

OKLAHOMA
AGRICULTURAL AND MECHANICAL COLLEGE
AGRICULTURAL EXPERIMENT STATION
STILLWATER, OKLAHOMA

Outfield Experimental Results

NOWATA COUNTY
For
1925, 1926, 1927

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FOREWORD

This bulletin is a report of the outfield work in Nowata county, Oklahoma, conducted by the Experiment Station of the Oklahoma Agricultural and Mechanical College.

Outfield experiments in Oklahoma are conducted by the Department of Field Crops and Soils of the College, and have been going for three years under the supervision of H. C. Potts, assistant agronomist in charge, who gives direct supervision to all outfield experimental work. Work is now being conducted in McClain, Bryan, Okmulgee, Pittsburg, McIntosh, Creek, Nowata and Garfield counties. The Garfield county work was started in 1926. A few acres are rented from each place of some good farmer who supplies the land, the labor, tools and equipment, and for his services takes the crops and a small agreed sum to pay him for his extra trouble.

In addition to the work in the above named counties, specialized work is being conducted in two places: (1) at Granite on the State Reformatory farm, for the benefit of the farmers of Southwestern Oklahoma. Roy W. Ellithorpe, assistant agronomist, is in charge of this work. It was established three years ago through the cooperation of the late Dr. G. A. Waters, then warden of the reformatory. It was continued under the administration of his successor, Mr. J. J. Savage. The present warden, Mrs. G. A. Waters, widow of Dr. Waters, has been enthusiastic in her cooperation in the continuance of the work. (2) At the Panhandle Agricultural College at Goodwell special work is being conducted under the supervision of H. H. Finnell, associate agronomist, who is in charge of the work at that place in crops and soils, in cooperation with the Panhandle Agricultural College. This work is for the benefit of the Panhandle and the Northwestern section of Oklahoma.

In order to extend Outfield Experimental work to other counties, additional funds will be necessary.

REPORT OF EXPERIMENTAL WORK IN NOWATA COUNTY

The experiment work in Nowata county is being carried on by Mr. W. C. Keller, who lives two and one-half miles southeast of Nowata. The soil on which these experiments are conducted is a silt loam in nature and is representative of the average upland soils of that locality.

CORN VARIETY TEST

Table 1—Corn Varieties—Yield in Bushels Per Acre**

Variety	1925	1926	1927	Average	Rank
Silvermine	4.4	40.3	34.3	26.3	7
Pride of Saline	11.0	60.0	45.7	38.9	3
Surcropper	12.5	32.6	28.6	24.6	8
Reid's Yellow Dent (Clay)	6.9	48.2	42.9	32.6	5
Reid's Yellow Dent (Cole)	*	*	40.0		
Ferguson Yellow Dent	9.1	44.5	37.1	30.3	6
Midland Yellow Dent	11.4	60.0	52.9	41.4	1
Dent Squaw	*	52.3	48.6		
Chisholm	8.8	45.6	47.1	33.5	4
St. Charles White	10.5	59.1	50.0	39.9	2

*Not planted.

**70 pounds ear corn per bushel.

In the season of 1925, moisture was the limiting factor in corn production in this section. As shown in Table I, all varieties gave a very low yield. The seasons of 1926 and 1927 were very favorable for corn production and the yields secured from the leading varieties indicate that corn is a very profitable crop for the upland soils in this locality.

GRAIN SORGHUM VARIETY TEST

Table 2—Grain Sorghum Varieties Yield in Bushels Per Acre.

Variety	1925	1926	1927	Average	Rank
Darso	23.8	37.1	20.5	27.1	1
Common Kafir	22.9	36.9	19.3	26.4	2
Reed's Kafir	18.3	31.4	20.5	23.2	4
Hegari Kafir	*	37.8	17.3	27.6**	
Sunrise Kafir	23.8	32.2	19.3	25.1	3

*Not planted.

**Two year average.

It will be noted in comparing Tables 1 and 2 that the leading varieties of corn made about 14 bushels of grain per acre more than the high yielding sorghums. This may not be true over a longer period of years since the past two seasons were very favorable for the production of corn.

Darso can probably be recommended over other varieties of grain sorghums because of its adaptability and its ability to produce under adverse conditions when other varieties may fail.

SWEET SORGHUM VARIETY TEST

Table 3—Sweet Sorghum Varieties Yield in Tons Dry Forage Per Acre.

Variety	1925	1926	1927	Average	Rank
Sumac	4.44	6.25	4.50	5.06	3
Orange	4.65	6.35	4.65	5.21	2
African Millet	5.40	6.57	5.55	5.84	1
Red Amber	*	5.79	4.35	5.07**	
Seed Ribbon	*	6.17	4.80	5.49**	

*Destroyed by chinch bugs.

