

Report of the Agronomy Farm, Season of 1910
by: B. S. Wilson, Foreman in Charge

January 25, 1911

The following is a report of the existing conditions on the Experimental Farm of the Agronomy Department, of the Kansas State Agricultural College, for the year 1910.

The farm is one mile northwest of the college campus and contains 320 acres. The S. E. 40 is controlled by the Animal Husbandry Department of the College.

In addition to the above, the Agronomy Department farmed 85 acres, known as the "Old Farm"; the Higinbotham [sic] field, 30 acres; and 10 acres west of the shops on the campus. This latter field is to be used for experimental work in small grain breeding.

This spring the "Old Farm" will be turned over to the Horticulture Department, with the exception of twelve acres in the northwest corner. This will be farmed by the Agronomy Department until the Horticulture Department is through with the orchard on the new farm.

During the spring of 1910 Mr. W. J. Griffing secured seed corn (Reid's Yellow Dent) from the college, and planted it with the understanding that the college should pick seed from his corn. Mr. Griffing died soon after planting the corn, and the Agronomy Department took charge of the field, tending and harvesting the corn for one-half the grain, reserving the privilege of picking the seed they wanted from Griffing's share, paying twenty-five cents above market price at the time of settlement.

The year 1910 was a fairly good one, for the work of the Agronomy Department. The winter was unusually severe, much of the winter wheat being killed. An attempt was made to save it by rolling, the ground having heaved considerably, but was unavailing. The roots were too much exposed and were dead. The poorest of the wheat land was disked [sic] and planted to spring grain. All of the winter wheat was not killed by the disking [sic], and as a result some of the grain was mixed with wheat.

The spring seeding was hindered very little by bad weather, but the temperature remained low until late, making it hard for the crops to get started, and considerable replanting had to be done in all of the varieties of corn. The growth of the later planted corn was the most satisfactory.

The first corn planted was the Boone County White, on April 19th. After this date the various crops were planted as fast as the equipment of the farm would permit.

The harvesting of the small grain was begun on June 29th and lasted until the middle of July; one binder was kept in the field all the time, and two a part of the time. July 18th, the threshing began, and was finished the 23rd.

On July 7th, occurred the severest hail storm this locality has experienced for a number of year. The corn had not started to tassel, the cane and kafir corn were ten inches high, the cowpeas and soybeans were still tender, and what grain there was still in the field was dead ripe. All of these suffered severely. The Boone County and Wilson County White varieties of corn were almost completely destroyed. The cowpeas and soybeans were entirely lost, and what oats there were left standing would not pay to cut. A few days after this, a wind from the opposite direction from that of the hail storm, blew the corn back, thus causing a large amount of it to break off, greatly thinning the stand.

July 23rd plowing for wheat commenced, and on the 27th began plowing for alfalfa. At this time the soil was in very good condition for working. The only drawback being the heat.

On August 27th haying in the Field "Z" commenced. This was a very good quality of prairie hay. A part of it was badly injured by rain. The water stood on the field several days after it was cut, during which time the sun shone. This field needs tiling. All this loss would have been obviated if the water had drained soon after falling. The grass in the slough on the north half of the farm was cut for hay also. This would have been of a better quality if the previous years trash had been removed.

September 16th, the corn harvester was started in the Boone County White, followed by the disk harrow. The ground was double disked [sic] both ways, and wheat seeding began on September 27.

By the middle of October the sorghums and kafirs were ready to harvest. About October 23rd, a killing frost froze the leaves of those varieties that remained uncut. This caused the Texas Honey sorghum to break about three feet from the ground, making it very disagreeable to cut.

October 25th, corn husking began. The earlier maturing varieties were fit to crib, but the Kansas Sunflower and Hildreth were too green. In fact the Hildreth was so late in maturity that husked after November 25th was injured by the moisture and cold weather.

November 17th the threshing of the kafirs, millets, and sorghums began, and was finished November 25th.

