WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR WEEK ENDING MAY 1, 1920.

Ardmore:

The entire week has been cloudy with some precipitation recorded every day. No field work has been possible. The crew of men at the station has been kept busy building fences and similar work. The snow which was reported for the week ending April 17 is practically gone, although some deep drifts remain in places. It will not be possible to do any field work for at least a week.

The maximum temperature for the week was 60; minimum 27; precipitation .61 inches. The following table shows the precipitation from January 1 of this year compared with the six year normal of this station.

1920		Six Year Normal.
January	.15	.29
February	.55	.37
March	.92	.63
April	3.78	2.64
Total	5.40	3.93

The snow fall recorded during the winter months has been as follows:

October	6.5	inches
November	16.0	"
December	9.0	"
January	6.5	"
February	12.5	"
March	13.0	"
April	29.0	"
Total	92.5	"

Precipitation in amounts varying from a trace to 1.01 inches was recorded every day during the last 15 days of April. During the month there were 12 cloudy days and 9 partly cloudy days.

Belle Fourche:

This has been the wettish April on record. There was precipitation on 24 out of the 30 days of the month. The total precipitation was only 2.59 inches, but the weather was so cold and damp that the surface soil was wet practically all of the time. Not over 15 per cent of the seeding in this section has been done.

The precipitation for the year to date is 4.75 inches, which is considerably above the average.

Loss of stock on the range continues heavy. The grass has made practically no growth. Little old grass remains on the range, as it was pastured closely last year. The roads have been so nearly impassable that even the ranchers who could afford to buy hay have not been able to haul much.

Maximum temperature 61, minimum 23; precipitation .52 inches.

Big Spring:

The weather is getting warmer and it is still dry. The total precipitation for April is .08 inches, which is considerably below the normal precipitation for this month, the average being 1.55 inches, covering a period of 20 years. Wheat in all the plats is heading out at an average height of about 16 inches. On most of the plats this crop is still green and has a good color, though there are some indications of burning in spots. As stated in last week's

Big Spring, continued:-

report we are still waiting for a good rain before beginning planting, as the top-soil is too dry to germinate the seed.

Maximum temperature 91, minimum 32 on the 27; precipitation .04 inches; evaporation 2.12 inches; wind velocity 6.8 miles per hour.

Dalhart:

The amount of rainfall for the week is .31 inches. This fell during 3 days, as follows: .15, .08, and .08 inches. The week has been somewhat warmer than weeks past, with much less wind.

Winter rye is making a rapid growth and will be heading within the next week or two. The rye will average about 12 to 14 inches in height. The oats are making a hard fight for existance and may come out O.K. A few farmers planted wheat last fall and it is looking fair for the season. It has made very little growth this spring averaging about 3 inches in height. No wheat was planted on the station.

Field work for the week consisted of hauling clay and finishing filling in on the roads, building fences, planting nursery stock, and watering same and some plowing. The land was plowed and harrowed for the first date of planting of the Cereal work. Five crops are used this year in the date work. Barchet Kaoliang was added to milo, kafir, sumac, and red amber. The planting was done on April 30. A shipment of about 2,000 Arizona Cypress was received and set out this week. All the plants were seedlings, averaging about 3 inches above the surface of the ground. One thousand pounds of dwarf milo seed was cleaned and shipped to the seed house at Tucumcari, New Mexico, this week.

Trees and shrubs are very slow in leafing out here this year. Some of them leafed out early, but were killed back by frost. It has been so dry that nothing seems to be getting the start this spring that it usually does.

Mr. E. F. Chilcott is visiting this station this week. He expects to leave for Amarillo today.

Dickinson:

Field work during the week has included the preparation of the land and seeding of oats and barley varieties for the Cereal Office; the seeding of forage crops and wheat and barley for increase. The weather has continued cold and cloudy with a rain and snowstorm throughout the day of May 1.

Maximum temperature 56, minimum 21; precipitation .43 inches. April this year was the coldest of record for the month, having a mean temperature of 32 degrees; 9 degrees below the mean for the month.

Garden City:

With the exception of an occasional wind storm, the weather this week has been quite favorable for field work. On April 26 and 27 .57 inches of rain fell, which helped to start the small grains, but they are very much in need of more moisture again now.

The spring wheat, oats, and barley are up and looking very good, but the winter wheat plots were nearly all killed out. They were disked up and reseeded to spring wheat.

Maximum temperature 77, minimum 32; average wind velocity (8' anemometer, 13.5) miles per hour, (2' anemometer) 10 miles per hour; average daily evaporation 1.7 inches; precipitation .57 inches.

Edgeley:

The weather has been cold and cloudy all week with freezing temperature every night. The ground remained frozen most all of the forenoon, so that but little better than half a days seeding could be accomplished a day. Seeding has been completed of small grains and grasses on all plots in the "Main Field", and on "Nine". The rains of a week ago made it possible to put the soil in an ideal conditions for a seed bed.

Wheat that was sown 7 weeks ago by some of the farmers is just now coming up.

Maximum temperature 57, minimum 19; no precipitation.

Hays:

The weather generally has been cloudy with light showers, fog, or heavy mist almost daily. Total precipitation for the week, 1.09 inches. Maximum temperature 76, minimum 32. All small grains are making food growth and looking fine. There is some fear of the early seeded wheat making too heavy a growth. The Experiment Station is now pasturing off one 80 acre field to check growth.

During the week soil moisture determinations were made on several winter wheat plats. The soil moisture work is being greatly retarded because of continued troubles with the drying ovens.

The plats to be planted in corn and sorghums with surface planter were cultivated to destroy a crop of weeds.

Huntley:

With the exception of two days of burning weeds, no field work was possible during the week because of frequent showers keeping the ground too wet to work. Precipitation for the month of April totaled 1.93 inches, or .93 inches above the previous 9-year normal. From the 1 of September to date the total precipitation has been 13.27 inches, which is 6.08 inches above the normal for that period. It is estimated that the soil was in shape to receive about 6 inches of the total precipitation.

The rains that are falling now are in the form of steady showers, and no run-off is noticed. Weeds and fall grains continue to make satisfactory growth but alfalfa is not responding as readily.

Temperatures for the week, macimum 58, minimum 28; precipitation .70 inches.

Judith Basin:

Field work is not yet possible because of the cold stormy weather which still prevails. Several clear and comparatively warm days were received during the week; however, and the growth of winter wheat, rye, and pasture grasses was very noticeable. Winter wheat has made a marked improvement this week, and, unless subsequent damaging freezes occur a good stand will be obtained on the commercial field and on practically all the plats of winter wheat. Pastures are becoming quite green but the grass has not attained sufficient growth to be of benefit to the stock.

The late spring has worked great hardship on both the stock and stockman in this region. They hay supply of a large number of the farmers is completely exhausted and hay is very scarce. The limited amount of hay which is being shipped in at present is of a very poor quality and sells at $50 a ton. A great many farmers are unable to buy hay and large losses of stock have occurred during the last month.

Judith Basin, continued:

The total precipitation received during April amounts to 5.37 inches, which is 2.52 inches more than the previous maximum precipitation for April and 4.18 inches more than the 22-year average for the same month. The ground is quite well saturated to a depth of about 3½ feet.

Maximum temperature for the week 52, minimum 19; precipitation .66 inches.

Lawton:

The total precipitation received April 24 and 25 was 2.73 inches, bringing the total for the first four months of 1920 up to 6.63 inches, as compared with a mean precipitation of 6.88 inches for this period, previously recorded.

Minimum temperature for the week was 34 the night of the 26, and all corn plats showed the effects of being nipped. A maximum of 86 was recorded the 30.

Wheat, oats, alfalfa, and sweet clover are doing well since the rain. Chinch bugs are plentiful.

Soil samples on M. C. wheat were taken early in the week, but the soil was too wet to work until Thursday. Since that time we have harrowed or disced all plats not already planted or fallow, and have cultivated all corn plats for the first time. Listing has been done on F and G plats of the M. C. series.

The following plantings have been made the past three days: 25, date cotton; May 1, date test grain sorghums, forage sorghums, and cowpeas, variety test broomcorn, M. C. broomcorn, the F. and G. (listed) plats of M. C. kafir, and milo, and F., G., and H plats of M. C. cotton. A terraced strip in field B has been seeded to alfalfa.

Mandan:

Horticulture.

The work of planting stratified fruit seed has been completed, and preparations are now being made to plant two "coulee" orchards and to line out the seeding stock for building and other purposes later in the season.

Agronomy.

Oats and barley were seeded in the rotations early in the week; also, the barley and oats varieties for the office of Cereal Investigations. Alfalfa was seeded in rotation 42 and also the plats of the seeding of 1918 and 1919, which were winter-killed. Brome was reseeded in 41. This was because of the poor stand caused by the dry seasons. Peas were also seeded in 16 and 17.

Twenty acres of oats were seeded for feed. Lallamantia for the Office of Drug Investigations was seeded for the earliest date of seeding. The low temperature test with corn for Corn Investigations was planted on the 25. Eighteen varieties of grain were planted to be used to make up an exhibit for the Office of Exhibits. Seeding of Alfalfa and Brome grass selections for the Office of Drought and Alkali Resistent Plant Investigations was completed.

Seventeen acres of land has been prepared for alfalfa which will be seeded next week.

The weather still remains cold. Grain which was planted over a week ago is starting to sprout. Snow is still laying in some of the coulees.

