Report for the Agronomy Farm, Season of 1911
by: B. S. Wilson, Foreman in Charge

January 16, 1912

The following is a record of the work, time it was accomplished, and cost of such work, on the Agronomy Experimental Farm for the year 1911.

A report of the experimental work in direct charge of the Superintendent, is included.

The year 1911 was a dry one. Very little moisture fell in the spring, and the summer was a record breaker for drouth and high temperatures. Sufficient moisture to saturate the soil six inches fell in August. This made plowing possible, which was almost out of the question before. The hot winds of July injured the late planted corn the most, and the small grain crops ripened two weeks earlier than usual. The first heavy frost was in the latter part of October, and good rains fell in September and October; and snow in November and December.

Plowing was done in Field "E", though very dry. Most of the alfalfa sod was plowed after January 1st. The "Old Farm", west half of Field "A", and all of Field "C", were plowed during the winter and spring months.

All oats and most of the barley was planted on last years corn and sorghum ground, the soil being disked and harrowed before seeding. The ground was covered with a heavy fall of snow March 1st. Began seeding oats March 18th. Two drills were used this spring; one on the commercial work and the other on the variety test plots. The oats and barley came up in due time and made good growths in the forepart of the spring. This seeding was completed March 23rd.

Began planting Reid's Yellow Dent corn in Field "C" April 24th, and finished corn planting May 9th.

Wheat harvest began June 18th, and progressed with no hindrance until completed June 20th. Two binders were used most of the time. The wheat was threshed June 21st to 26th.

Began harvesting oats and barley June 26th. These crops were very light. Chinch bugs and drouth practically destroyed the barley, and damaged the oats severely. Finished harvesting these crops June 29th, and threshed them July 5th.

All variety test work with oats and barley was threshed with the Baby Vibrator, and five to six bundles of each plot in the wheat variety test. The latter being rogued before threshing. The remaining bundles of wheat were threshed with the large machine, keeping each plot separate, thus getting the yield per plot.

June 30th, began plowing for fall seeding of wheat and alfalfa. It was so dry that the soil turned up in large clods, it being difficult to get the plow in the ground at times.

The corn was severely damaged by the drouth by September, and it was sold to the Dairy Department for $2.75 per ton in the field. 21 acres were cut, which yielded 103 tons of silage. This area, if left to mature, would have yielded 400 bushels of corn and 16 tons of fodder.

The corn binder was started September 14th in Field "C", and kept going until all commercial corn was cut by October 1st. Began cutting cane and kafir corn immediately, and finished October 14th.

Fall plowing was started in Field "A" September 18th, where the silage corn was cut. After this, Fields "G" and "E" were plowed and the alfalfa sod in Field "D" was broken. As fast as the shock corn in Field "A" was husked, the ground was plowed, the fodder being reshocked

on the plowed land.

The following figures may be of value in figuring cost of production:

	No. of acres plowed.	Total Cost of plowing.	Cost per acre.
Field "A"	20.5	$ 41.28	$2.01
" "D"	22.0	64.87	2.95 *
" "E"	8.5	21.40	2.52
" "G"	17.0	46.58	2.74

* Alfalfa sod.

The labor cost varies from $.15 to $.25 ½ per hour; and the team labor is at the rate of $.07 ½ per each horse used. These figures are used in all calculations in this report; time being counted from leaving the barn until the return.

When figuring the value of crops produced, the following figures were used:

Pure wheat ..... $1.00 per bu.
Mixed wheat ..... Market price.
Pure Barley ..... $ .50 per bu.
" Rye ..... .75 per bu.
" Oats ..... .75 per bu.
Hay ..... Market price.
Ear corn ..... .60 per bu.
Cane seed ..... $1.00 per bu.
Kafir seed ..... $1.00 per bu.
Alfalfa seed ..... $5.00 per bu.
Corn silage ..... $2.75 per ton.
Corn stover ..... $3.00 per ton.
Corn fodder ..... $4.00 per ton.
Cane & Kafir fodder ..... $3.00 per ton.
Straw ..... $3.25 per ton.

The fall seeding of wheat began October 4th. Cold and damp weather prevailed most of the time during seeding. Turkey and Bearded Fife were seeded in Field "C", and Kharkof in Field "H". The Ghirka wheat was seeded in the northeast corner of Field "H". Excellent seed beds were secured this fall. Field "H" was plowed early, and Field "C" was double and single disked and harrowed. After the shocks were removed in Field "C", in December, as an experiment the ground occupied by them was seeded to wheat. This work was done on the east end only because of lack of seed.

All of the corn was husked by December 5th. The corn had a large per cent of small ears with smut and worm dust on them. For this reason, all of the corn was sorted before cribbing; the discarded corn was sold immediately and into the remainder reserved for horse feed and seed.

IMPROVEMENTS

Some improvements have been made the past year. The north end of the farm was

fenced, and the fencing for the west side is started. All of this fence is a four strand barbed wire, with eight foot cedar posts set one rod apart, and twelve foot woven wire gates at the openings. The posts are set and the wire on the ground for the fence north and east of the horse pasture.