The fall was an exceptionally dry one, little moisture falling after September 1st. These conditions were favorable for fall threshing. The best method of handling the kafirs and sorghums, was to carry a chopping block from shock to shock. Two men can keep one ax-man busy heading. The fodder was piled on the ground, and the heads thrown on a hay frame and hauled to the machine. Practically all of the fodder will be sold this winter at \$1.50 per ton, in the field, or \$2.50 per ton delivered making quite a profit from the fodder alone.

The fall plowing was very disagreeable work. Especially that on the corn and alfalfa ground. The soil turned up rough, and several mornings was frozen. The plowing in the Higginbottom Field was finished December 20th. This field had wheat on it in the spring, which was badly winter killed; as a result three-fourths of the wheat was not harvested. The ground lay idle all summer, and when it was plowed, a rank crop of grass and tall weeds was turned under. This crop seemed to conserve the moisture, rather than exhaust it. The soil turned like spring plowing, with the exception of the patches of corn land on the north side of the field, and the weeds were completely buried.

IMPROVEMENTS

During the past six months the matter of improving the appearance of the farm has been kept in mind at all times. The aim has been to make it a model farm. This work was done when ever it was not fit to work in the fields, and at odd times during the summer. It is delayed by lack of funds. There are several important improvements that will help the appearance of the farm, and as soon as money can be obtained, the work will be completed. Most of the hedges along the public road have been trimmed to two and one-half feet high, and the land on both sides kept mowed, as are all of the roads and alleys through the farm.

ROAD WORK

The work of road building has not been neglected. The road east and north of the pasture was built the past summer. The method of building this is as follows:

The road-bed, with the exception of eight feet in the middle, was plowed, throwing the soil to the center. Slip scrapers were then used to move the dirt, from the ditches on either side, to the middle upon the unplowed portion. This rounded the road so it would have drainage, and placed the center upon a solid base. After getting the shape of the road, the disk harrow was used to pack the softer portions and smooth the rough places. The road is then ready for a drag. This will perfect the road, and if used after each rain will keep it in excellent condition. An east and west road of the half mile line of the farm, and a north and south one through the north half, needs to be built. The latter road will need a bridge across the creek that flows through the farm. This should cost several hundred dollars, as a large amount of water flows through the creek at times, and there will be considerable travel over it.

DRAINAGE

The question of drainage on this farm is a very important one. To do it thoroughly, a large amount of labor and money must be expended. Some work in the way of open ditches has been done. The ditch in Field "T" is almost completed. A ditch was begun in Field "Y". This will be two and one-half feet deep and about fifty rods long when completed. The land to the north and east of this ditch needs tile drainage. A ditch should be placed between Fields "T", "U", and "W" to keep the wash from the former going onto the latter. This can be accomplished when a road is built on the half mile line.

FARM EQUIPMENT

The equipment of the farm is in fairly good condition. A smaller separator for threshing could be used to better advantage than the large Avery now used. At present an engine must be rented from the Mechanical Department of the College whenever threshing is done.

At present the farm has two mule teams, one team of horses, and hires one team by the year. The equipment for these teams is very poor. Four teams should be owned, and then, one or two must be hired through the busy season.

The wages are, fifteen cents per hour, for all hands working by the hour; \$47.50 per month for all other hands; and \$75.00 per month to Mr. J. L. Jolly, who lives on the farm and boards the hands at his own price. The above wages include his team. Mr. Jolly is sub-foreman of the farm and is responsible for the work in hand whenever the foreman cannot be present.

CROPS

The small grains did very well this year. The yield and quality was excellent. The Success Beardless barley was the first grain cut. Considerable of the wheat was very ripe when cut, due to not being able to get to it soon enough.

ALFALFA

The alfalfa in Field "A2" is thin and badly infested with gophers which are being trapped.