The total precipitation for April was 0.58 inches, or over, an inch below the 45-year mean. Maximum 60, on the 28 and 30; minimum 18, on the 26 and 27; precipitation 0.07 inches.

Mandan, continued:

Arboriculture.

On account of the continued cold weather, fumigation of trees by the Federal Horticultural Board has gone rather slowly, but was completed yesterday.

Shipping of trees to the cooperating farmers began Friday, and will be continued until finished.

Cooperative Grazing Experiment.

Over thirty species of native grasses were planted in a grass nursery to test their germinating ability.

All vegetation is slow in starting on the prairie. The two species of Carex have made the most growth to date, and one species has started to head.

Sheridan:

The weather continued cold and cloudy with rain at three different times during the week. The rotation field did not dry off from previous rain and snow sufficiently to work until Tuesday. Harrowing the plats was begun then. More rain interfered to prevent all of them being harrowed at that time, and work on this field was impossible again until today. Harrowing these plats was finished today, although portions of the field were still quite soft. More rain is falling, but the rotations can now be seeded immediately as soon as the land is dry enough again.

About half of Field B, Blocks A and B, intended for corn, has been plowed during the week. This piece of ground, on the north side of the station, is quite sloping and with a lighter soil, but the lower end of this piece has been too wet for good work at times.

The alfalfa and brome in the rotations was seeded broadcast and harrowed in Tuesday. The brome plat in rotation 41, seeded last year, was reseeded broadcast today and harrowed in. The brome plats in the forage field, where the stand was very thin was also reseeded today.

Cuttings for replacement in the willows and N.W. poplar of the shelterbelt were put in the ground today. It would seem as though the ground is now in as good shape as possible here for cuttings to get a start.

Maximum temperature 58, minimum 24; precipitation .85 inches.

Tucumcari:

All the plat fields have been measured and staked off so that planting this year will be in line and all roadways running straight. This measuring and staking took two days. Some large stakes are being put in along the south end of the south field which will be used as permanent stakes. All other stakes are along the fence rows where they will not be in the way of team work. Some cultivating was done in the south field to prevent blowing. The succor rods were pulled and new leathers put on for the north well. The well by the office building will be pulled and repaired next week.

Most of the trees are leafed out and many of the fruit trees have blossomed. It is very likely that all the fruit is killed this year as several late frosts have occurred.

This week has been quite warm with very little wind. A small rain occured Sunday which amounted to about a quarter of an inch. This was not enough to do any good, as things were do dry. About all the rain did was to clear the air and stop the winds for awhile.

Mr. E. F. Chilcott, and Mr. Clemmer left the station Wednesday for Amarillo and Dalhart, Texas.

Woodward:

Three days of rainy weather, the 24, 25, and 26, netted only .39 inches. Ground in very good shape for seeding, though still very dry in the lower depths. Farmers are preparing to seed the spring row crops and the demand for good seed is sharp at the present time. Chances seem favorable for a big acreage of sorghums this year. Much wheat has blown out, and the ground was too dry for oat sowing, so that attention must necessarily be thrown to the sorghums.

Practically all the shrubbery and the trees are out in leaf on the station. Grapes have commenced rapid growth and will be blooming within the next week or ten days. Work for the past week has consisted of the setting out of some two thousand grape cuttings, the wrapping and sending out of some eight hundred cuttings, to local people, and cultivating the orchard and vineyard. Weeds are giving no great trouble this spring.

Second date of seeding experiment planted on the Cereal Project this past week. A heavy demand for Sunrise Kafir was created throughout this region by an article concerning it, which appeared in the Oklahoma Farmer. The Cereal Office representative has sent out some two hundred free samples of this seed to as many different parties.

Maximum for the week 86, on the 30; minimum 33, on the 27; precipitation .39 inches.

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REPORT FOR WEEK ENDING MAY 8, 1920.
(Except as otherwise indicated).

Akron: Reports of May 1 and May 8, inclusive.

Small grain and grass made very little growth previous to April 29. There was still some snow lying on the ground in drifts from the storm of the 18 and 19. Temperatures have been higher the past week and small grain and grass have started growth. Winter wheat that was quite badly damaged by blowing, and which was considered worthless, is showing up much better than expected and will make a thin stand.

Farm work is delayed by frequent showers, and only a small acreage has been prepared for corn. Feed is very scarce and high. Stock is very thin and grass has not made growth enough to furnish much feed. Quite a number of farmers are pasturing their wheat.

Thirty two-year-old ewes were obtained ten days ago for the sheep pasture experiment. They were purchased from a farmer living 13 miles from the Station, and the roads were so bad that they were hauled in wagons instead of being driven to the Station. They are lambing now and we have 22 lambs with a loss of only one. The ewes were quite thin and the first lambs dropped were weak.

Mr. F. L. Kelso visisted the Station on the 27. The Superintendent accompanied him to Scottsbluff on the 28.

We have had precipitation of 0.01 inches on five days during the past week.

Maximum temperature for the week ending May 1;- 62, minimum 23, precipitation 0.45 inches.

Maximum temperature for the week ending May 8;- 75, minimum 33, precipitation 1.22 inches.

Ardmore:

The entire week has been cloudy and rainy, and no field work has been possible. The last field work done at this station was on April 16. Some snow drifts are still visible on the north sides of hills. The first snow of the season recorded at this Station was on October 7, 1919. Since that time, up to the present date, a little over seven months, the ground has never been bare. Of course, only a few snow drifts remain at the present time. Precipitation in varying amounts from a trace of 1.01 inches has been recorded at this Station every day for the past 23 days. The total precipitation for the week ending May 8, was 1.25 inches; maximum temperature 61; minimum temperature 37.

All small grain which were seeded before the storm of April 16 are up in excellent condition. Native grasses are making a very rapid growth.

The crew at this Station has been kept busy constructing fences, and similar work.

Big Spring:

The first part of the week was very warm and dry. On Wednesday the 5th we had a light shower at the Station, while a portion of the county a few miles northwest and east secured a heavy rain and hail. The latter part of the week has been cloudy and threatening rain, and we have hopes of securing a good shower within the next few days. The winter wheat in the various plats is practically all out in head, but is needing rain badly. The four-tenths acre of alfalfa planted in 36-inch rows in April 1915, which stood the dry seasons of 1917 and 1918, is dying out rapidly for the lack of moisture. During the week we ran over all fall and spring plowed plats and fields with the cutaway disk, to pack the land and put it in better shape for planting

Big Spring, continued:

when we get a good rain.

Maximum temperature for the week 97, minimum 50; evaporation 1.96 inches; wind velocity 5.2 miles per hour; precipitation .06 inches.

Colby:

The spring of 1920 has been unusual at the Colby Station. The precipitation for the first three months was very light, and high winds occurred at frequent intervals during the month of March. Winter wheat had made very little growth in the fall and winter and a small acreage which was growing on summer fallowed land suffered from soil blowing. However, the greater part of the crop was protected by stubble, and was not injured. A few of the plats were damaged slightly.

The plats of oats, spring wheat, and barley were planted on March 27. Damp, cool weather followed immediately and has continued up to date.

Precipitation for April amounted to 3.38 inches and another inch has fallen during the first week of May.

A hailstorm occurred on May 4, and since many of the hailstones were fully as large as hen eggs considerable damage was done to window panes, but crops were not far enough advanced to be injured seriously.

Field work has been delayed some because of rainy weather, but spring plowing for corn ban be done next week, if the weather clears.

Dalhart:

The past week has been rather warm as a whole, and trees have leafed out considerably. Most of the trees and shrubs have begun to leaf out. Winter rye is heading at about 14 inches in height. Grass on the range is furnishing plenty of grazing for the cattle, although it is not as far advanced as at this time last year.

Little field work was done this week. The fields are so dry that it is useless to begin seed bed preparations until it rains, or until planting time. Field work is at a standstill among the farmers on account of the dry weather. It has been trying to rain for the past three days, but has succeeded only in sprinkling. Up to this time about .32 inches precipitation has been recorded. It is cool now and threatening, so a better rain may be coming.

Dickinson:

This week has seen the first growing weather of the season. Wheat, oats, and barley on the rotations have emerged with good stands of grain and thistle. Pastures are starting very slowly, except where favored by moisture conditions. Experimental seeding of winter wheat on the Station has all been winter-killed; rye is coming up very thinly; alfalfa has been mostly winter-killed; and brome appears to be gone in patches. Trees are starting very slowly, and several of the evergreens about the grounds are dead.

Maximum temperature 72, minimum 34; precipitation .24 inches.

Edgeley:

Ideal growing weather for small grains has prevailed throughout the week. Early sown grain is coming up nicely now. Fall rye in this district does not appear to be coming well this spring. In all probability considerable

Edgeley, continued:

of the land sown to fall rye will have to be resown to spring grains.

All the plots intended for corn is all prepared and ready for planting.

Maximum temperature, 74; minimum, 36; precipitation .45 inches.

Garden City:

We have had nearly two weeks now with but very little wind, and it is quite a relief after so many days of continuous blowing. The spring grains are looking good now, and the surrounding pastures have started up fast during the past week.

Fifty-seven hundredths inches of rain fell on the night of the 5, which helped the small grains along considerably. Although we have had no heavy rains this spring, the few light showers of late have added considerable moisture to the soil. The potato plats were prepared and the potatoes planted this week. Some of the fallow plats had to be worked in order to destroy the rank growth of volunteer winter wheat that was being made.

Maximum temperature 89, minimum 44; total precipitation .60 inches; wind velocity (8' anemometer) 11.7 miles per hour, (2' anemometer) 9.7 miles per hour.