The work of straightening the creek was started this fall. A cut 130 feet long, 16 feet wide, and 6 ½ feet deep was finished in December. The dirt removed was used to fill around the bridge, and level the road south of it.

A ditch was constructed to drain the water from Fields "H" and "B", to a storm sewer made of twelve inch tile laid through the north end of "B", a distance of 300 feet, to the creek.

The outlet for the system of tile drainage in Field "F" is constructed and the tile for the field work is on the ground.

The seed house at the college was vacated August 1st; and when demolished, the partitions, doors, and inside furnishings were hauled to the farm. This lumber has been used in the improvement of the tool house. A double door was laid down stairs, part of the wall cased, engine room constructed, and line shafting put up. The outside of the building was covered with drop-siding and painted. A brick flue was built in order to place a stove in the seed corn drying room.

The east half of the grove north of the barn was cut and the stumps removed. $1100.00 was expended for permanent improvements. *

* The above figures cover cost of mater and expense of constructing or placing such improvements.

FARM EQUIPMENT

The farm equipment is in very good condition. Several old machines were sold and the proceeds used to buy reparis [sic] for tools in need of such. One set of double harness and a hay rake were purchased the past summer.

The work stock consists of two mule teams, and one team of horses. One team of horses is hired; paying the owner $.35 per hour for himself and team.

The following rotations were adopted for the farm.

SHORT ROTATION

Year	Field "A"	Field "H"	Field "G"
1911	Corn	Oats	Wheat & C.P.
1912	Oats	Wheat & C. P.	Corn
1913	Wheat & C. P.	Corn	Oats
1914	Corn	Oats	Wheat & C. P.

LONG ROTATION

Year	Field "B"	Field "C"	Field "D"	Field "E"	Field "F"
1911	Wheat	Corn	Alfalfa	Kafir	Alfalfa
1912	Alfalfa	Wheat	Kafir	Corn	"
1913	"	Kafir	Corn	Wheat	"
1914	"	Corn	Wheat	Alfalfa	Kafir
1915	"	Wheat	Kafir	"	Corn
1916	Kafir	Alfalfa	Corn	"	Wheat

1917....Corn..... " .....Wheat..... " .....Kafir
1918....Wheat..... " .....Alfalfa.....Kafir.....Corn
1919....Kafir..... " ..... " .....Corn.....Wheat
1920....Corn.....Kafir..... " .....Wheat.....Alfalfa

"The short rotation will be used for experimental purposes primarily, while the long rotation, generally speaking, will be devoted to increasing the products from the experimental plots, with the exception that a variety test of corn will be carried in the long rotation almost every year."

"It is our intention at this time to keep up the fertility of the soil on the short rotation series by applying chemicals and plowing under cowpeas after wheat. No barnyard manure will be applied. All of the barnyard manure will be distributed over the five fields included in the long rotations. Cowpeas, also will be plowed under as often as possible in the long rotation; little if any chemicals will be applied in the long rotation."

SMALL GRAIN

Wheat

The wheat wintered well and the yield was good. It received sufficient moisture after planting to germinate early, and made a fair growth in the fall. On April 30 it received a rain when it was much needed, and this rain is what made the wheat what it was here. Wheat was ripe June 14th and was badly infested with chinch bugs; however, the insects damaged the wheat very little.

Turkey Wheat

The Turkey wheat was planted south and east of the variety test in Field "G". Almost three acres were planted and made an average yield of 29 bushels per acre. The following figures will show the cost of production. These figures were partially approximated, as other ground was worked at the same time.

	Disking	$3.52	
	Harrowing	2.03	
Oct. 4	Seeding	1.88	
	Seed	6.00	
June 19,	Harvesting	2.93	
" 23	Threshing	10.09	
	81 bu. pure wheat		$81.00
		26.45	81.00

Date Test of 570 Turkey Wheat

The 1910-11 Date Test of Turkey wheat was planted to the northeast corner of Field "H". This land was planted to cowpeas in June. The peas were destroyed by hail in July and the ground lay idle until August 22nd, when it was plowed and narrowed.

No. of Plot	Date of Seeding	No. of Days to come up	First Ripe	Yield per Acre
1	Sept. 12	5	June 7	44.8 bu.
2	" 19	5	" 7	50.0 "
3	" 26	6	" 7	53.8 "
4	Oct. 3	7	" 7	52.5 "
5	" 10	6	" 7	51.2 "
6	" 17	12	" 10	45.7 "
7	" 24	14	" 10	45.0 "
8	" 31	15	" 10	36.8 "

Notes

Sept. 8	harrowed after a heave rain
" 13	Plenty of moisture and an excellent seed bed
" 19	Soil is drier
" 26	Light rain last night
Oct. 18	Heavy rain last night, followed by cold weather Several freezes after latter date
Dec. 1	The wheat is looking fair. The later plantings have made practically no growth after coming up. The earlier plantings have some dead leaves: due to dry weather.
Dec. 5	Two to three inches of snow fell. This laid on the ground for several days and was followed by warm weather.
Dec. 27	Light rain and snow
Feb. 13	One inch of rain, and snow the 16, 17, and 18th.
June 17	Harvested
" 23	Threshed

Kharkof Wheat

The 382 Kharkof wheat was planted in the northwest corner of Field "H" and south west corner of Field "G". Both of these pieces were very good land: especially the latter, which is low ground and did not suffer for moisture. In view of the fact that the north piece was liable to lodge in a normal season, a strip on the west side was clipped with the mowing machine on May 6th, to prevent too rank a growth. The season being a dry one, this work did a damage to the wheat this year. The clipped plot yielded 31 bushels per acre, and ripened ten days later than the remainder of the field, which yielded 57 bushels per acre. The Kharkof wheat in Field "H" yielded 45 bushels per acre.