The first crop was cut on May 23rd. This crop was light, and half was injured by rain after cutting. At this time, baling alfalfa green was tried. The Leubben Baler was used. Hay was baled as soon as cut, and after it had started to cure. Neither stage of curing was a success. The hay molded and even rotted in the bale. When the third crop was cut the experiment was tried again. Some hay that was almost dry enough to stack was baled, but this heated and molded. The alfalfa that thoroughly cured was the only hay that kept well. The Leubben Baler is all right if a large amount of hay can be cut and cured; a condition which is very hard to secure without getting it wet. It needs a large force of men and teams to run it at full capacity.

On June 28th the second crop of alfalfa was ready to cut. This crop was cured without a drop of rain, with the exception of the last two tons. It was an excellent crop of alfalfa.

On August 4th the third crop was ready to harvest. This crop was late because of the dry hot weather in July. About half of this cutting got wet, and some of it was completely lost, because of the prolonged wet weather.

Began to cut the fourth crop on September 19th. This should have been cut a week earlier. As a result it had a large amount of crab grass, and the hay cut last was woody. This crop was partially injured by rain.

All of the hay put up on the farm was stacked in the field. A home made derrick was used, with the six tine grapple fork. The hay was "bucked in" with a sweep rake and placed upon the stack with the derrick. A better method is to have a hay shed, and haul the hay to this, using a hay loader to place it upon the wagons. The present method necessitates long hauls with the sweep rake, or the making of several small stacks. Either method is expensive.

Fall Seeding Alfalfa

On July 27th plowing for fall seeding of alfalfa commenced in Field "Y". The plot selected contains eight acres. It had barley in the northeast corner, oats on the west side, and soybeans in the center. The soil was in excellent condition at the time of plowing. The land lay after being harrowed until August 25th, when the seeding commenced. August 17th one of the harvest rains of the year fell. This made an excellent seed bed. A wheelbarrow seeder was used, planting seventeen pounds per acre. After seeding, the ground was harrowed, and a piece on each side was rolled as an experiment.

This fall seeding did exceptionally well; making an excellent growth of five inches. The oats ground had a thick stand of volunteer oats, which retarded the growth of the alfalfa slightly.

Grass Seeding in Field "Y"

The soybeans in Field "Y" being a failure, it was decided to plant this portion of the field to grass. This field was wet the greater part of the summer and fall. By September 12th the ground was covered with weeds, cockle burrs, and foxtail, some of the weed seeds having fallen. The soil was too wet to work. The north side had water standing on it in spots. On the above date the weeds were mowed, hauled off, the land stirred with cultivators, and harrowed before seeding. This work was simply a case of "mudding through". With the exception of the east side, the seed was not harrowed. The following amounts of seed were mixed, and planted with the wheelbarrow seeder; going both ways of the field.

64 pounds Timothy

10 pounds Kentucky Blue grass

30 pounds Red Top
Thirty pounds of Orchard grass were broadcasted by hand, making a total of 134 pounds planted, or 17.5 pounds per acre.

Hay Land in Field "T"

The hay land in Field "T" was seeded the spring of 1910, at the same time as the seeding of the variety test of grasses which lies on the west side of the field. Timothy and clover were planted on the whole field, and in addition, Red Top on the low wet places. The field was mowed three times the past summer. The last two cuttings had considerable crab grass, clover, and volunteer sorghums. No tests were made from the variety test this year.

HILDRETH YELLOW DENT CORN

The Hildreth corn was planted in Field "A2". This ground grew alfalfa for several years previous, and was plowed the fall of 1909. The corn was:

Listed	April 27 th
Cultivated.....	May 18 th
Cultivated.....	June 4 th
Cultivated.....	June 18 th
Harrowed.....	June 20 th
Cultivated.....	July 8 th
Cultivated.....	July 22 nd

The Flying Swede two row lister cultivator was used in the first three cultivations. The four shovel Avery was used after harrowing, and the five shovel, one horse cultivator, the last time. The latter is an excellent implement to have on the farm. It is used when the corn is too tall for the two horse machines. At this time the soil always needs stirring, and there are always some weeds that can be killed.

This corn suffered severely from the dry weather in July. The field was spotted with the tops of stalks that died from the drouth. The larger portion of this field was husked the latter part of November, the vitality of this late husking being injured severely.