Havre: Report for week ending May 1.

During the past week there has been rain on four days with a total precipitation of .63 inches. The temperatures have been rather low, and the humidity so high that the most of this has gone in the ground or has remained on the surface in sufficient quantities to prevent field work.

We were ready to start seeding on the 1, but rain and snow began falling early in the morning. The plots are now about ready for all the spring seeded grain and flax. The seeding of the grasses and alfalfa were completed on the 26 in the reseeding of native ranges. Conditions have been almost ideal for work this spring, and if there is any possibility of getting a stand under range conditions, we should get it this season.

Native grasses are slow in starting and as farmers cannot get in the field more than a day or so at a time, it is causing some hardship with the scarcity of feed.

Havre:

The past week has been very favorable for seeding and for the germination of crops that are in the ground. Wheat seeded on Monday and Tuesday is now nearly through the ground. Wheat plats and barley were seeded on the rotations from the 3 to the 6. The seed beds are almost ideal and good stands should result. The seeding on the forage work is almost completed, and the commercial fields are about ready for the drill.

The winter wheat on the rotations was completely killed and will be reseeded to Marquis. The only early seeding of this crop that shows any stand is that seeded with a furrow drill. Some of the real late seeding may make a fair stand in favored locations.

Professor Cardon, Dr. Joseph, and Mr. Burke, all of the Montana Experiment Station, were visitors on the 5.

Maximum temperature for the week 76, minimum 32; precipitation .46 inches, of which 41 inches fell on the first of the month.

Hays:

Throughout the week the weather was warm with clouds every day, and fogs nearly every morning. Winter wheat has made a very heavy growth, and spring grains are also making rapid growth. Weeds are coming thick on all plats, as well as on roads and alleys.

Soil moisture determinations were made on a few plats.

We believe we have solved our soil oven troubles by securing a better grade of gasoline, which sells under the brand of "Stove and Light Gasoline." This seems to be of about the same quality as the gasoline that was sold at garages a couple of years ago. But, now the only way in which it can be secured here is by special orders showing that its need is absolutely necessary and by assuring the company that none of it will be used for any other purpose than for laboratory work. It is shipped in special barrels which must be emptied and returned immediately.

During the week three parties of High School students from as many counties visited the Station, spending considerable time on the projects.

Maximum temperature 81, minimum 43; precipitation 1.18

Hettinger: Report for week ending May 1.

Seeded oats, barley, peas, and sweet clover on the D.L.A. and Flax Rotations. Plowed all plats on D.L.A. and Flax Rotations for corn; seeded oats on general farm field; prepared plats for the Forage Crop trials; seeded oats and rape in hog pasture; plowed on general farm field for corn; cut and planted 2500 Diamond Willow cuttings west of farm house for shelterbelt; and built 80 rods of pasture fence.

The soil is in excellent condition for small grains, although the weather has been very cold. The grain has germinated on the rotations, but has not as yet emerged. The farmers are backward in their seeding operations in this locality, due to the cold and wet weather.

Maximum temperature for the week 59, minimum 19; precipitation .35 inches.

Total precipitation for April 1920, 2.39 inches.

Hettinger:

Due to the wet weather, there was not much work done in the rotations. It has been too wet to take the soil samples after seeding, but can get at it the coming week, if the weather keeps clear. Have about finished plowing on the general farm field for corn: Will plant the corn on the Rotations this week, and will also plant some sunflowers to try out for silage. The grass is coming along in good shape, also, the sweet clover and alfalfa. The wheat and oats are beginning to emerge.

There will be a smaller acreage of wheat seeded in this county this season than usual, but there will be about a fifty per cent increase in forage crops over former years. The decreased acreage of wheat is due to the lateness of the spring, shortage of labor, and shortage of feed for work horses. Hay is selling at $36 per ton and oats at $1.10 per bushel.

Maximum temperature for the week, 54.7, minimum 41.7; precipitation .57 inches.

Huntley:

The past week has been somewhat warmer and less rain has fallen. We have been able to get in two half days of plowing, but the soil is too wet to permit a good job being done. Alfalfa is making very rapid growth, as is

Huntley, continued:

also winter wheat, and rye. The stand of brome grass on the pasture plats is beginning to show considerable damage due to the last year's drought. It was at first thought that the survival would be good, but the contract between the good and poor areas is becoming more noticeable every day.

Maximum temperature for the week 67, minimum 29; precipitation .56 inches.

Lawton:

The past week has been exceptionally favorable for planting and for plant growth. While we have had a light rain on one or two cloudy days, excellent weather prevails for germination.

Everything has been planted with the exception of variety test forage sorghums, variety test cowpeas, M.C. and rotation sorghum, sudan, the remaindate tests of sorghums, cowpeas, and cotton.

Mr. J. R. Horton arrived Thursday to advise as to the best methods to use in combatting chinch bugs. Several plats were examined and by counting the bugs on one row we found that the number per plat ranged from 34,000 to 78,000. Four plats were sprayed, using a 250-gallon tank per plat with about a 200 lb. pressure. Sumac was seeded with the drill in all roadways and alleys adjoining wheat plats in Field "A", in order to hold the bugs when they start to leave the wheat. Unless they can be killed there is danger of serious injury to row crops when the wheat is harvested.

The affects of the spraying seemed quite satisfactory. Further details may be given later.

Mr. Horton returned to Wichita Saturday evening, but expects to return the coming week.

Maximum temperature for the week 95, minimum 54; precipitation .34 inches; evaporation 1.18; wind velocity 5.3 miles per hour.

Mandan:

Horticulture.

No new work in Horticulture was started this week, other than the preparing for the planting of the two coulee orchards it is planned to set out this spring.

Agronomy.

Rain the forepart of the week delayed all field work. The remainder of the week was spent in seeding some increase blocks of wheat, oats, and barley for seed; and, barley and brome for feed; and a fifteen acre field of alfalfa.

Cooperative Grazing Experiment.

Forty-nine head of cattle arrived from Fargo on the 7, to be used in the grazing work this summer. The remainder will be obtained at this point. They are now on the reserve pasture.

Aboriculture.

This week has been spent in making the shipments to the cooperating farmers: It is expected this work will be finished early next week.

Maximum temperature 68, on the 6; minimum 36, on the 1; precipitation 0.83 inches.

Moccasin: (Judith Basin).

Cool, stormy weather continued during the first part of the week, but the last few days have been quite clear and warm. The soil is drying out very rapidly, and it will be possible to commence field work Monday, providing another rain is not received before then.

Winter wheat is commencing to make a noticeable growth, and a good stand is evident, except on "C.C" D, E, and F winter wheat, and on the plats seeded with an ordinary drill in the furrow drill experiment. A large percentage of the wheat on these plats is still in a doubtful condition. Rye is progressing rapidly and the native pastures show a marked improvement. A cristatum in the grass garden has made a much greater growth than the native grass, or any other grass being tested out at this Station.

Mr. Burke, Prof. Cardon, and Dr. Joseph, of the Montana State College, are visiting the Station at present to inspect the possibilities of livestock work on the experiment farm, and, also to obtain surface foot soil samples for chemical analysis on rotations 16, 17, 41, 42, 11, 67, and on the continuous cropping series of corn and spring wheat.

Maximum temperature for the week 57, minimum 27; precipitation .90 inches.

North Platte: Reports of May 1 and May 8, inclusive.

The week ending May 1 was the first this season during which it was possible to do field work the entire time. During the week ending May 8, two days have been lost.

April had but 12 clear days. The mean temperature was 8.5 degrees deficient. Precipitation recorded at the table gauge was 4.24 inches, which is 17 per cent of the 45-year average.

The upper three feet of all plats sampled are filled with moisture to practically full carrying capacity.

Stands of spring grain are somewhat uneven. Emergence of plants did not begin until 25 days after seeding and continued for ten days or more. Thistles have started on some plats. On disked stubble ground they are particularly bad, and it is feared that the grain crops will have a hard time to compete with them.

W. W. Burr visited the Station during the week.

Sheridan:

More rain the first of the week prevented work on the rotation field until Wednesday. All of the wheat in the rotations was seeded on the 5. Rain that night and Thursday prevented further work until today. All of the oats in the rotations and the checks, except for 12 check plats that were seeded Wednesday, after finishing with the wheat, were seeded today. Sweet clover in the rotations was also seeded today.

The remainder of the field being plowed for the corn, has been plowed, and has also been harrowed. Disking Block "B" in Field "A" for oats was begun today.

The varieties of wheat and oats, and the April 15 date of seeding emerged during the week. The pelissier wheat in the varieties germinated very poorly. There is a good stand in the increase field seeded from the same seed.

Today has been the most spring-like day we have had yet this spring. The winter grain, perennial forage crops, and early seeded spring grain have been growing rapidly the last two days. Weeds are also getting a good start.

Sheridan, continued:

The stand of winter wheat on the north end of the block is rather uneven, due to washing this spring.

Maximum temperature 63, minimum 35; precipitation .67 inches.

Tucumcari:

There has been no great amount of wind this week and the weather has been warm. Nearly everything is leafed out in good shape. Most of the fruit has been killed by late frosts, although some will be safe unless another frost occures. The apples, cherries, and plums are now in bloom.

Most of the week has been spent in doing field work. The stocks have been cut off the west side of the Station, and the ground listed to conform with the rest of this field. The west side of the south field has been disced so that it can be plowed at an early date. The middle line fence on the north side of the south field has been changed and reset on line to correspond with measurements made last week.