	Field "G" 3.2 acres	
August	Plowing	$10.99
October	Disking and harrowing	2.18
" 15	Seeding	1.45
	Seed	8.00
	Harvesting	5.53
	Threshing	12.47
	139 bu. pure wheat	$139.00
		$ 40.62 ..... $139.00

	Field "H"	3.2 acres	
July	Plowing	$11.48	
"	Disking and harrowing	3.07	
September	Seeding	2.32	
	Seed	8.00	
June	Harvesting	4.12	
"	Threshing	12.47	
	138 bu. pure wheat		$138.00
		$41.20	$138.00

The soft winter wheat was grown in Field "F". 64.6 bushels of Currell and 50 bushels of Fultz was threshed from the commercial plots. No other definite figures were obtained.

OATS

130 Kherson

The Kherson oats were planted in the center of Field "H" next to the soil fertility plots, and on the previous years corn seed bed preparation plots. Used the Hoosier drill set at two and one-half bushels per acres. Drilled March 18th.

The north end of the field was severely damaged by chinch bugs. The seed was light and yielded 21 bushels per acre. This field was thoroughly rogued before harvesting: there being a slight mixture of barley. Barnyard manure was applied to the large piece the past winter.

Red Texas

The Red Texas oats were planted with the Hoosier drill in the north end of Field "B", and on the corner of cultivated land north of the pasture. The latter piece had Milo Maize on it and the former broom corn the previous year. The oats on the latter piece were short and had a slight mixture of barley which was rogued out.

The north piece yielded 38 bu. per acre and the south one 12 bu. per acre.

	Red Texas Oats	Field "B".	6.3 Acres	
March 20		Disking	$ 4.75	
		Harrowing	1.49	
"	21, 22	Seeding	2.33	
		Seed	25.00	
		Rogueing	1.41	
		Harvesting	5.11	
		Threshing	9.62	
		* 179 bu.		$100.00
			$49.71	$100.00

* 30 bu. pure

BARLEY

Very little spring barley was raised this year. The chinch bugs and drouth made the seed so light and the straw so short that the crop was very difficult to handle.

That part of Field "H" north and east of the variety test of spring grains was seeded to spring barley. This made an approximate yield of three bushels per acre.

A small patch of Tennessee Winter barley was planted in the north end of Field "G". This was low land and yielded at the rate of 30 bushels per acre.

RATE AND DATE OF SEEDING TESTS

The rate and date of seeding tests with spring grains were in Field "H". The plots were on corn land, the disked plots being double and single disked before planting.

RATE OF SEEDING 718 RED TEXAS OATS

Rate of Seeding	Date of Seeding	Date of Harvesting	% of Stand* 5-4-'11	Yield per Acre
1 ½ bu.	March 18	June 28	40	9.94 bu
2 "	" 18	" 28	50	13. 56 "
2 ½ "	" 18	" 28	75	17.19 "
3 "	" 18	" 28	100	16.88 "
3 ½ "	" 18	" 28	100	20.81 "
4 "	" 18	" 28	100	20.13 "

* The Red Texas did not feed uniformily [sic]: the kernels were very large and would clog the drill.

RATE OF SEEDING 130 KHERSON OATS

Rate of Seeding	Date of Planting	Date of Harvesting	% of Stand 5-4-'11	Yield per Acre
1 ½	March 18	June 28	100	16.88 bu.
2	" 18	" 28	100	19.69 "
2 ½	" 18	" 28	100	20.63 "
3	" 18	" 28	100	27.75 "
3 ½	" 18	" 28	100	23.13 "
4	" 18	" 28	100	20.81 "

From the table it is seen that the seeding at the rate of 3 ½ bushels per acre produced the most.