KANSAS SUNFLOWER

The Kansas Sunflower was planted in Field "V". The west side grew white kafir in 1909, the east side Milo Maize, and Kansas Sunflower on the remainder of the field. The seed was:

Listed.....	April 26 th
Cultivated.....	May 13 th
Cultivated.....	June 2 nd
Harrowed.....	June 13 th
Cultivated.....	June 17 th
Cultivated.....	June 22 nd
Cultivated.....	July 11 th

Used the two row cultivator the first three cultivations, and the shovel cultivator the last two

times.

This variety was medium late in maturing. The eleven acres yielded an average of twenty bushels per acre.

The Kansas Sunflower does not have very good ears, but the kernels are “hard to beat”. They are dark yellow, have a very large germ surrounded by a thick layer of horny portion, and a small amount of starch in the top.

LEAMING CORN

Planted Leaming corn in Field “Q”. This land grew Leaming in 1909.

Listed.....April 20th
Cultivated.....June 2nd
Harrowed.....June 10th
Cultivated.....June 15th
Cultivated.....June 22nd
Cultivated.....July 16th

This corn was cultivated four times with the two row lister cultivator, and the last time with the five shovel single horse cultivator. Began husking on October 25th.

The Leaming was thin, due to the dry weather and hail. The seven acres yielded at the rate of 17.1 bushels per acre. This variety was the earliest corn on the farm this year.

REID’S YELLOW DENT CORN

The Reid’s Yellow Dent Corn was planted on the “Old Farm.” This land grew barley and rye the previous summer, on the south, and Reid’s Yellow Dent corn on the north. Most of this field was plowed the fall of 1909. The corn planter with disk furrow openers was used.

Planted.....April 25th
Harrowed.....May 3rd
Cultivated.....June 6th
Cultivated.....June 18th
Cultivated.....July 16th

The shovel cultivators were used, and the single horse the last time. The cultivation was delayed in May. As a result, the corn was very foul with crab-grass. The ear test was hoed by hand. Began husking October 26th. Yielded at the rate of thirty-three bushels per acre.

BOONE COUNTY WHITE CORN

The Boone County White corn was planted in Field “X”. This field was very ununiform [sic]. The previous years green manuring plots were on the east, and barley on the west side.

Used the surface planter with disk furrow openers.

Planted.....April 19th
 Harrowed.....May 3rd
 Cultivated.....June 10th
 Cultivated.....June 21st
 Cultivated.....July 16th

Began cutting the corn September 16th. Very little good corn was secured. This however, was not the fault of the variety, but of the weather conditions.

WILSON COUNTY WHITE CORN

The Wilson County White Corn was planted in Field "X". This variety is very similar to the Boone County White. It suffered the worst from the hail, yielding only five bushels per acre.

BLACKHULLED WITH KAFIR

The Blackhulled White kafir was planted in Field "Q". This field was an old alfalfa and hog field. The sod was plowed the fall 1909. May 20th the ground was disked [sic] and on June 2nd, began listing the kafir.

Cultivated.....June 21st
 Harrowed.....July 6th
 Cultivated.....July 15th
 Cultivated.....August 15th
 Cut.....October 17th

Yielded sixty bushels per acre.

This was an excellent quality, and what is not sold for seed at \$1.50 per bushel can be disposed of at \$1.50 per hundred weight for feed. This field was very uniform. The seed originated from less than one half dozen heads two years back.

RED KAFIR

The Red kafir was planted in the southeast corner of Field "A2". This portion of the field remained wet until late, thus delaying the planting.

Listed.....June 13th
 Cultivated.....June 29th
 Harrowed.....July 7th
 Cultivated.....July 21st
 Cultivated.....August 15th
 Cut.....October 25th

The Red kafir was planted too thick to do its best. This variety yielded at the rate of 46.4

bushels per acre. The two row lister cultivator was used in June, and the shovel cultivator in July.