Friday about 5.30 p.m. a heavy storm came up suddenly and it hailed quite hard for about half an hour, then turned into rain. The storm lasted about an hour with a heavy downpour of rain and hail, then it settled to a quiet rain which lasted about another hour. The total precipitation recorded was .97 inches. There was a great deal of runoff from the slopes but none to any extent from the Station fields. This rain will help things greatly. The hail did no damage. Some trees had their leaves stripped, but not badly. A damaging hail storm occurred out on the mesa.

Mr. Luther Foster of the New Mexico Agricultural College and Mr. Clemmer of Dalhart visited the Station this week. Work relative to the cattle feeding experiment was taken up. Mr. Foster was well pleased with the way the experiment has been conducted and with the condition of the cattle.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

[illegible] WEEK ENDING MAY 15, 1920.
(Except as otherwise indicated)

Akron:

We have had two growing days - Sunday and Monday - during the week. The remainder of the week has been cold with some precipitation on four days. About two inches of snow fell Friday and Friday night. Plowing for corn was done during the week. Grass and small grain are growing very slowly.

Mr. J. W. Brandon reached Akron on the 11 and will take charge of the Station as soon as he gets settled. Mr. O. J. Grace will probably leave the Station about June 10, and will try farming near Mitchell, Nebraska. He has purchased a small irrigated farm with some dry land.

Maximum temperature for the week 75, on Sunday and Monday; minimum 31; precipitation 0.55 inches.

Belle Fourche: Report ending May 8.

The whole week was too wet for field work. It is now almost time for corn planting, but as yet very little small grain has been planted. The acreage of small grains planted on this project will be very much below the average.

There has been precipitation on 25 of the last 26 days. Total up to date for May is 1.74 inches.

The weather has been warmer lately and the grass has commenced to grow rapidly. Practically all of the stock wintered on the project has been sent out to the range.

The grain on the dry land rotations is now up. There is a good stand on all plats. The potatoes in rotations 75 and 76 were planted on May 4, the only day during the week that the surface of the soil dried off for a few hours.

Maximum temperature 67, minimum 35; precipitation 1.49 inches.

Big Spring:

The week has been a wet one, the three months drought being broken by good rains the fore and latter part of the week. On Sunday night, the 9, we got a good rain amounting to 1.19 inches. Monday another .50 inch fell. These rains were followed by a few clear days, which enabled us to do some farm work on the plats. On Friday night we had a return engagement from the rain-man and the gauge Saturday morning, the 15th, registered 3.08 inches. As most of this rain fell slowly the runoff was not very great. The whole county was covered with the precipitation occurring the latter part of the week. Owing to the wet condition of the soil, it will be several days before we can get into the field.

Maximum temperature 88, minimum 45; evaporation 2.18 inches; wind velocity 6.1 miles per hour; precipitation 4.77 inches.

Colby:

Damp, cool, cloudy weather has continued through the week, ending May 15, and no field work could be done during the latter part. Total precipitation amounted to .77 inches. The maximum temperature was 79, minimum 34.

Spring plowing for corn was finished, but planting is being delayed until warmer weather, as the crop is almost certain to be destroyed by cutworms if planted now. A few farmers in the county have started planting but nearly all have delayed beoynd the usual time for planting corn.

Colby, continued:

Weather conditions during the past several weeks have been favorable for the growth of all small grains and these are in excellent condition, both on the Station and throughout the county.

Soil moisture conditions are almost ideal for starting sorghum crops this spring, and if the weather warms up soon there will probably be less difficulty in getting stands of these crops than is usually experienced.

Edgeley:

The weather for the past week has been cold and windy. Grain is very backward in growth. Corn planting on all the plots was completed on the 14. The soil is very moist and in excellent condition for corn.

Seeding is pretty well completed in this district. The farmers are just starting to plow for corn and millet.

Maximum temperature 78, minimum 32; precipitation .52 inches.

Garden City:

With the exception of two rainy days this week has been very favorable for field work. The week was spent in preparing the corn and sorghum plats for planting, and in scraping away some of the sand that had piled up in the fence corners during the heavy wind-storms this spring.

On the 14 of this month .84 inches of rain fell; this with the two other light showers of this week was a great help to the crops, for they were very much in need of moisture, before these rains came.

Dean Farrell and Prof. Throckmorton from the Kansas Agriculture College visited the station on the 15.

Maximum temperature for the week 81, minimum 40; wind velocity (8' anemometer) 15.3 miles per hour, (2' anemometer) 12.2 miles per hour; total precipitation 1.23 inches.

Havre:

Conditions have been favorable for field work during the past week with the exception of Tuesday, after a shower of a quarter of an inch on Monday night, this being the only precipitation for the week. Temperatures have been somewhat lower for the past week than for the previous week. The maximum of 76 was recorded on the 9 with a minimum of 35 on the 15.

All winter wheat and winter rye plots on the rotation were reseeded to Marquis. This is the first season that winter rye has killed, and the killing of the winter wheat has been the most complete on record. Rye seeded during an open spell in November is almost a perfect stand.

All the grains on the rotations are up nicely with the most uniform stands that have been obtained since the station was started.

Alfalfa and slender wheat grass in rotations 42 and 41 respectively, we reseeded except the Plat A which is two years old. This killing was due to drought last summer rather than to winter killing. Alfalfa is starting rapidly, especially in the bottom fields.

Hogs were placed on alfalfa pastures during the week. The 1500 conifers and the 500 Buffalo Berry trees arrived during the week from Mandan and are mostly in the ground now. Dry land garden was planted.

Hays:

The first part of the week was warm and mostly clear. The last three days it has continued raining or misting without a stop. The rain has been heavier today since the morning readings were made. There is considerable danger of the damp weather overstimulating growth of winter wheat. It is now about 18 inches high and most of it is very heavy or thick, although it is about 15 days later than this time last year. The weat is standing up well on the project thus far. Alfalfa is 12 to 15 inches and spring seeded small grains about six inches. Canadian field peas are four inches.

Corn was planted on the project Wednesday the 12. The Experiment Station has finished planting corn on the general fields.

Soil moisture determinations were made on the Moisture Conservation series of corn and kafir,- six plats of each.

Tuesday the Project was visited by 35 automobile loads of people: Wednesday by a Soils-class from the Fort Hays Normal School

Maximum temperature 78, minimum 41; precipitation (last three days) .33 in.

Huntley:

Field work was resumed Monday, but was halted by a rain which began Monday evening and continued almost continuously until Thursday morning. The first part of the shower was torrential in character but the last part came in the form of a constant drizzel. The total precipitation amounted to 1.53 inches.

Professors Burke, Gardon, and Joseph of the Montana Experiment Station visited the Station last Monday.

Maximum temperature 77, minimum 39; precipitation 1.56 inches.

Judith Basin:

Field work was finally commenced Monday, only to be delayed again by rain which began Monday evening and lasted almost continuously until Wednesday morning. The week as a whole has been quite cool and cloudy, and the soil has not dried out sufficiently to permit plowing. Discing of the land for the commercial field of spring wheat, however, has been in progress since yesterday morning, and the ground for the Cereal plats was disced and harrowed before the rain was received. Over 2,000 trees, including Jack Pine, Scotch Pine, Western Yellow Pine, Poplar (Antelope Lake), Tartarian Maple and Buffalo Berry were set out in the shelterbelt experiments during the week.

A new "16-30 Twin City" tractor for the Experiment Station arrived in Moccasin on the 11, but due to the bad roads the tractor has not yet been brought out to the station.

Maximum temperature 71, minimum 34; precipitation .87 inches.

Lawton:

Precipitation of 3.62 inches from eight o'clock last evening to eight this morning brought the total for the week up to 4.31 inches. A great amount of washing occurred, although it is impossible as yet to estimate the damage done to spring crops.

A poor stand of both kafir and milo was obtained, so all plats of the above have been replanted the past two days. Variety test forage sorghums were planted yesterday. Two plats of peanuts rotted in the ground and will be replanted. Doubtless the heavy rainfall will necessitate replanting most of the plats not up, as well as some of the cotton and cowpea plats which showed excellent stands yesterday before the rain.

Lawton, continued:

Soil moisture samples were taken on M.C. wheat, but due to a rocky ledge which lies near the surface, it is never possible to drive a soil tube over four feet, and oftentimes a two foot sample is all that can be secured. In only one spot in field A does the soil reach a depth of six feet.

Chemicals for spray solutions to combat chinch bugs have been received, and Messrs. Horton and Walkden of Wichita arrived yesterday to assist with this work. Mr. Walkden is a graduate of the Massachusetts Agricultural College and is assisting Mr. Horton in the U. S. Entomological laboratory at Wichita.

May 15, date test plantings of cotton, cowpeas, and sorghums will be delayed several days by the soaked condition of the soil.

Most wheat plats are in full head, and sweet clover is ready to cut. The week has been rather cool.

Maximum temperature 86, the 13; minimum 50, the 15; average wind velocity 7.7 miles per hour.

Mandan:

Horticulture.

The two coulee orchards were planted this week, each orchard containing about half apples and half plums, of the most promising varieties.

Most of the surplus stock has been lined out and the first cultivation of the orchards completed.

Agronomy.

All grains in the rotations are up with a good stand, some of them were up the latter part of last week.

Seeding on the 17 acre field of alfalfa was completed early in the week. All plowing for corn and flax has been completed and the plats will be ready for seeding early in the week.

Germination tests of the 1919 seed corn show it to run practically 100 per cent.

