

IOWA CORN YIELD TEST

RESULTS OF 1923 TESTS

PLANS FOR 1924 TESTS

CONDUCTED BY

Iowa Corn and Small Grain Growers' Association

Cooperating with the

Farm Crops Section, Iowa Agricultural Experiment
Station

and the

Office of Cereal Investigations, Bureau of Plant
Industry, United States Department
of Agriculture

ASSOCIATION OFFICERS

President.....	Geo. M. Allee, Newell
Vice President.....	I. E. Proudfit, Altoona
Treasurer.....	P. C. Taff, Ames
Secretary.....	Joe L. Robinson, Ames
Assistant Secretary.....	John C. Eldredge, Ames
Assistant Secretary.....	R. M. Vifquain, Ames
Rep. Office Cereal Investigations, U. S. D. A.....	A. A. Bryan, Ames

DISTRICT VICE PRESIDENTS

1. F. B. Hanson, Inwood	7. Frank Trucks, Coon Rapids
2. A. B. Schenck, Algona	8. Leland Taylor, Mitchellville
3. Theo Gronna, Waterville	9. Henry Morse, Ladora
4. Karl Hoffman, Ida Grove	10. O. D. Stone, Elliott
5. Emanuel Peterson, Harcourt	11. J. A. Mason, Carlisle
6. J. C. Bige, Cedar Falls	12. Ray Redfern, Yarmouth

THE BOARD OF DIRECTORS

Consists of the above named officers of the Association and the following ex-presidents:

John Sundberg, Sioux City
F. H. Klopping, Neola
F. D. Steen, West Liberty

J. H. Petty, Elliott
Fred McCulloch, Hartwick
W. E. Krizer, Eddyville

APPLICATION FOR ENTRY

In the 1924 Corn Yield Test no entry will be accepted unless this form is filled out fully and completely. **Write carefully.**

I hereby make application for entry in the Yield Test of the Iowa Corn and Small Grain Growers' Association and agree to ship, prepaid, twelve pounds of high germinating shelled seed corn to the association by April 20, 1924. I am the grower of this seed and agree to abide by all the provisions of the contest. My check, money order, draft (indicate which), for the entry fee is enclosed.

Section in which corn is to compete.....

Have you entered this corn in this section before? If so, what year?

Number of kernels preferred per hill

Variety or strain name.....

Maturity compared with other local corn.....

In what county and state was your entry grown?.....

How long have you produced this variety or strain?.....

From whom did you obtain your first seed?.....

Name

Post Office.....Rural Route.....

State

All applications should be mailed to

JOE L. ROBINSON

Secretary, Iowa Corn and Small Grain Growers' Association,
Ames, Iowa

(If you are not ready to make your entry please inform the Secretary **NOW** that you expect to be in the 1924 test.)

DIFFERENCE IN STRAINS

There are as great differences in the yields secured from different strains of the same variety of corn as between distinctly different varieties adapted to the same locality. A difference of 13 bushels per acre was found between two different strains of Reid's Yellow Dent in the 1923 test. Recognizing these facts the Iowa Corn Yield Test was inaugurated in 1920 by the Iowa Corn and Small Grain Growers' Association and has been continued during the past four years. This test differs materially from the acre yield tests of previous years, in that the relative ability to yield is very carefully and accurately determined for each lot of corn entered, by growing the different kinds under exactly the same conditions, side by side on the same soil. Each corn entered is grown on three testing fields in the section of the state for which it is adapted or is entered.

Results of the 1923 Tests

The results of the tests in 1923 have further strengthened the conviction of those in any way connected with the work that the plan being followed is giving accurate information regarding the relative value of different strains of corn for different parts of Iowa. Strains of corn giving the larger yields for the past three years have in most cases been near the top of the list again this year. But it is reasonable to suppose that the best corns have not yet been found. In fact, in both the north and north central sections the particular strains standing highest this year had not been entered previously.

Some of the details of the test which will be of interest to those who had corn in the test this year or who contemplate entering their corn the present year, are as follows:

Entries 1923

Total number entered—100.

Distribution by sections—Northern, 21; North-Central, 28; South-Central, 21; Southern, 30.