DWARF BROOM CORN

The Dwarf Broom corn was planted in Field "W". This field grew broom corn on the west, and corn on the east end in 1909. It was plowed in the spring and listed on June 16th.

Cultivated.....	July
Cultivated.....	July 18 th
Cultivated.....	August 16 th
Cut.....	October 14 th

This broom corn has some tendency towards the formation of a center stem. There are two plots, the seed of which is separate. These are from heads 5 and 25 or the 1909 head test. The four acres made an average yield of thirty-five bushels per acre.

.46 acres of Standard broom corn were planted in the north end of Field "Y". This yielded at the rate of 21.7 bushels per acre.

MILO MAIZE

The Milo Maize was planted in Field "T", south of the variety test grasses. The two varieties, U. S. Dwarf, and Common Dwarf, were planted side by side. The former is four feet high, and the latter eight to nine feet high. The Common is the most desirable. The Milo Maize was:

Listed.....	June 3 rd
Cultivated.....	June 22 nd
Harrowed.....	July 6 th
Cultivated.....	July 15 th
Cut.....	October 14 th

The U.S. Dwarf yielded 23.8 bushels per acre and the Common 39.8 bushels per acre.

SORGHUMS

There were five increase plots of sorghum planted. The Kansas Orange, Field "B2"; Texas Honey and Sumac, Field "X"; Early Amber, Field "T"; and a small plot of Red Amber on the "Old Farm." The corn planter with disk furrow openers was used, with the exception of the Red Amber, which was listed in.

Of these varieties the Sumac yielded the highest, and the Early Amber second. The Texas Honey was injured by frost. After freezing, it dried, thus causing considerable loss of seed by shattering, when cut. The Texas Honey is considered the most valuable for sorghum purposes. The Sumac has a small kernel, to which the hulls and stems stick, making it hard to clean.

VARIETY	ACREAGE	YIELD PER ACRE	TOTAL YIELD
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CORN:

Kansas Sunflower	11	20 (175 bu. from Prof. Call)	395
Leaming	7	17.1	120
Hildreth	19.5	42	825
Reids	6	33	200
Boone Co. White	8	3	25
Wilson Co. White	—	—	6
From Variety Test	4	27.5	110
Hild. & Reids (mix)	1.8	50	<u>90</u>
		Total	1771

SORGHUMS:

Texas Honey	2.43	6.8	14
Early Amber	1.65	20.6	34
Sumac	2.9	27.6	80
Kansas Orange	1.82	16.7	39
Red Amber	—	20 *	12
From Variety Test	—	—	<u>72</u>
		Total	251

KAFIR CORN:

B. H. White	6.78	60	407
Red	3.23	46.4	150
Pink	.27	40.7	11
From Variety Test	—	—	<u>50</u>
		Total	618

MILO MAIZE

U. S. Milo	1.05	23.8	25
Common Milo	1.28	39.8	<u>51</u>
		Total	76

BROOM CORN:

Dwarf	4.	35	140
Standard	.46	21.7	<u>10</u>
		Total	150

VARIETY	ACREAGE	YIELD PER ACRE	TOTAL YIELD
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OATS:

Burt	—	18 *	12
Sixty Day	—	—	6.5
Kherson	—	13 *	135
Hays Oats	—	—	6
Red Texas	—	—	<u>54</u>
		Total	213.5

BARLEY:			
Success Beardless	1.27	15.7	20
Mansury	—	—	64
Caucasian	—	—	<u>26</u>
			Total 110
WHEAT:			
Ghirka	—	7.5 *	30
Malakoff	—	12 *	3
Bearded Fife	—	12 *	3
Roumanian	—	10 *	4
Turkey	—	8 *	25
Kharkof	—	6 *	<u>20</u>
			Total 85
MILLETT:			
German	—	20 *	20
FLAX:			
	—	4 *	12

* Approximately.

Besides the above crops discussed, the Agronomy Department grew others for experimental purposes. The statement of this work will be found in a report by Mr. C. W. Nash

[Signature of B. S. Wilson]
Foreman of the Experimental Farm.

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