A 10 acre field of Brome was seeded during the week; this is on land that is subject to blowing. The field was seeded to barley and Brome in 1919, but no stand of Brome was secured because of the dry season.

Very high winds have prevailed on five days during the week. On the 11 the wind averaged 17 miles per hour for the 24-hour period. Very little soil blowing has taken place in the rotations, but in the field that was seeded to Brome, soil has started to move.

Maximum temperature 80, on the 9; minimum 34, on the 12; precipitation, 0.

Cooperative Grazing Experiment.

Vegetation is growing rather slowly. There was not enough growth on the quadrats that are clipped on 10-day periods, to start clipping on the 10, date on which the first clipping would have been made. There was only a small amount of Carex filifolia growing in the quadrat, while other species had started on the other quadrats which are clipped less frequently.

It will no doubt not be possible to start the experiment before the latter part of May, or the first of June, as there is not enough vegetation in the 30 or 50 acre pastures to carry the cattle.

Aboriculture.

Shipping of stock was completed Wednesday; the shipments numbered 427, of which 224 went by parcels post and 203 by express. Distribution in the

Mandan, continued:

various states was as follows:

State	Poplar	Willow	Box-elder	Ash	Maple	Buff. berry	Scotch Pine	Jack Pine	Yellow Pine	Col.Bl. Spr.
Montana	2170	900	32283	19330	882	626	10928	1946	5529	1319
N. Dakota			15042	10095			3620	1497	1214	488
S.Dakota	600		10015	4974	40	135	3343	635	430	52
Wyoming			3863	1560			399	1314	249	0
Total	2770	900	61203	35959	922	761	18290	5392	7422	1859

****Grand total 135,478****

The unsatisfactory willows in Field L were dug and the field made ready for filling with Northwest Poplars for a permanent cutting block. Rooted Northwest poplars were planted in Field L. The dead trees in the experimental shelterbelt blocks, both conifer and deciduous, have been replaced, as well as missing trees in the species blocks of Scotch, Bull, and Jack Pine; and White and Norway spruce.

North Platte:

The weather condinues dark, cold, and wet. It was possible to be in the field but two days during the week. Preparation of corn ground for planting was finished on the 10. Planting was begun on the 11, and 20 of the 22 plats on field 41 were finished. Rain that night and the next day stopped operations. Teams were again sent out Friday morning, but were driven in again by rain in less than an hour. Drizzling rain has continued ever since. Total precipitation for the week 1.40 inches. Moisture has now penetrated through the fourth foot on the CC, A and B plats, and the entire six feet is filled to carrying capacity on the C and D plats.

Very little corn is as yet planted in the vicinity. Last year's seed is very poor and very little of the 1918 crop is now available. Should present weather conditions continue, it will be very difficult to secure good stands.

Scottsbluff:

The spring, to date, has been the coldest and wettest on record. The past two weeks have been unusually wet and cold, more than three and one half inches of rain having been recorded since May 1. Some of this occurred in the of snow. Quite a heavy fall of snow occurred this morning.

Farmers over the entire project are much behind with spring work, only a small per cent of the beet acreage being seeded.

With the exception of corn and sorghum, all crops on the rotations have been seeded. Spring wheat and oats seeded on April 13 and 14 did not come up until May 8, due to cold weather, and the blanket of snow that covered the ground most of the time. On May 10 a hail storm occurred that beat these crops into the ground. However, it is presumed they were not damaged beyond recovery with the advent of favorable weather.

Alfalfa and clover plats were seeded during the week, but have not yet come up.

Station visitors included Messrs. Grace and Kelso.

Maximum temperature 69, minimum 31, precipitation 3.61 inches.

Sheridan:

The first two days of the week were the warmest and the most spring-like that we have had yet this season. The barley in the rotations, the barley and flax varieties, and part of a field of bulk oats were seeded Monday. Plowing on the block for peas, potatoes and forage crops was also begun. Monday evening it began to rain and rained practically steady for the next two days.

Trees sent from Mandan for replacements in the shelterbelt were brought out Thursday and planted yesterday. Plowing was resumed this morning. The remainder of the field of oats started Monday and the May-15 seeding of Date-of-Seeding is being seeded this afternoon. The wheat in the rotations, seeded the fifth, is just emerging. The alfalfa, seeded April 27, is also just beginning to show. Very few farmers have much of anything seeded yet.

Maximum temperature, 72; minimum, 35; precipitation, 1.46 inches.

Woodward:

The fore part of the week was rather hot with small showers the first two days, with a thunder storm the night of the 10th which netted 1.06 inches and caused considerable soil washing. The latter part of the week has been cool and cloudy with 1.28 inches of precipitation spread over a period of about 24 hours.

Field work has consisted of cultivation trees, plowing and some spring-tooth harrowing with the Fordson Tractor which was transferred from the Amarillo Station. Planting was commenced on the 14th but was stopped by rain.

Mr. E. F. Chilcott made a trip to Amarillo on the 10th to settle some of the details of the transfer of some of the equipment of the Amarillo Cereal Field Station to the Dry-Land Office. Mr. Chilcott left this morning the 15th, on an official trip to Lawton, Okla.

Maximum temperature for the week, 82; minimum, 43; average hourly wind velocity, 9.3 miles per hour; evaporation, 1.829 inches; precipitation, 2.39 inches.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR WEEK ENDING MAY 22, 1920.
(Except as otherwise indicated.)

Ardmore; report ending May 15.

No field work has been possible at the Station with the exception of planting a few trees on Monday. Today makes 29 consecutive days that the soil has been too wet for cultivation. As stated in previous reports, all the small grain plots and practically all of the fields which were to have been seeded to small grain on this Station have been seeded, but very little small grain has been seeded in the surrounding country.

Precipitation has been recorded every day this week, in amounts varying from .40 inches to 1.61 inches. The total precipitation for the week was 3.28 inches. Heavy rains fell on the 11 and 12 throughout a large section in western South Dakota, Nebraska, and Wyoming. On the afternoon of the 11 there was a terrific hail and rain storm about six miles south of the Station. The action of the clouds were quite visible from this Station. To use a common expression, it may be said that the storm amounted to a "cloud burst." From authentic reports, we know that hail fell over a section about three miles wide and six miles long. Over this strip of territory the hail was at least two feet deep, and in many places drifts were six to ten feet deep. The hail could be seen quite plainly from this Station for three or four days. This hail storm was accompanied by a great deal of rain. From reports by farmers of water caught in open vessels, it is safe to say that the total precipitation in this area must have been 10 to 12 inches. This unusual amount of water fell in two hours. This particular storm coming at a time when there was already a great deal of rain throughout a wide section, caused very high water in this county and the surrounding country.

The little stream, known as Hat Creek, which runs just south and east of the Station became a raging torrent. In less than 24 hours the water level in this creek was raised about 30 feet. The water in two hours, from four to six o'clock in the afternoon of the 11, raised to a level of fifteen feet. The water reached its maximum height about six o'clock on the afternoon of the 11; at this time the creek was about three quarters of a mile wide between town and the Station. The bridge on this creek just west of town was completely destroyed, and the bridge between the Station and Ardmore is badly damaged. Although the steel structure still stands, the railroad bridge about 200 yards below the wagon bridge was completely destroyed, together with about one half a mile of railroad track on either side of the bridge. The enormous power of the stream is well illustrated, by the fact that a steel span of the railroad bridge 60 feet long and weighing at least 100 tons was carried down the stream about a quarter of a mile. Several miles of railroad was washed out east of Ardmore, and between Ardmore and Alliance. We have had no passenger or mail service since the 11, and it is likely that this service will not be reestablished for a week or ten days.

The storm did a great deal of damage to fences and live stock in this section. Coming at the end of the phenomenaly long and hard winter, it has worked a particular hardship upon many farmers and ranchers throughout this section. The full extent of the damages cannot be ascertained at the present time, because practically all telephone and telegraph lines are down. Reports are coming in, however, of losses among live stock and cattle. On this Station we did not lose any live stock, but suffered damages to fences and machinery that are estimated to be at least $500. The indirect losses on this Station will amount to at least twice this sum. A family of seven neighbors, living on the bank of Hat Creek a few miles below the Station were surrounded by the water, and lost their lives. The bodies were recovered.

The crew at the Station has been busy since Wednesday repairing the bridge across Hat Creek, between town and the Station. They are working under

Ardmore, continued (report 15).

a great many difficulties as rain is falling continuously. There has been only a few minutes of sunshine during the entire week.

Maximum temperature during the week .74, minimum .33.

Ardmore:

The first three days of the week were cloudy, with small amounts of rain. The entire week has been cold and disagreeable with weather unfavorable for our plant growth, with the exception of native pastures. The last three days of the week were unfavorable for the prosecution of farm operations. The seed of oats was completed, and plots were put into condition for planting corn. Twelve and one half acres were planted to sun flowers. All small grain is looking very good, with the possible exception of winter wheat, which has made only a fair growth.

Mr. J. T. Sarvis of the Northern Great Plains Field Station arrived here Wednesday morning to attend to the starting of Beef Cattle Grazing Experiment. The cattle have been branded, and weighed for the first time preparatory to starting this experiment the first of next week.

Other visitors were Mr. Sam Sloan, County Agricultural Agent, and Dr. G. S. Weaver, Extension Veterinarian of the South Dakota Agricultural College.