Entry Numbers

Each contestant's corn was assigned a number by which the corn was known throughout the season. The only record of these numbers with the corresponding names and addresses of the owners of the samples, was placed in the Union National Bank at Ames and was not removed until the afternoon of the annual meeting of the Iowa Corn and Small Grain Growers' Association, at which time the envelope containing this information was opened in public. These precautions served to insure absolute fairness to all entered in the contest.

Location of Testing Fields

Three testing fields were located in each of the four sections of the state. One in the eastern, one in the central and one in

the western part of Iowa. These testing fields were located as follows: Northern section, Sioux County, Kossuth County and Chickasaw County; North-Central section, Buena Vista County, Hardin County and Delaware County; South-Central section, Harrison County, Story County and Iowa County; Southern section—Montgomery County, Warren County and Henry County.

Planting

Each entry was planted in five different plots in each of the central testing stations for that particular section and in ten different plots in the two outside testing stations; thus giving each entrant a total of 25 different replications. To insure an accurate drop, all samples were planted by hand.

Yield of Entries in 1923 Test

At the time the state yield test was inaugurated, it was agreed that only the names of the top one-third of the contestants in each section would be made public. Only to the contestant himself are we making known his relative standing, if he is below the top one-third.

The main purpose of the test is not to see how many bushels of corn can be produced per acre, but rather to compare the productiveness of different strains and types for each section, when grown under average uniform conditions.

Standing of Entries in Each Section of the State in 1923 Northern Section

Rank	Entry Bu. per No. acre		Variety	Name—Address—County					
1	19	61.53	Smiths Y. D.	Wm. B. Smith, Nashua, Floyd					
2	17	61.13	A. B. K. Y. D.	Geo. M. Allee, Newell, Buena Vista					
3	8	59.04	G. M. & E+	Geo. M. Allee, Newell, Buena Vista					
4	4	57.92	Golden King	W. McArthur, Mason City, C. Gordo					
5	21	56.80	Silver King	Theo Gronna, Waterville, Allamakee					
6	15	56.37	Golden Murdock	Hoyt E. Buttolph, Mitchell, Mitchell					
7	2	55.99	Golden Jewel	A. W. Oxley, Ossian, Winneshiek					
8	14	55.20		Entry Bu. Per			Entry Bu. Per		
9	13	54.97		Rank	No.	Acre	Rank	No.	Acre
10	16	54.84		14	3	52.48	18	6	51.02
11	5	53.85		15	9	52.41	19	11	50.90
12	20	53.15		16	10	52.07	20	7	49.94
13	12	52.65		17	1	51.87	21	18	49.91

North Central Section

Rank	Entry Bu. per No. acre		Variety	Name—Address—County					
1	51	55.81	B. H. R. Y. D.	Jesse Bige, Cedar Falls, Black Hawk					
2	38	55.71	Silvermine	O. F. Young, Havelock, Pocahontas					
3	46	55.63	Iodent	Farm Crops Sec., Ames, Story					
4	47	55.62	G. M. & E+	Geo. M. Allee, Newell, Buena Vista					
5	41	55.56	McCulloch's Y. D.	Fred McCulloch, Hartwick, Iowa					
6	42	55.40	A. B. K. Y. D.	Geo. M. Allee, Newell, Buena Vista					
7	56	55.33	Reid X Leaming	Axel T. Anderson, Paton, Webster					
8	44	55.31	Blacks Y. D.	Clyde Black, Dallas Center, Dallas					
9	48	54.79	Lakeside Y. D.	J. T. Edson, Storm Lake, B. Vista					
10	40	54.49		Entry Bu. Per			Entry Bu. Per		
11	45	53.92		Rank	No.	Acre	Rank	No.	Acre
12	55	53.74		18	43	52.58	23	34	50.77
13	35	53.37		19	39	52.54	24	54	50.72
14	29	53.26		20	30	52.05	25	53	50.22
15	32	53.14		21	49	51.87	26	52	50.06
16	31	52.99		22	36	51.15	27	50	49.81
17	33	52.65							