RATE OF SEEDING 1363 MANSURY BARLEY

Rate of Seeding	Date of Seeding	Date of Harvesting	% of Stand 5-4-'11	Yield per Acre
1 ½	March 21	June 28	100	3.92 bu.
2	" 21	" 28	100	4.23 "
2 ½	" 21	" 28	100	4.17 "
3	" 21	" 28	100	3.48 "

DATE OF SEEDING 721 MANSURY BARLEY

Seed Bed	Date of Seeding	No. of Days to Come up	First Heading	% of Stand 5-4-'11	Yield per A.
Fall	March 11	14	May 26	100	0.4 bu.
Plowed	" 21	11	" 30	100	1.54 "
	" 31	10	June 4	100	3.83 "
Spring	" 11	14	May 26	100	4.13 "
Plowed	" 21	11	" 30	100	1.92 "
	" 31	10	June 6	95	2.08 "
Disked	" 11	14	May 26	100	3.92 "
(Disced)	" 21	11	" 31	100	4.96 "
	" 31	10	June 5	100	2.75 "

DATE OF SEEDING 130 KHERSON OATS

Seed Bed	Date of Seeding	No. of Days to Come up	First Heading	% of Stand 5-4-'11	Yield per A.
Fall	March 11	14	May 25	100	21.38 bu
Plowed	" 21	11	" 29	100	16.63 "
	" 31	10	June 2	100	8.50 "
Spring	" 11	14	May 28	100	12.25 "
Plowed	" 21	11	" 30	100	7.81 "
	" 31	10	June 6	80	3.88 "
Disked	" 11	14	May 28	95	9.19 "
(Disced)	" 21	11	" 31	98	13.69 "
	" 31	10	June 5	90	10.50 "

The rate and date tests of spring grains were harvested June 26 and 27.

FLAX AND RYE

The flax was planted in Field "G", and produced less than a bushel on an acre of ground. The variety, rate, and date tests were planted on the campus; near the west entrance. (See page)

25 bushels of Monster rye was harvested from the plots planted to winter vetch and rye; the vetch was planted too late to get a good start, and was smothered by the rye in the spring.

RATE AND DATE OF SEEDING FLAX

This work was carried out, with the variety test, in the five west plots in the north series of plots west of the weather bureau.

The three east plots of this area were not farmed the previous year, and the two west ones were in timothy. After burning off a heavy crop of grass and weeds, the sod ground was plowed and the other plots double disked [sic]. In addition to the above, the west part was thoroughly packed with the disk set straight. This work was done a few days before seeding.

Used the Dowagian drill and No. 45 Flax in this experiment. The plots were 0.24 acres in area.

Date of Seeding	Rate of Seeding	No. of Days to Come up	Height (Inches)	Yield per Plot. Lbs.
April 5	25 lbs	10	18	25/32
" 15	25 "	10	17	19/32
" 25	25 "	*	13	3/32
" 6	15 "	11	19	3 2/32
" 6	20	11	19	3 1/32
" 6	25	11	19	3 14/32
" 6	35	11	19	3 21/32
Broadcasted plot				
" 6	25	12	20	1 14/32

* Very poor stand.

CORN

The Reid's Yellow Dent corn was planted in Field "C". This field was planted to Hildreth corn the previous year, was plowed deep in February and March, and well worked before seeding.

Began planting April 24th with the surface planter equipped with disk furrow openers. The corn made an excellent growth in May and June, with the exception of the north west corner which developed very little corn and the fodder was very poor.

Began cutting September 14th, and shocked the corn in the field. 302 bushels were husked.

Cost of Production

20 ½ acres planted

February	Cutting stalks	$ 7.72	
	Plowing	47.60	
April 1	Disking	12.78	
April 15-17	Disking	10.05	
April	Seeding and Preparation	10.42	
April	Harrowing	4.04	
	Planting	8.54	
	Replanting	1.20	
May	Harrowing	9.55	
May 18-20	First Cultivation	17.79	
May & June	Second cultivation	16.29	
August 12-18	Single horse cultivation	15.40	
	Hoeing, cultivating, etc	24.66	
September	Binding & shocking	27.16	
	Husking	60.91	
	302 bu. corn		$181.20
	3 ½ tons corn and fodder		14.04
	12 tons stover		36.00
		$274.11	$231.24

Kansas Sunflower

The Kansas Sunflower corn was planted in Field "A". The west half was surface planted, and the east half listed. No difference was noted in the quality, and the yield was the same: 30 bushels per acre. The west half was in Leaming corn the previous year, and the east side, kafir corn.

The two south pieces, and the fifteen rows next the hedge to the east, were cut for silage. This yielded six tons* per acre. The remainder of the field was bound and shocked in September, and husked in October and November.

Cost of Production

15 Acres Planted

February	Breaking stalks.....	$ 5.32	
March	Plowing.....	21.03	
"	Disking.....	5.85	
April	Disking.....	4.25	
"	Disking.....	3.96	
"	Harrowing.....	4.70	
"	Seed.....	9.37	
"	Listing.....	10.04)	
May 30	Harrowing.....	3.21)	Listed
May 17-19	First cultivation.....	9.63)	
June 3-8	Second cultivation.....	9.12)	
April	Planting.....	2.84)	
	Harrowing.....	5.55)	Surface
May 16-17	First cultivation.....	4.18)	Planted
May 22-26	Second cultivation.....	6.51)	
June 1-3	Third cultivation.....	6.44)	
	Suckering, cult, etc.....	11.17	
	Cutting and shocking.....	17.12	
	Husking.....	58.63	
	450 bu. or corn.....		$ 270.00
	63 tons of silage.....		173.25
	101/3 ton of fodder.....		31.08
	Total.....	$198.72	$474.33

Boone County White

The Boone County White corn was planted in the Higginbotham field. This field was in wheat the previous year and lay idle the summer of 1910. It was plowed in December, and with one disking and harrowing a perfect seed bed was secured when planting began on May 5th with the surface planter. The corn came up promptly, and made an excellent appearance in the forepart of the season. This corn was injured by dry weather the most, of any on the farm. Because of this it was decided to cut all of the commercial planting for silage. This yielded approximately four tons per acre. The corn made an average yield of twenty bushels per acre.