Maximum temperature 84, minimum 36; precipitation .19 inches

Big Spring:

Most of the week has been clear and warm with no precipitation. Due to the heavy rains that feel the week before, the fields did not dry sufficiently so we could begin field operations until Wednesday. On Thursday morning we started the two planters going and succeeded in getting most of the experimental plats planted, except the varieties of grain sorghums. If the weather remains favorable we expect to finish this part of the planting by Monday night of the following week. There is an excellent season of moisture in the soil, and we expect to secure a good stand with all crops planted. The winter wheat in the various plots has revived wonderfully, since the rains and the indications are that we will secure a fair yield of grain from these plots this season. Sweet clover in the few plats we planted last year is waist high and growing rapidly. The alfalfa planted in rows in 1915, which suffered badly from the drought this spring is coming out again and making some growth.

Maximum temperature 96, minimum 45; evaporation 1.42 inches; wind velocity 4.7 miles; precipitation 0.

Colby:

There has been a marked improvement in the weather conditions at Colby during the past few days. Precipitation for the week amounted to only .14 inches, and weather during the latter part of the week was clear and warm. All growing crops had suffered from lack of sunshine and were greatly benefited by these few days of good growing weather. Winter rye is beginning to head head, and winter wheat is jointing.

The Weekly Report of the State Board of Agriculture estimates the condition of the wheat crop in the county at 96 per cent and the acreage at 160,100. Veryfew counties in Kansas exceed Thomas County in either condition or acreage of the wheat crop. Barley is also in excellent condition.

Colby, continued.

All corn on the Station was planted during the week and sorghums will be planted within the next few days.

Dalhart:

Everything is much more favorable now than two weeks ago. Last week it rained 1.47 inches and this week 1.38 inches. The days separating the rains were quite warm so that things in general are looking good. The weed crop is getting an early start. The first date of planting is just beginning to emerge. From the present indications a good stand will be secured. Winter rye is in blossom and looking good. Oats seem to be making a showing since the rains.

As soon as the soil is dry enough, both teams will be put in the field to get things in readiness for planting. If conditions are favorable about June first all the planting will be done at that time, except the last date. It will take about a week of field work to get things in shape for planting.

Seed sales have been rushing this week. Since the rains the farmers have been flocking in after seed. Most of our calls are for dwarf milo with dwarf kafir as second. Some sumac, red amber, sudan and red kafir has been sold. One farmer just left with 1200 pounds of dwarf milo. This is the largest individual sale to date.

Farming operations in the surrounding country are under way. Before the rains the top soil was so dry that no work could be done although there was plenty of moisture just below. The soil is thoroughly wet down now, so that all crops planted ought to get a good start.

Dickinson:

The weather for the past two weeks has been dry, cool, and very windy. More soil blowing has occurred than during the entire season last year. Many acres of grain on the lighter soils of this section of the State have been cut off or blown out and some damage has been done to all grain that is up. On the Station only a few acres of increase grain have blown out, but there has been some damage on a few of the rotation plats.

Crops have grown very slowly, due to the cool weather and dry soil. Corn and sunflowers planted April 27 have emerged with good stands and a field of sunflowers planted a week later for silage have started to come up. Corn was planted on the rotations May 10, varieties and silage corn on the 14, and a field of flint corn for grain on the 20. Ten acres of millet for hay was seeded on the 22.

Seeding of oats and barley is just being completed by farmers in the vicinity. Seeding of an unusually large acreage of corn and millet has just begun.

Maximum temperature 80, minimum 35; precipitation .46 inches. May rainfall to date totals 1.06 inches; most of it having come in small showers.

Edgeley:

High winds prevailed throughout most of the week. The soil contains sufficient moisture to promote rapid growth of cereal crops. Low night and daily temperatures are not proving beneficial for rapid growth of the corn crop. Corn is not showing above the ground yet.

Maximum temperature 82, minimum 34; precipitation .82 inches.

Garden City:

The weather this week has been very favorable for field work and crop growth. The rain of last week, followed by a few warm days, helped the crops considerably. The rye plots are heading out, and the small grains are making a good growth.

This week has been spent in preparing the rest of the sorghum and corn plats for planting. If nothing happens we expect to get them planted the first of next week. We were in hopes that we could kill a crop of weeds before planting time, but they seemed to be very slow in starting this spring.

Maximum temperature for the week 85, minimum 41; average wind velocity (8' anemometer) 8.4 miles per hour; average daily evaporation .157 inches.

Havre:

Aside from a shower of .07 inches, recorded on the 19, the past week has been dry. Temperatures have been about normal, but the wind velocity has been very high. For the 24-hour period ending the morning of the 19, the average wind velocity was 17.2 miles per hour, which is near the maximum since the Station was established.

We still have some seeding to do on the bottom fields, and on the breaking tests as well as the corn on the commercial fields. Spring grains on the plats are looking very good, and the stands are as uniform as we have had for this season of the year.

Soil moisture was taken on the 18 plots that have been sampled in other years. Moisture in continuous cropped plats is somewhat over a foot.

Fields in this community that were seeded early are badly infested with Russian thistles. Some of them are nearly gone at present. Fields that were not seeded so early, and were well disked before seeding, have very few thistles as yet.

Huntley:

The entire week has been favorable for field work, and as a result soil preparation for all spring crops has been completed on the rotations, with the exception of corn ground, on the pasture plats.

The seed beds obtained after spring plowing were generally rough owing to the wetness of the soil which, in the heavier spots would not work up well. Disked corn ground, fallow and fall plowing, worked into an excellent seed bed. The crops went in in ideal shape, the drill following closely on the harrow.

Maximum temperature 83, minimum 35; precipitation .07 inches.

Judith Basin:

The week has been characterized by strong winds and no precipitation. Field work has commenced in earnest and is progressing very rapidly. Plowing, disking, and harrowing on the rotations has been completed. Spring wheat and 16 plants of oats have been seeded on the rotations in Field "A", and the barley, oats, flax, and spring wheat varieties for the Cereal Office were also seeded. Thirty acres of increase wheat were sown and about 18 acres were double-disked and harrowed. Sixty-five acres for increase fields of barley, oats, and wheat were plowed with the new "16-30" tractor and breaking of 120 acres of native sod was commenced.

Maximum temperature 74, minimum 32; precipitation 0.

Lawton:

The past week has been practically given over to spraying wheat plats. Nearly all plats have been sprayed and good kills were made on most of them. Wheat is in full head and indications are that a fairly good crop will be harvested.

During the past week the orchard was pruned and cultivated. A late frost killed fruit buds and there will be no fruit crop in this section.

Date plantings of grain sorghums and coepweas were made, but the ground has been too wet to plant the "5/15" date test forage sorghums and cotton. A fairly good stant of cotton was obtained on the Station from the first planting. Many farmers in this vicinity planted just before a heavy rain and are replanting.

First cuttings of alfalfa and sweet clover have been made.

Mr. E. F. Chilcott visited the Station the first of last week.

Maximum temperature 87, minimum 44; precipitation .33 inches.

Mandan:

Agronomy.

Preparation of the land for corn and planting formed the major part of the activities of this department for the week. Flax and potatoes were seeded in the rotations on the 20.

Grass in the 30 and 50 acre pastures of the grazing experiment is still very backward. It is probable that grazing in the experimental pastures will not be commenced until about the 1st of June.

Mr. Sarvis, Station Agronomist, left on the 17 for Ardmore, South Dakota, to confer with Superintendent Kelso, regarding the grazing experiments being carried on there.

High winds, moderate temperatures, and squally weather prevailed during most of the week.

Maximum temperature 88, on the 21; minimum 34, on the 21; precipitation .22 inches.

Aboriculture.

This week 30,000 small ash have been lined out for shipping next spring; also, about 3,000 small caragana. Cuttings of 45,000 Northwest poplars have also been planted. Owing to the extreme lataness of the spring, and the sudden warming up of the weather, the caragana seedlings in the seed-beds, and the two year old jack pine, lodgepole, and yellow pine, have begun to grow and could not be transplanted without considerable loss. We still have about 10,000 conifers (two-year olds) received from the Forest Station at Cloquet, Minnesota, to plant, but as the weather has continued hot, dry, and windy, this will have to be postponed until we receive some moisture.

North Platte:

The second week of the season without sufficient rain to stop field work has just passed. Temperatures have been considerably higher and crops have made good growth. The first rye heads are appearing, but winter wheat is still small for this time of the year. Corn planting on the D.L.A. plats was completed on the 18, and most of the Station corn has been planted since that tiie.

Scottsbluff:

Weather conditions the past week have been quite favorable for field work. Several days of sunshine following the extreme wet weather of last week caused the ground to bake badly and a very hard crust has been formed on the surface of the plats. Those crops that had emerged are making rapid growth, but alfalfa, clover, flax, etc. have sprouted and are unable to penetrate the crust. It is planned to use the corrugated roller to break up the crust, in order to allow these crops to emerge.

Seed beds were prepared and corn was planted during the week. The stripped ground squirrels are very numerous on the project, and it is planned to wage the customary campaign against them by means of strychnine poisoning.

Soil moisture samples taken on the M.C. series of spring wheat showed the soil to be well saturated to a depth of four and half feet, but below this point the sand was very dry.

Maximum temperature 82, minimum 43; precipitation .29 inches.

Sheridan:

The week has been quite favorable for field work. The rotation plats for corn, flax, sorghum, and potatoes have been plowed and harrowed twice, and are ready for seeding. The fall plowed, summer tilled, and corn stubble plats for these crops were double disked. The manure was also applied to those plats requiring it. The block for peas for forage, the millets, and potatoes was made ready for seeding. The peas for both forage and green manure and the potatoes were seeded.