South Central Section

Entry Bu. per			Variety	Name—Address—County				
Rank	No.	acre		Rank	No.	acre		
1	81	68.67	R. Y. D.	Geo. Steen, West Liberty, Muscatine				
2	66	67.66	Lemon Yellow	Albert A. Miller, Ogden, Boone				
3	74	67.53	Black's Y. D.	Clyde Black, Dallas Center, Dallas				
4	61	66.06	R. Y. D.	J. S. Leonard, Waukee, Dallas				
5	76	65.70	R. Y. D.	L. H. Mendelhall, Earlham, Dallas				
6	68	65.07	R. Y. D.	Wm. Durkes, Dallas Center, Dallas				
7	77	64.54	McCulloch's Y. D.	Fred McCulloch, Hartwick, Iowa				
8	80	63.76		Entry Bu. Per				
9	65	63.72		Entry Bu. Per				
10	69	63.52	Rank	No.	Acres	Rank	No.	Acres
11	79	63.45	14	63	60.72	18	62	58.12
12	72	62.81	15	64	59.72	19	75	57.69
13	71	61.75	16	78	59.17	20	82	55.84
			17	70	58.77	21	73	53.97

Southern Section

Entry Bu. per			Variety	Name—Address—County				
Rank	No.	acre		Rank	No.	acre		
1	114	63.84	R. Y. D.	John Farquhar, Blanchard, Page				
2	118	63.49	R. Y. D.	F. J. Haas, Shelby, Pottawattamie				
3	116	62.99		E. S. Dyas & Son, Bellevue, Jackson				
4	108	62.72	McCulloch's Y. D.	Fred McCulloch, Hartwick, Iowa				
5	113	62.56	R. Y. D.	A. T. Mann, Thurman, Fremont				
6	104	62.39	Walden Dent	C. D. Kirkpatrick, Keota, Keokuk				
7	93	62.36	Evan's Imp. Y. D.	Evans & Mefford, Hedrick, Wapello				
8	112	62.03	Imp. R. Y. D.	J. H. Petty, Elliott, Montgomery				
9	95	61.73	Willhoit's Corn	Chas. W. Willhoit, Batavia, Wapello				
10	103	61.33	R. Y. D.	DeCook Bros., Pella, Marion.				
11	111	61.32		Entry Bu. Per				
12	115	61.17	Rank	No.	Acres	Rank	No.	Acres
13	102	60.96	19	98	58.76	25	91	57.14
14	94	60.89	20	109	58.42	26	97	56.98
15	107	60.88	21	96	58.41	27	101	56.35
16	106	60.73	22	100	58.08	28	117	56.31+
17	89	60.04	23	105	57.83	29	99	56.31
18	90	59.10	24	92	57.56	30	110	52.05

While it is a recognized fact that seasonal conditions will sometimes change the relative yielding power of different kinds of corn tested in successive seasons, the results of the 1923 tests are reasonably consistent with those of the three previous years but there have been some changes. This only emphasizes the fact stated before that too much confidence should not be placed on the results of a single year's test. Some samples entered the past season for the first time have stood very high. Others which did not stand so high should not be satisfied until the corn has been tested through several seasons. We therefore urge those in the contest during the past to re-enter for the coming season and in this way make the results as reliable as possible.

SUMMARY OF PREVIOUS YEARS' RESULTS

In this summary only those entries are considered where the same kind of corn was in the test for each of the years indicated. It is reasonable to believe that a test running over a period of years is more reliable than one of only one year duration and for that reason it is believed much significance should be attached to the winners of the test over a period of several years. The names listed are the top one-third in each section for the period shown.

FOUR YEARS, 1920, 1921, 1922, 1923

Northern Section				
Rank	Name	Address	County	Kind of Corn
1.	Theo Gronna	Waterville	Allamakee	Silver King
North-Central Section				
1.	Farm Crops Section	Ames	Story	Iodent
South-Central Section				
1.	Clyde Black	Dallas Center	Dallas	Black's Y. D.
2.	Geo. Steen	West Liberty	Muscatine	R. Y. D.
Southern Section				
1.	Fred McCulloch	Hartwick	Iowa	McCulloch's Y. D.
2.	H. E. Hazen	Denmark	Lee	R. Y. D.