**Two year average.

As a forage yielder, the African Millet gave the highest yields, but the Orange or Sumac can be recommended over the African Millet because of their superior quality. The Red Amber is a very early maturing variety and when planted at a normal date, matures at a time when the quality of forage is lessened by the hot, dry weather of late summer, while the Seeded Ribbon is a late maturing variety and will not mature seed every year in this section.

SOYBEAN VARIETY TEST

Of the varieties of soybeans that were grown in 1925, 1926, and 1927, the Virginia seems to be the most promising dual purpose variety. The Laredo is a good forage yielder and under the most favorable conditions, produces a fair yield of seed. It cannot be recommended as a dual purpose variety but because of its quality of hay can be recommended as a forage variety. The Morse variety seems to be the best seed producer of any variety tried in the tests.

COWPEA VARIETY TEST

There were five varieties of cowpeas grown in the variety test each year, but due to heavy rains at the time of harvesting, the forage yields were destroyed. The average grain yields of the following varieties were: New Era 14, Blackeye 12.5, Whippoorwill 11.5, Early Buff 10, and Brabham 9.5 bushels per acre.

WHEAT VARIETY TEST

This section of Oklahoma is more adapted to the growing of soft wheat than of hard wheat. For that reason, most of the varieties used in the test are soft wheat varieties. There were no varieties planted in the fall of 1924 because the work was not started until the spring of 1925. In 1926 the following varieties were grown: Fulcaster, Miracle, Currell, Mediterranean, Harvest Queen, Fultz Dunbar, and Turkey Red. The Fulcaster gave the highest yield with 25.7 bushels per acre and the Mediterranean the lowest with 20.7 bushels per acre. The same varieties were planted in the fall of 1926, but due to the Hessian fly and to adverse weather conditions, the production was so low that no yields were taken.

OAT VARIETY TEST

Table 4—Oat Varieties Yield in Bushels Per Acre.

Variety	1926	1927	Average	Rank
Fulghum	33.2	42.3	37.8	1
Kanota	31.6	39.4	35.5	2
Nicholson's Extra Early	31.6	36.7	34.2	3
Nicholson's 100 Bushel	38.8	38.9	33.3	4
Ferguson No. 922	*	43.1		

*Not planted.

The test having been conducted only two years, no recommendation can be made as to which variety will be the best to grow in this locality.

FERTILIZER EXPERIMENT ON WHEAT

Only one year's results have been secured from the wheat fertility plots at Nowata. This was the season of 1926 which was a very favorable one for wheat production in this section. In these results, the fertilized plots did not give any increase over the nonfertilized plots. For that reason, it will probably take several years to determine whether or not fertilizers will pay on wheat in this section.

COTTON VARIETY TEST

The data obtained from these tests show that the early maturing varieties gave the highest yields and the greatest money value per acre. This value is based on the average price paid for Middling cotton using the length of staple in each of these varieties. The three main factors taken into consideration in determining the value of these varieties are: length of lint, linting per cent, and yield per acre.

Table 5—Cotton Varieties Showing Length of Staple, Linting Percent, Yield of Seed Cotton, and Money Value Per Acre

Variety	1925				1926				1927				Average Yield	Average Value
	Length Lint	% Lint	Yld. Per Acre	Value Per Acre	Length Lint	% Lint	Yld. Per Acre	Value Per Acre	Length Lint	% Lint	Yld. Per Acre	Value Per Acre		
Okla. Tri. 44	14	32.78	750	60.94	15	34.20	600	30.95	14	31.16	1010	77.89	786	56.59
Acala 5-37	14	33.33	495	40.66	16	35.97	450	29.79	15	34.13	720	59.05	555	43.17
Acala 5	*	*	*	*	*	*	*	*	15	31.94	570	44.39	570***	44.39***
Mebane	14	32.87	225	19.87	16	35.27	300	16.27	16	32.90	450	46.84	325	27.54
Delfos 6102	*	*	*	*	*	*	*	*	16	30.33	390	29.89	390***	29.89***
New Boykin	14	33.55	405	33.37	14	34.40	165	7.68	14	31.13	390	29.39	320	23.48
Okla. Tri. 44	14	33.53	705	58.91	15	35.66	480	25.68	14	31.16	930	69.88	705	51.49
Tri. 406	14	34.02	390	34.52	15	35.57	390	20.82	14	32.57	750	58.51	510	37.95
Lone Star	14	36.70	300	26.68	16	37.27	225	12.81	14	34.52	360	29.38	295	22.96
Rowden	14	35.97	450	37.64	15	33.33	240	12.11	15	34.34	450	37.09	380	28.61
Half and Half	12	40.50	600	53.20	13	41.96	420	20.62	14	36.57	510	45.08	510	39.63
Trice	*	*	*	*	14	32.12	450	19.77	14	33.33	750	59.56	600**	39.66**
Okla. Tri. 44	14	33.50	840	69.32	15	37.13	450	24.94	14	31.16	1050	78.75	780	57.69

*Not planted.

**Two year average.

***One year only.