A comparison of corn planted with, surface planter; surface planter equipped with disk furrow openers, and the loose ground lister, was made in this field.

Surface planted corn yielded.....	20.2 bu. per acre
Surface planter equipped with disk furrow openers.....	18.4 bu. per acre
Loose ground lister.....	25.0 bu. per acre

SORGHUMS

The sorghums made an excellent showing this year. All of these crops were planted on plowed land, with the surface planter equipped with disk furrow openers. The Sumac cane was planted on a field that had a thin stand of alfalfa previous to plowing.

Kansas Orange Cane

The Kansas Orange cane was planted in Field "E". A very good quality of seed was secured.

Cost of Production

1.83 acres planted

April	Plowing.....	$ 4.02	
	Harrowing.....	3.06	
May 24	Planting.....	1.34	
	Seed.....	.25	
	Cultivating.....		5.15
Oct. 13	Cutting & Shocking.....	5.11	
November	Heading.....	8.02	
"	Threshing.....	13.72	

60 bu. of seed.....		$60.00
8 tons fodder.....		24.00
Total.....	$ 40.67	$ 84.00

Sumac Cane

The Sumac Cane was planted in the center of the west side of Field "F". 2.3 acres were planted.

March	Plowing.....	$ 4.52	
April & May	Harrowing.....	3.58	
May 24-25	Seeding.....	1.67	
	Seed.....	.30	
June 10, 12	Cultivating.....		1.57
July 3	Cultivating.....		1.75
July 29	Cultivating.....		2.17
October	Cutting & Shocking.....	12.23	
November	Heading.....	13.17	
November	Threshing.....	30.24	

80 bu. of seed.....		$ 80.00
10 tons of fodder.....		30.00
Total.....	$71.20	$110.00

Early Amber Cane

The Early Amber Cane was planted in the northeast corner of the Higinbotham field, May 24. The seed was fair and the fodder good. The seed yielded at the rate of 20 bu. per acre.

		2 acres planted	
	Plowing	$ 4.66	
	Disking	1.10	
	Harrowing	1.00	
	Planting	1.67	
June 17	Cultivating	1.75	
August 9	Cultivating	1.42	
Oct. 5-7	Cutting & Shocking	6.75	
Nov. 9-10	Heading	5.00	
November	Threshing	15.26	
	38 bu. of seed		$38.00
	8 tons of fodder		24.00
	Total	$38.61	$62.00

Blackhulled White Kafir

The Blackhulled White kafir was planted on the "Old Farm". The field made an average yield of thirty bushels per acre and two tons of fodder per acre.

Cost of Production

Jan. & Feb.	Plowing	$ 33.10	
April 7-10	Disking	6.75	
" 26	Harrowing	3.08	
May 8-9	Harrowing	8.16	
May 12 & 23	Seeding	4.20	
May	Disking & Cult	6.36	
June 16-19	Cultivating	8.40	
July 7-15	Cultivating	8.75	
August 9-11	Cultivating	6.55	(5 shovel)
	Thinning & purifying	3.83	
Oct. 10-13	Cutting & Shocking	25.74	
November	Heading	32.27	
"	Threshing	54.73	
	300 bu. seed		$ 300
	20 tons of fodder		60
	Total	$ 201.92	$ 360

RATE AND DATE OF SEEDING TEST

No. of Plot	Size of Plot	Date of Seeding	Rate of Seeding	Yield per A. seed	Yield per A. Fodder
1	.5 of A.	May 12	5 lb.	43.3 bu.	2.54 tons
2	.4 of A	June 3	5 "	48.1 "	2.70 "
3	.4 of A.	May 23	5 "	38.5 "	2.22 "
4	.4 of A.	May 23	1 ½ lbs.	50.4 bu.	2.99 tons
5	.4 of A.	" 23	4 "	45.8 "	2.70 "
6	.2 of A.	" 23	8 "	43.6 "	2.14 "

Dwarf Broom Corn

The Dwarf Broom conr [sic] was planted in the north west corner of Field "C". The entire field was devoted to experimental work. Half of each plot or row was pulled and the brushed dried and cleaned, the weight being taken at the time of cleaning. The remainder of the plots were cut and threshed for commercial seed.

The following diagram will show the location of plots and order of planting.