All vegetation has been growing well. The early seeded oats show practically as much growth now as the winter grain. The barley in both the rotations and the varieties emerged during the week; also the flax in the varieties. The trees in the shelterbelt are now about all leaved out. The cuttings seem to be starting fairly well.

A light shower this morning interferred with field work, but the ground is dry again this afternoon.

Maximum temperature 90, minimum 35; precipitation .08 inches.

Tucumcari:

The fore part of the week the first date was planted in the Cereal work. It should have been planted on the 15, but on that date there was too much water on the field. The field dried off sufficiently to allow the planting on the 17. Field operations are well under way, and if too many delays are not met with the fields will be ready for the main planting, about June 1.

The cattle were turned together on the 15, after the last weighing. They were all in good condition, although those in the fed lot were in much better shape than the range cattle. They have begun calving, several calves having been dropped to date. Grass on the range is getting better since the last rains and cattle are beginning to show gains. Many cattle and horses were locoed in this section this year. None of the Station stock happened to take to the loco.

All trees and ornamentals are well started, being in full leaf, and some in blossom. There will be only a very small amount of fruit this year, [illegible] less than was first supposed.

Birds, such as the English sparrow, black bird, etc., are flocking to the Station to get a setting for future reference. They are getting so thick they are about to carry things away.

Tucumcari, continued:

Many compliments were received from farmers and business men on the way the Station was held down during the windstorms. The efforts that were expended in trying to hold the Station have been closely observed. The people state that this is the first year they have seen the Station held down. This has been one of the worst spring in several years to control blowing on account of so long a dry spell and such hard winds.

Everything at the Station is looking promising for a good year. There is plenty of moisture present to give everything a good start, even the weeds. The weeds have gotten an early start, so that the preparation given the fields before planting will get rid of them.

Woodward:

The past week has been warm and cloudy, with rather low evaporation. Good progress has been made with preparation of the ground for planting and with planting. The tractor has been kept busy with the spring tooth harrow and plow most of the time. Spring plowing has been completed, all plots have been prepared and staked for planting, and all kafir, milo, sorghum, and broomcorn on the D.L.A Project has been planted. Most of the planting on the Cereal Office Project has also been completed. Soil samples were taken on the C-C. Series of winter wheat and rye.

Maximum temperature for the week 89, minimum 43; average hourly wind velocity 7.5 miles per hour; evaporation 1.062 inches.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR WEEK ENDING MAY 29, 1920.
(Except as otherwise indicated.)

Akron:

The station was visited by two men from the State Agricultural College the past week who aided in starting the sheep experiment. Corn was planted on the rotation plats on the 18 and is now emerging. During the week variety millets were planted. Other field work has consisted in disking fallow strips, plowing for forage sorghums, and cultivating in the orchard.

Maximum for the week 84, on the 22; minimum 34, on the 28; precipitation .19 inches.

Ardmore:

The entire week has been favorable for conducting farming operations. There was a small rain the first part of the week, but not sufficient in amount to stop cultivation in the fields. During the week the flax rotations were seeded. All corn plots were seeded; the variety plots of millet were seeded together with plots that were seeded for test of perennial forage crops. About 50 acres were planted to corn. The planting yet to be done on the station consists of about 75 acres which is to be planted to corn and cane.

Beef cattle grazing experiments were started during the week, and Mr. Sarvis returned to Mandan on Wednesday morning, last.

Mr. V. I. Clark has been absent from the station during the week due to the illness of his wife.

Maximum temperature 79, minimum 35; precipitation .15 inches.

Big Spring:

All crops planted in the various experimental plots the week before are coming up to a good stand. The light showers that occurred on Wednesday and Thursday night, last, were a great help in bringing up the crops. These showers fell slowly and did not pack the soil. Following the showers we had cool, cloudy weather for a couple of days. Wheat in the C.C. and rotation plots is beginning to turn and will be ready to harvest in a few days. The planting on the station is practically all done for the season, with the exception of the remaining date plantings of the varieties. The farmers throughout the county are about up with their work, and most of them report as having secured good stands with the crops planted. We have had very little wind lately, consequently no trouble has been experienced from soil-blowing.

Maximum temperature for the week 92, minimum 44; wind velocity 4.1 miles per hour; evaporation 1.63, precipitation .49 inches.

Colby:

With the exception of some cool days, the weather during the past week has been favorable and the work of preparing the ground for sorghums has been rushed.

The milo and kafir plots on the D.L.A. project were all seeded and also the variety test of sorghums. A shower amounting to .50 inches fell soon after and germination of these crops should be good.

Soil moisture samples were taken on a number of winter wheat plots. Plots that were summer tilled in 1920 contain a surplus of moisture to a depth below six feet, but those that produced a crop last season have very little available moisture below a depth of two and one-half to three feet.

Maximum temperature 89, minimum 39; precipitation .50 inches.

Dalhart:

The fore part of the week was cold and windy. The rain the previous week packed the soil, and the wind started it to blowing. It seemed that March winds were being repeated and the soil was not in shape for a blow on account of the recent heavy rain. Both teams were put to work and the blowing sand was stopped before any damage was done. At this time the fields were a little wet for plowing.

The M.C. corn was planted this week, also the corn on rotations 88 and 89. The teams are busy preparing the seed bed for the remainder of the planting. If it does not rain before the first of the month the third date of planting will go in. The plats are ready for planting now, and planting will be done Monday in case the weather seems to be unsettled. The first date is up to a good stand. The second date is just beginning to show through. Both dates were harrowed this week to break the crust so the young plants could get through.

The sweet clover on the station is ready to cut and will be mowed. The clover made a good showing last year and is making a good showing again this year. It is located so that people in passing get a full view. The alfalfa is making a pretty good showing, since the rain. Winter rye is on an average of about three feet high, and prospects are good for a good yield. Oats may come to the front and make a crop, but it is doubtful. The oats on rotations 58 and 59 are coming up in pretty shape since the rain. Before the rain there was nothing showing on the plots. The oats in the general field average from a few inches to about eight inches in height. They are quite uneven on account of some of them having germinated since the rain. There is a good stand over the field.

Farmers are all busy planting. They are planting a large acreage this year. There was quite a rush to get seed from the station after the first rain. The farmers were well pleased with the seed purchased from the station. Seed was sold to them at 2¢ per pound.

Labor is scarce out-here in Texas. Another man is needed badly, but up to this time one has not been found. A few men want work, but they expect from $5 to $7 per day, which it too much money.

Edgeley:

All spring grains are looking exceptionally well. Early sown grain is about four inches high. Corn is just appearing above the ground. The cool weather of the past week has been ideal for the stooling of small grains, but has been poor corn weather. High winds prevailed almost the entire week. Some blowing occurred on the lighter soils, which did some damage to small grain crops.

Maximum temperature 81, minimum 36; precipitation .22 inches.

Garden City:

With the exception of one rainy day, the week has been quite favorable for field work. We finished preparing the corn and sorghum plots for planting and planted part of the kafir and milo. The cowpeas were also planted this week. We expect to get the rest of the planting completed within the next few days. Crops throughout the county are looking good, although they are somewhat behind what they should have been at this time of the year. The alfalfa is starting to blossom and will be ready to cut in another week. Four inches of rain fell on the night of the 26, and .26 inches on the 27, which helped to brighten things up considerably.

Mr. E. F. Chilcott, of Woodward, Oklahoma, visited the station.

Maximum temperature 92, minimum 46; precipitation .66 inches.

Havre:

The 24 and the 27, during the last week were very windy days, which in some cases in the neighborhood has started movement of the soil with damage to growing crops. Temperatures have been very favorable for crops. The maximum for the season to date was recorded on the 27, that being 85 degrees. Thirty-eight hundreths of an inch of precipitation fell in three showers which has very materially helped the growing crops as well as the grass. The praries are as green as they can be, there being no old grass to hide the new growth. Western wheat grass is making a very pronounced start this season.

Varieties of corn were planted during the week, as well as some of the sunflower plots. Aside from a commercial field of corn, we are about through with all seeding at this time.

Wire worm and cut worm damage is still being reported from some places in this county. A few crops have apparently been entirely taken with them. From reports there are at least three worm pests this spring - the wire worm, the Army cut-worm, and the western cut-worm.

President Atkinson, of the State College at Bozeman was a visitor at the station on the 28.

Huntley:

This has been another week of good growing weather. The nights have been generally very cool, but the days have been warm and windy. Surface soil has dried out considerably and where winter wheat and rye have made a heavy growth, the crops look wilted. Spring sown grain is all up and the stand appears to be good on all plots.

The dry-land garden was planted during the week, and the pasture experiments were started. The rye plot to be pastured in Rotation 652 has made a very rapid growth during the week and now averages about 12 inches in height. Because of the lateness of the season and the advanced stage of the crop, 15 hogs were placed on this plot instead of 10 as formerly. The alfalfa plots average 14 inches in height, and though the stand is spotted, they will afford considerable grazing. The brome grass pastures are in poor shape, the stand having been badly killed out last summer. These plots will have a quota of but two hogs per acre, as compared with six hogs on the broadcast plot, and four hogs on the row alfalfa plot.

Mr. J. T. Sarvis spent Friday, last, at the Station.

Maximum temperature 86, minimum 31, precipitation, trace.

Judith Basin:

The past week has been comparatively cool with high winds prevailing during a greater portion of the time. Except for small negligible showers on the 23 and 25 no precipitation occurred until Friday evening, when a rain of .27 inches was received. It is raining very heavily at the present writing.

