Odessa	182	Manchurian	739	2	Smooth White (× 39–3).	4658
Laramie, Wyo	Coast	690	Odessa	182	3	Beldi Giant	2777
Archer, Wyo	Trebi [1]	936	Flynn [1]	1311			
Sheridan, Wyo	do	936	Coast	690	3	Meloy	1176
Lethbridge, Alberta (irrigated).	Bearer (Ott. 475)	4707	O. A. C. 21	1470	2	Bark	2793
Lethbridge, Alberta (dry land).	Early Chevalier (Ott. 51).	2725	Chinese	4696	2	do	2793
Lacombe, Alberta	Bearer (Ott. 475)	4707	Trebi	936	3	Canadian Thorpe.	740
Beaverlodge, Alberta	Bearer [1] (Ott. 475).	4707	Hannchen [1]	531	2	Gold	1145
Fort Vermillion, Alberta	Duckbill (Ott. 57).	1916	Manchurian	4832	4	Chinese	4696
Edmonton, Alberta	Bark	2793	do	4832	4	Hannchen	531
Summerland, British Columbia.	Gold	1145	O. A. C. 21	1470	3	California Mariout.	1455
Agassiz, British Columbia.					2	Gold	1145
Invermere, British Columbia.					3	Chinese	4696
Brandon, Manitoba	Bark	2793	Bearer (Ott. 475)	4707	4	Trebi	936
Morden, Manitoba					3	Bearer (Ott. 475)	4707
Fredericton, New Brunswick.	Early Chevalier (Ott. 51)	2725	Charlottetown 80.	2732	3	Manchurian	4832
Nappan, Nova Scotia	Charlottetown 80.	2732	Chinese	4696	2	Star	1701
Kentville, Nova Scotia					3	Manchurian	4833
Ottawa, Ontario	Star	1701	Bearer (Ott. 475)	4707	3	Velvet	4252
Guelph, Ontario	Chevalier × Mandscheuri 13211.	4875	Chevalier × Mandscheuri 11137.	4874			
Kapuskasing, Ontario	Manchurian (Ott. 50).	4832	Duckbill (Ott. 57).	1916	3	Bearer (Ott. 475)	4707
Charlottetown, Prince Edward Island.	Charlottetown 80.	2732	Manchurian	4832	2	Stella (Ott. 58)	4851
MacDonald College, Quebec.	Bark [1]	2793			3	Bearer (Ott. 475)	4707
Sainte Anne, Quebec	Chinese (Ott. 60)	4696	O. A. C. 21	1470	3	Gold	1145
Lennoxville, Quebec	O. A. C. 21	1470	Chinese	4696	2	Star	1701
Cap Rouge, Quebec	do	1470	Early Chevalier (Ott. 51).	2725	2	Bearer (Ott. 475)	4707
Rosthern, Saskatchewan.	do	1470	Chinese	4696	2	Star	1701
Swift Current, Saskatchewan.					3	Hannchen	531
Scott, Saskatchewan	Gold	1145	O. A. C. 21	1470	3	Swedish Chevalier.	4837
Indian Head, Saskatchewan.	Hannchen	4841	Junior (Ott. 471)	4698	3	Early Chevalier (Ott. 51).	2725
Saskatoon, Saskatchewan.	Keystone [1] (Sask. 228).	4708	Bark [1]	2793	2	Hannchen	4841

[1] Only 4 years reported.

[2] Only variety grown for 5-year period, 1922–1926.

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Experiments in Canada, by Provinces

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Varieties included in tables

[An asterisk (*) prefixed to a number in parentheses indicates a C. I. No.]

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