North

Plot 1	50 rows of Head test
Plot 2	15 rows of Heredity test
Plot 3	8 rows @ 2 ½ lbs. per A.
Plot 4	8 " @ 5 " " "
Plot 5	8 " @ 9 " " "
Plot 6	6 " seeded June 1st
Plot 7	9 " " " 12th
Plot 8	9 " " " 22nd
Plot 9	8 " listed
Plot 10	8 " surface planted
Plot 11	8 " pulled right time
Plot 12	8 " pulled late
Plot 13	8 " cultivated shallow
Plot 14	8 " cultivated deep

Waste

The following notes and weights were made by Mr. Laude after cleaning the brush.

No. of Plot	Yield per Plot Lbs.	Yield per A. Lbs.	Remarks on Brush
1	See page		(Head test)
2			(Heredity test)
3	20 lbs	222.00	
4	16.8 "	186.00	
5	10.5 "	117.00	
6	11.5 "	160.00	Good color, fine stem, little center stem.
7	Did not grow; too dry		
8	Did not grow; too dry		
9	22.5 lbs.	250	Good color, fine stem, long brush
10	22.0 "	240	Reddish
11	10.75 "	119	Good color
12	11.75 "	130	Red color
13	17.75 "	198	Red color, coarser
14	22.00 "	240	" " "

DWARF BROOM CORN HEAD-TEST. FIELD "C".

No. of Head	Wt. of Cleaned brushes Lbs.	Ozs.	Rank
1	2	6.0	
2	2	10.5	
3	4	12.00	3
4	3	2.5	
5	1	13.0	
6	3	4.0	
7	3	15.0	5
8	3	10.0	
9	3	8.0	
10	3	10.5	10
11	4	4.0	1
12	3	10.5	8
13	3	11.5	6
14	4	4.0	2
15	3	9.0	
16	3	1.5	
17	3	5.5	
18	3	11.0	7
19			
20	3	10.5	9
21	3	6.0	
22	3	6.0	
23	3	10.5	11
24	3	9.0	

25	3	2.5	
26	3	15.5	4
27	2	15.0	
28	3	7.0	
29	3		
30	3	9.0	
31	3	7.0	
32	3	8.0	
33	3	1.0	
34	3	8.0	
35	3	3.5	
36	3	7.0	
37	2	15.0	
38	3	4.5	
39	3	5.5	
40	3	6.0	
41	3	5.0	
42	3	4.5	
43	3		
44	2	10.0	
45	2	13.5	
46	3	1.5	
47	2	14.5	
48	2	13.5	
49			
50	2	12.5	

FORAGE CROPS

Alfalfa

The alfalfa in Field "D" was disked the latter part of March, and manure and lime applied to two strips on the east side. No effect from the manuring was noticed this year.

The first two crops of hay were sold to the Dairy Department; they putting it up. The two cuttings yielded sixteen tons of hay. The third cutting was allowed to produce a seed crop. The following figures show the cost of the work.

Alfalfa Seed Crop

Mowing, etc.....	$ 18.35	
Threshing.....	15.10	Men & teams
Threshing Machine.....	97.50	

78 bu. seed (Wt. at machine)		$400.00
4 tons alfalfa straw.....		32.00
	$130.95	$432.00

The fourth crop was plowed under when the sod was broken in the fall.

The following is the record of the alfalfa field as a hay and grain producer.

Disking	$ 4.35	
Manuring	8.00	
Harvesting	130.95	(seed crop)

16 tons of hay	$160.00
78 bu. of seed	400.00
4 tons of alfalfa straw	32.00
Totals $143.30	$592.00

The alfalfa in Field "F" was seeded in the fall of 1910. A part of this field had volunteer oats on it; this ground heaved the past winter, and as a result the alfalfa was damaged severely. This part of the field was reseeded in the spring. It is estimated that twenty tons of high class hay was put up from this field this year.

Thirteen and a half acres of alfalfa was seeded in Field "B" this fall. This ground raised a crop of small grain, was plowed in August, well worked with disks and harrows and seeded the latter part of the month. The seed bed was well prepared and several rains occurred this fall, so the plants made a good growth and will stand the winter well. The grass hoppers destroyed half of the four acres in the north end of Field "B".

The following figures represent the cost of the work in Field "B".

Plowing & harrowing	$ 54.76
Seed	36.00
Seeding	18.00
Total	$108.76

A rate of seeding test with alfalfa was made in the southwest corner of Field "B". The plots number from south to north. The wheel barrow seeder was used.

No. of Plot	Hole used on machine	Rate per acre * (Pounds)
1	No. 8	13.75
2	" 7	12.5
3	" 6	10.0
4	" 10	20.0
5	" 9	18.75
6	" 8	13.75
7	" 7	12.5
8	" 6	12.5
9	" 5	8.75

* It is seen that the rate per acre varies for the same hole used etc. The seed was weighed before placing it in the drill, and, after planting the plot, was weighed again. The speed was kept uniform.

No results were secured from the variety test of grasses planted in Field "B". These plots and the general planting produced ten tons of excellent hay. This field was mowed once.

The sweet clover in Field "B" was cut three times. The first cutting was the best. It yielded one ton per acre of cured hay.

The prairie hay in Field "F" was mowed twice this year. The first cutting was July 10th and yielded, with the slough, 25 tons of hay. The second cutting was in October and yielded 10 tons of hay.