All seeding of wheat, oats, barley, flax, peas, and brome grass on the rotations has been completed. With the exception of the nursery and a few plots of sweet clover and root crops, the seeding for the Office of Forage Crop Investigations is finished. The Cereal nursery was also planted during the week. Work on the increase field has been devoted to the sowing of 20 acres of Marquis wheat and 22 acres of oats; double disking 10 acres; harrowing 75 acres; and breaking of about 45 acres of native sod.

Mr. N. F. Woodward arrived on the 24 to take charge of the seeding of the Forage Crop plats.

Maximum temperature 80, minimum 30; average hourly wind velocity 9.7 miles; precipitation .35 inches.

Lawton:

The last rain caused a great amount of washing out and some replanting will have to be done. Fields were in condition to work only one day the past week.

Messrs. Horton and Walkden returned to Wichita the first of last week, after spending 10 days at the station assisting in spraying wheat plats.

Corn plats have been thinned; sumac and sudan seeded; peanuts replanted; orchard cultivated; several plots replanted in field A, and some cultivating done in B the past week.

A wooden trough (1' x 3' x 100') was made to carry the run-off from the pond in the pasture, as a channel several feet deep had been worn and there was danger of the dam being undermined.

Maximum temperature 91, minimum 56; average wind velocity 3.3 miles per hour.

Mandan:

Horticulture.

About three acres of potatoes have been planted. This includes variety trials and distance planting of five varieties. A demonstration farmers garden - area one acre - has been laid out and planted according to a four-year rotation system. Two coulee orchards, consisting of apples, plums, pears, and cherries were planted. The stock consists of hardy and semi-hardy varieties on dwarf and regular stocks. Several thousand of seedling sandcherries, juneberries, chokeberries, and high bush cranberries, were lined out to later furnish material for plant breeding selections.

Last year's budded stock, including pears, cherries, plums, and apples have been cut back. This stock is mostly native Amelanchier, Prunus besseyi, and Virginiana, Viburnum, Crataegus, and Pyrus baccata, and appears to be very promising. The shrubbery groups on the grounds are being cultivated and pruned. Considerable winter killing, particularly of Spireas and Rosa Rugosa, is noticeable. The planting of several hundreds of Geraniums and Cannas, in semi-formal beds on the ground has just been completed. All orchards and plant breeding selection plots have been cultivated once.

Agronomy.

The rotation plots of both main and south fields were trimmed during the week and the roads thoroughly disked. Millets and sorghums were planted on the 25 and 26.

Soil samples from the M.C. wheat continuous cropping showed moisture penetration from one and a half to two feet.

Maximum temperature 82, on the 29, minimum 37, on the 25; precipitation .59 inches.

Cooperative Grazing Experiment.

Another carload of steers was received on the 28 for the grazing experiments. Transfer from the reserve pasture to the regular experimental pastures will probably be made during the coming week.

Aboriculture.

The rain of .69 inches on Monday evening saved the cuttings and small ash trees planted last week, from drying in the field. It also enabled us to plant the conifers that had been waiting for about a month. Last week 31,000 small ash; 2,000 small caragana, and 50,000 Northwest poplar cuttings were planted. This week 6,600 jack pine; 7,200 yellow pine, and 1,000 red pine were planted. The last mentioned is for experimental purposes only, as it is not known whether this pine will withstand the severe winters and drought conditions of this section.

Mandan, continued:

Aboriculture.

In the field the box-elder, caragana, and buffalo-berry seed has germinated, and are through the ground in fine shape. The Russian olive is much slower, and the ash has hardly begun to show signs of life. Unless we receive more rain than we have up to this time, we will be again without a stand of ash. Those transplanted this year were small two-year old stock that were saved to be used in place of last year's total failure.

North Platte:

Another full week of field work has been accomplished without interference by the weather. Rain is threatening today but the week for the most part has been bright, clear, and warm. A hail storm did considerable damage in the town of North Platte Monday night, but only the border of it reached the station buildings, and on the table there was no precipitation at all. Corn listed on the 11 was replanted on the 26. The soil in the bottoms of the lister furrows was badly crushed, and it was feared that a poor stand would result. Winter wheat is now making a good growth. Spring wheat stands are rather poor.

Scottsbluff:

The past week was characterized by unusually high wind movement and consequent high evaporation. A small rain cloud passed over on the 25, and .04 inches precipitation was recorded. In direct contrast to the cold, wet weather the first part of May, the last part has been unusually dry and windy. Precipitation from May 1 to May 15 totalled 3.61 inches, while from May 15 to date, we have had only 0.33 inches. Surface soil is becoming very hard, especially in areas untilled since the last rains.

The greater part of the week was spent in shaping up the plots and cleaning the roads and alleys.

Stations visitors included Professors Werner and McFarland from the State University, potato specialists who are conducting experiments with potatoes under irrigation.

Maximum temperature 81, minimum 37; precipitation .04 inches.

Sheridan:

This has been another week quite favorable for field work. The corn in the rotation plots was planted Monday. Corn in the varieties and for feed was planted Tuesday and Wednesday, last. Ground for sudan grass, sorghum, beans, and sunflowers was prepared for seeding. Some of the ground that was worked when rather wet is rather cloddy, but the most of it worked up in fair condition. The millet, sudan grass, and beans in the variety trials and methods of seeding have been seeded.

Vegetation has been making a fair growth. The peas in the variety trials are just beginning to emerge. Winter wheat is looking rather spotted, growth being uneven where a fairly even stand was apparent a week or two ago. Alfalfa and brome are making a rapid growth.

Mr. Sarvis visited the station Thursday on his way from Ardmore.

Maximum temperature 81, minimum 35, precipitation trace.

Tucumcari:

With the exception of a couple of days the week has been warm and favorable. The first date of planting is up in good shape and the plots are ready for the second date. Planting will begin in earnest about June first.

The new team arrived from Amarillo in good condition and field work has been advanced considerably. Another man was put to work this week, and the work is progressing nicely. Three teams are busy getting the fields in shape for planting.

The station water supply was exhausted this week. There was only one well that was pumping and the mill over it is worn out so that the supply ceased. An engine pump-jack was put to work and the water situation was relieved. The north well will have to be pulled and repaired before it will pump water, and this cannot be done unless field work is delayed on account of rains. It seems that all the trouble had to come at once. The electric light line became shorted after the storm or during the storm a short time ago, and it was found that the pipe in which the wires were laid was full of water. The expense of fixing the line back in the pipe would be pretty heavy. The wiring will be put overhead so the buildings can be lighted and at the same time very little expense will be involved. The old wires can be used for the pole wiring and with a few minor changes the line will be as good as ever.

Woodward:

The weather for the past week has been very changable; Sunday was very cool, Monday, Tuesday, and Wednesday warm, and Thursday and Friday cool with rain both days, and warm again today - Saturday. Most of the seeding on the experimental work was completed the fore part of the week. Seed planted the first of the week and the latter part of last week is emerging. The tractor was kept busy with the spring tooth harrow, plow and disk whenever it was dry enough to work in the field. Part of the alfalfa was cut just in time to get rained on. New tags have been made and put up in the vineyard. A good many of the grapes are in bloom and several varieties have set fruit.

Mr. E. F. Chilcott left here the afternoon of the 28 to visit the Kansas stations.

Maximum temperature 92, minimum 50; average hourly wind velocity 5.9 miles per hour; evaporation 1.447 inches; precipitation .91 inches.

Belle Fourche: report ending May 22.

The worst storm in years occurred on May 10. During that day four inches of rail fell, most of it falling between 4.00 and 6.00 p.m.. The soil at the time this rain started falling was saturated with moisture so that practically the whole amount ran off. The damage done to the fences, bridges, dams, and irrigation canals was enormous.

The rain canals on the irrigation project are in a very bad state. There are eleven serious washouts in the North canal and four in the South canal. Nearly every lateral has from one to several breaks in it. It is estimated that it will take at least five weeks to repair the damage done.

Practically every dam in this section, and almost every fence that borders along a water course is gone. The dam on the Experiment Farm is still standing, but this has been used as a road for years and was exceedingly well packed. The water washed out the spillway to the dam and took about 20 feet of the end of the dam with it. Water several feet deep flowed over the full length of the dam for several hours before the flood subsided.

Belle Fourche, continued:

Every railroad running into the hills was washed out. Since the storm this section of the county has been practically isolated. It will be at least June 1 before the branches of the Northwestern Railroad running into Rapid City are able to operate. The first train to Newell, carrying eastern mail, arrived on May 22.

The rainfall for the week ending May 15 was 5.68 inches, which is within .06 inches as much as was ever before recorded in a month at this station. The precipitation for May to date is 7.26 inches.

It was about May 18, before the soil dried off enough to permit field work. Since that time there has been practically no rain and farmers have been busy trying to get in their crops. There will be more late grain seeded in this section this year than was ever seeded in any other year on this project. The acreage of small grain will not be over 75 per cent of what would have been seeded in a favorable year.

Belle Fourche:

The past week was the most favorable for field work of any week during the present season. Seeding all over the project has been rushed, and a large proportion of the small grain acreage is now planted. Alfalfa shows promise of producing an exceptionally good first cutting. Winter grains that survived the winter are now doing very well.

The clover in rotation 11 is completely winter-killed. No winter-killing of alfalfa has been observed.

The maximum temperature for the week was 81, minimum 37; precipitation .44 inches.