THREE YEARS, 1921, 1922, 1923

Northern Section				
Rank	Name	Address	County	Kind of Corn
1.	Henry Schleusner	Garner	Hancock	Silver King
North-Central Section				
1.	Farm Crops Section	Ames	Story	Iodent
2.	H. F. Osterland	Faulkner	Franklin	Silver King
South-Central Section				
1.	Clyde Black	Dallas Center	Dallas	Black's Y. D.
2.	Geo. Steen	West Liberty	Muscatine	R. Y. D.
Southern Section				
1.	Fred McCulloch	Hartwick	Iowa	McCulloch's Y. D.
2.	John Farquhar	Blanchard	Page	R. Y. D.
3.	H. E. Hazen	Denmark	Lee	R. Y. D.

TWO YEARS, 1922, 1923

Northern Section				
Rank	Name	Address	County	Kind of Corn
1.	Theo Gronna	Waterville	Allamakee	Silver King
2.	Henry Schleusner	Garner	Hancock	Silver King
North-Central Section				
1.	Farm Crops Section	Ames	Story	Iodent
2.	J. T. Edson	Storm Lake	Buena Vista	Lakeside Y. D.
3.	Geo. M. Allee	Newell	Buena Vista	A. B. K. Y. D.
South-Central Section				
1.	Geo. Steen	West Liberty	Muscatine	R. Y. D.
2.	L. H. Mendenhall	Earlham	Dallas	R. Y. D.
3.	J. S. Leonard	Waukee	Dallas	R. Y. D.
Southern Section				
1.	Fred McCulloch	Hartwick	Iowa	McCulloch's Y. D.
2.	John Farquhar	Blanchard	Page	R. Y. D.
3.	Glass Bros.	Diagonal	Ringgold	BB—R. Y. D.

PLAN OF THE 1924 TEST

The 1924 test will be conducted along the same general lines as those of the past three years and may be stated briefly as follows:

1. Twelve testing stations will be established—three in each of the four sections—north, north-central, south-central, and southern, into which the state has been divided for a number of years for the annual State Corn Show (See Map). In order to give all the corn entered the most thorough trial, the stations in each section will be well distributed and as far as possible on different soil types.

2. All entries for a section will be grown in competition at all three stations within that section.

3. A number will be assigned each sample when received by the Secretary of the Iowa Corn and Small Grain Growers' Association, so that the name of the competitor will not be used or known until the final yields have been computed.

4. Each entry will be planted a sufficient number of times at each of the three stations in the section for which the particular sample is entered to insure an accurate test.

5. All yields will be based on sound corn with a uniform moisture content.

ENTRIES

1. An entry fee of \$10.00 for each sample entered and grown in Iowa, and \$40.00 for each sample from outside the state, will be charged to partially pay for the detailed work of making a careful and thorough test. The actual cost per sample for making the test during the past four years has been about \$20.00.

2. Applications for entry together with entry fee should be mailed immediately to Joe L. Robinson, Secretary of the Iowa Corn and Small Grain Growers' Association at Ames, Iowa.

3. A competitor may enter as many as three samples in any one section, providing each sample is of a different strain or variety. Samples may be entered in more than one section.

4. For each sample entered the competitor must supply, free of charge, twelve pounds of high germinating shelled seed corn ready to plant. This seed becomes the property of the Iowa Corn and Small Grain Growers' Association when received by the Secretary.