The timothy field in "F" was cut in June. It yielded four tons of good hay; and cost $10.37 to put it up.

COWPEAS FOR GREEN MANURING AND HAY

After the wheat and flax in Field "G" were harvested, the ground was double disked, and cowpeas planted with the corn planter. This method of planting was used because of the dry weather prevailing this year. The ground was dry but several rains fell in the forepart of August. The crop was cultivated twice in August.

The cowpeas in the southwest corner of the field were cut for hay on October 14th. Yield 1.75 tons cured hay per acre.

Cost of Producing Cowpea Hay.

	3.2 acres	
Double disking	$ 3.26	
Planting	1.60	
Cultivating	5.05	
Mowing	2.10	
Raking	.77	
Del. to Dairy Dept	5.70	
5 tons hay		$40.00
Total	$18.48	$40.00

The remainder of the field was plowed under in October. The following statement refers to the entire acreage planted. (14.2 acres).

Disking	$ 14.50
Planting	7.21
1st cultivation	12.25
2nd cultivation	10.28
Total	$ 44.24

FORAGE CROP EXPERIMENTS

The experiments with forage crops were conducted in the north west corner of Field "F". The land was alfalfa sod of several years standing and was plowed the past winter. The ground was dry when seeded, and very little rain fell during the growing season. As a result, the west end of each plot, which was on poorer soil, produced very little as compared with the rest of the plot; however, these conditions were uniform, and the test showed what these crops would do in a dry season.

In these experiments millet, cane, kafir, and cowpeas were grown alone, at different rates, and in combination with each other at different rates, dates, etc. The plots were one-tenth acre.

Millet and Cowpeas

Plot 1, drilled with grain drill.
Plot 2, drilled with grain drill.
Plot 3, Cowpeas planted with cornplanter, and millet drilled two weeks later.

Cowpeas Alone

Plot 4, drilled with grain drill.
Plot 5, Planted with cornplanter and cultivated.

Millet Alone

Plot 6, drilled with grain drill.

Cane and Cowpeas

Plot 7, drilled with grain drill.
Plot 8, drilled with grain drill.
Plot 9, Cowpeas in rows and cultivated. Cane drilled in two weeks later.
Plot 10, cane alone, drilled with grain drill.
Plot 11, cane alone, planted with cornplanter and cultivated.

Kafir and Cowpeas

Plot 12, drilled with grain drill.
Plot 13, drilled with grain drill.
Plot 14, Cowpeas in rows and cultivated. Kafir drilled in two weeks later.
Plot 15, Kafir alone, drilled with grain drill.
Plot 16, Kafir alone, planted with cornplanter and cultivated.

Millet and Cane

Plot 17, drilled with grain drill.
Plot 18, drilled with grain drill.

Millet and Kafir

Plot 19, drilled with grain drill.
Plot 20, drilled with grain drill.
Plot 21, drilled with grain drill.

Cowpeas and Soy Beans

Plot 22, drilled with grain drill.
Plot 23, drilled with grain drill.

Varieties of Cane and Kafir *

Plot 24, Blackhull White Kafir
Plot 25, Texas Honey Cane
Plot 26, Kansas Orange Cane
Plot 27, Sumac Cane
Plot 28, Early Amber Cane

* Drilled with grain drill.

(Plots 24 to 28 were not weighed.)

FORAGE TEST

No. of Plot	Rate of Seeding per Acre		Date of Seeding	Date Cut	Date Weighed	Yield per plot Lbs	Yield per Acre Tons
1	Millet	½ bu.	5/25	9/11	9/14	464	2.32
	Peas	½ "					
2	Millet	1/4 bu.	5/25	9/11	9/14	352	1.76
	Peas	3/4 "					
3	Millet	½ "	M 6/11	9/11	9/14	260	1.30
	Peas	1/4 "	P 5/25				
4	Peas	1 "	5/25	9/11	9/14	260	1.30
5	Peas	½ "	5/25	9/11	9/14	291	1.45
6	Millet	½ "	5/25	9/11	9/14	279	1.39
7	Cane	½ "	5/25	10/5	11/10	974	4.87
	Peas	½ "					
8	Cane	1/4 "	5/25	10/5	11/10	1040	5.20
	Peas	1/4 "					
9	Cane	½ "	C 6/11	10/5	11/10	814	4.70
	Peas	1/4 "	P 5/25				
10	Cane	1 "	5/25	10/5	11/10	1377	6.88

11	Cane	1/4 "	5/25	10/5	11/10	1299	6.04
12	Kafir	½ "	5/25	10/5	11/10	910	4.55
	Peas	½ "					
13	Kafir	1/4 "	5/25	10/5	11/10	874	4.37
	Peas	3/4 "					
14	Kafir	½ "	K 6/12	10/5	11/10	390	1.95
	Peas	1/4 "	P 5/26				
15	Kafir	1 "	5/26	10/5	11/10	820	4.10
16	Kafir	1/4 "	5/26	10/5	11/10	575	2.87
17	Millet	1/4 "	5/26	10/5	11/10	540	2.70
	Cane	3/4 "					
18	Millet	½ "	5/26	10/5	11/10	480	2.40
	Cane	½ "					
19	Millet	½ "	5/26	10/5	11/10	530	2.65
	Kafir	½ "					
20	Cane	1/4 "	C 6/12	10/5	11/10	850	4.25
	Kafir	3/4 "	K 5/26				
21	Cane	3/4"	C 6/12	10/5	11/10	740	3.70
	Kafir	1/4"	K 5/26				
22	Peas	40 lbs.	5/26	9/11	9/14	419	2.09
	Beans	50 "					
23	Peas	30 "	5/26	9/11	9/14	346	1.70
	Beans	40 "					

The following notes were taken on the experiment with forage crops:

September 11, The millet is ripening and most of the cowpeas pods are ripe. Plot 3 had many weeds and the millet is thin, what did grow is headed, and has made a ranker growth than that planted on the first date. The cowpeas on Plot 5 have made the best growth. Plots 2 and 3 show the same difference. The Cane and kafir plots are beginning to head.

June 10, The Kansas Orange Cane is making the best growth in the variety test.
The Texas Honey Cane lodged badly, and the Sumac slightly. The Early Amber cane and kafir did not lodge.
(Photographs of most of these plots are in the office files.)

The following is a record of the crops raised in 1911.

	Total Yield	Yield per Acre
WHEAT:		
380 Turkey	81 bu.	29 bu.
570 Turkey	38 "	47 "
382 Kharkof	349 "	50 "
366 Bearded Fife	41 "	Proj. 18.
750 Beloglina	30 "	
754		
1444 Fultz	50 "	40 bu. *
1445 Currell	65 "	40 " *
Mixed Wheat	40 "	
	694 "	
CORN:		
Reid's Yellow Dent	300 "	
Kansas Sunflower	450 "	30 "
Boone County White	20 "	20 "
Mixed (Variety Test)	70 "	
	840 "	
OATS:		
Red Texas	179 "	38 "
Kherson	120 "	21 "
	299 "	
BARLEY:		
Winter	15 "	30 " *
Spring	30 "	3 " *
	45 "	
RYE:		
Monster	25 "	
ALFALFA:		
Seed	78 "	3.75 bu.
Hay	33 tons	
COWPEAS:		
Hay	12 "	1.50 tons
SILAGE:		
Corn	103 "	5.00 "
CANE:		
Kansas Orange	60 bu.	33 bu.
Sumac Cane	80 "	40 "
Early Amber	38 "	20 "
	148 "	

Fodder	30 tons	5 tons
KAFIR: (Blackhulled White)		
Seed	300 bu.	30 bu.
Fodder	20 tons	2 tons
BROOMCORN:		
Dwarf (Seed)	20 bu.	

* Approximately

FINANCIAL STATEMENT

RECEIPTS: Jan. 1st to June 30th		$2750.18
Seed grain	$1175.25	
Produce	1322.25	
Miscellaneous	252.68	
EXPENDITURES: Jan. 1st to June 30th		$2272.87
Labor	$1508.89	
Team hire	325.00	
Miscellaneous	438.98	
RECEIPTS: July 1st to December 31st		$2311.00
Seed grain	$1126.86	
Produce	1085.89	
Miscellaneous	98.25	
EXPENDITURES: July 1st to December 31st		$3578.13
Labor	$1956.42	
Team hire	325.00	
Lumber (Tool house)	110.92	
Cedar posts	112.80	
Woven wire, gates, etc.	227.58	
Harness	40.00	
Rake	25.00	
Steel posts	53.05	
Tileing	195.75	
Concrete bridge	211.14	
Miscellaneous	320.47	
TOTAL RECEIPTS		$5061.18
TOTAL EXPENDITURES		5851.00
		789.82

SUMMARY

Turkey wheat seeded September 26th, yielded the heaviest; 53. 8 bushels per acre.

Red Texas oats seeded at the rate of 3 ½ bushels per acre yielded the heaviest, 17.2 bushels per year.

Kherson oats seeded at the rate of 3 bushels per acre, yield at the rate of 27.8 bushels per acre.

Mansury barley seeded at the rate of 2 bushels per acre yielded at the rate of 4.23 bushels per acre.

Mansury barley planted on disked ground March 21st yielded the heaviest.

Kherson oats planted on fall plowed land March 11th yielded the heaviest.

Flax seeded April 5th yielded the heaviest.

Flax seeded at the rate of 35 pounds per acre yielded the most.

Corn planted with the loose ground lister yielded the heaviest.

Kafir seeded June 3rd yielded the most seed and fodder.

Broom corn seeded at the rate of 2 ½ pounds per acre yielded the most brush.

Cane drilled at the rate of one bushel per acre produced the most fodder; 6.88 tons per acre.

[Signature - B. S. Wilson]
Farm Superintendent

Reprinted from Agronomy Farm 1909, 1910, 1911, 1912 Kansas State Agricultural College Department of Agronomy, Report of Foreman, pages 51-104.