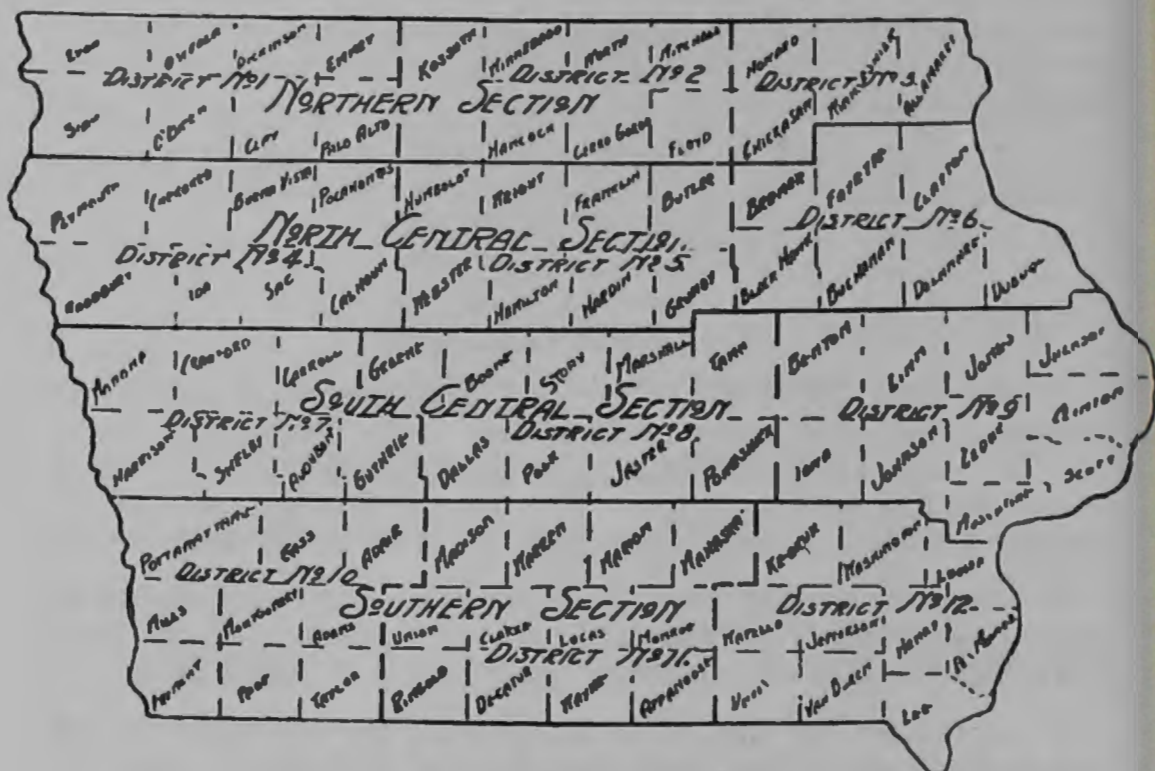
5. Each sample must be labeled distinctly as to the name and address of the grower, variety name of the corn if known, and the section of the state in which it is to compete.

6. Sample should be shipped in heavy bags or strong containers to insure the corn reaching the Association in good condition.

7. The preference of the majority of entrants will govern the number of kernels per hill to be planted in each section. Study these data carefully and indicate your preference on the application blank.

FOUR-YEAR RATE OF PLANTING DATA

No. Kernels Planted	at Harvest all sections	B U S H E L S				P E R		A C R E	
		Northern Section	N. C. Section	S. C. Section	Southern Section				
2	1.73	52.27	52.66	58.87	52.19				
3	2.44	64.38	63.44	70.46	64.27				
4	3.09	68.39	65.85	72.95	61.65				
5	3.77	71.33	66.83	72.72	63.22				



PREMIUMS FOR 1924 TEST

1. The BANNER TROPHY is awarded annually by President Raymond A. Pearson to the grower entering the sample which produces the greatest number of bushels per acre.

2. Some of the prominent corn growers and breeders in the state realizing the value and benefit of this test, are offering liberal cash premiums to those having high yielding corn in 1924.

3. In a number of the counties the local Farm Bureau offers premiums for the highest yielding samples from their particular counties. It is the plan to have this repeated again this year. Is your county offering a prize?

4. The Association will present the owner of the highest yielding sample in each section with an appropriate gold medal. The top one-third in each section will receive ribbons from the Association indicating their achievement.

VALUE OF CORN YIELD CONTEST

The final results of the yield contest will be of particular value to every corn grower who competes, regardless of whether his entry ranks high or low. Such information will be of the greatest benefit to men with low yielding seed because it will enable them to replace their own varieties or strains with those kinds which comparative trials have proven most productive. A number of growers have located higher yielding corn by means of the yield test. They have profited in this way.