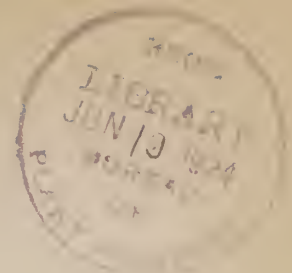


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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUL 5 1924



REPORT FOR WEEK ENDING JULY 5, 1924.

HAVRE:

The past week has been the warmest of the season with no precipitation. All grains are shooting rapidly with barley and early seeded wheat headed. Some of the early wheat, barley, and oat varieties are also headed.

Unless very unfavorable conditions prevail in the near future, this section will have a fair crop this season. With one more good rain the grain crop should be very good.

The first cutting of alfalfa hay was stacked the past week. This was rather rank with a high moisture content. Uniform curing of hay has been difficult.

Maximum temperature 92, minimum 45.

JUDITH BASIN:

In contrast with the weather of the previous month, the past week has been quite hot and no precipitation was received. Very little wind movement took place and the humidity was comparatively high. Since there is an abundance of moisture in the soil the warm weather has been unusually favorable to crop growth.

Corn has commenced to assume a healthy color and is making a vigorous growth. Winter wheat is headed out, and fall rye was turned under for green manure. Sweet clover has made a remarkable growth and is ready to cut. Alfalfa appears to be very spotted and apparently much of it did not recover from the effects of the drought during May. Harvesting of alfalfa has commenced.

Field work has been devoted chiefly to plowing of summer fallow, cultivating row crops, cleaning alley-ways and trimming plats.

Maximum temperature 86, minimum 41; precipitation 0.

HUNTLEY:

The first continuous, real summer weather of the season was experienced during the past week. Practically every day was hot with warm nights as well. Corn has improved in growth and appearance, but small grains are beginning to look dry and where the stand is thick some burning is in evidence. This is especially true of winter wheat and rye. Spring grains will need rain in order to fill.

Hay cutting and raking was completed on the Dry-Land fields early in the week, but the crop has not yet been hauled in. Roads and alleys were given a second cultivation and some hand hoeing of row crops and alleys was done. Winter rye in the pasture rotation was mowed for the second time as the growth was getting too coarse to be palatable.

Maximum temperature 93, minimum 42; precipitation .16 inch.



DICKINSON:

The weather of the week was favorable for grains and hay crops but still too cool for corn.

Small grains in general are fair to good. Wheat is relatively less promising than oats and barley. Winter wheat is fully headed and spring wheat will begin to head during the next week. With normal July rains about an average crop should be harvested. Winter rye will be ripe in about a week and is better than average.

Alfalfa and sweet clover on the Rotations was cut July 3. The yield of all perennial hay crops will be about average since the stands are thicker than usual due to the wet season last year.

Corn is very late, most fields being only 0-8 inches high and the stands thin and weedy.

Fallow on the Rotations was worked July 5 with the duck-foot cultivator.

Two men arrived July 5 to begin work of erecting the Wind Electric plant blown down by the storm of June 18.

Mr. Emerson of the Mandan station called July 1 on shelterbelt inspection work. Mr. R. S. Towle and family visited the station July 5.

Maximum temperature 80, minimum 40; precipitation .29 inch.

June precipitation was 3.26 inches. Total precipitation to date for the year is about 2 inches below average.

MANDAN:

Agronomy.

The past week has been favorable for field work. No rain fell during the week.

With the exception of one day, June was cloudy every day during the month, and was nearly equal to June, 1915 for cloudiness.

Corn and sorghum were cultivated in the feed fields. Alfalfa, sweet clover, brome-grass, and crested wheat grass, were harvested in the Forage Crop tests.

Mowing has also been started in some of the feed fields. The indications are that a very good crop of alfalfa will be obtained; much better than was expected. The harvest of the forage crops is from two to three weeks later than usual.

Sweet clover in the rotations was turned under for green manure early in the week.

Maximum temperature 82, minimum 47; precipitation 0.





Mandan, continued:

## Cooperative Grazing Pasture.

The cattle were given their usual weighing at the end of June. The gains were all good for the month. The cattle in the rotation pasture made the lowest gain for the month. The pasture was short early in June before the rains came, which may account for the lower gains.

The gains per head made in the different pastures during the month of June are given below. All pastures carry 10 head of 2-year old steers, except the rotation pasture, which carries 16 head, and the brome-grass pasture, which is carrying 14 head.

<u>Pasture.</u>	<u>Gain in lbs. per head.</u>
100-acre	114.5
70-acre	112.5
50-acre	115.57
30-acre	119.5
Rotation (70 ac.)	90.9
Brome (35 ac.)	130.4

The gains in the brome-grass pasture were a little higher than in 1923 for the same period.

All pastures are in excellent condition for grazing at the present time.

## Horticulture.

Trees and garden crops have been growing rapidly during the warm weather of the past week, and prospects for good yields are favorable. Mock orange, lilacs and roses, are now blooming on the grounds, and the lawns are green and in good condition although no irrigation water has been applied this year.

The orchards and gardens were cultivated and hoed during the week. Onions, beets, carrots and parsnips have been thinned in the acre-garden. The first peas were picked on July 3.

## Arboriculture.

A. W. Emerson and R. W. Hansen started inspection of shelterbelts on July 1. E. J. George started July 5. The following itinerary indicates the territory to be inspected by each:



Mandan, continued:

	<u>Emerson.</u>	<u>Hansen.</u>	<u>George.</u>
July 1	Dickinson, N.Dak.	Flasher, N.Dak.	
2	Glendive, Mont.	Carson, N. Dak.	
6	Plentywood, Mont.	New England, N.D.	Washburn, N.Dak.
12	Glasgow, Mont.	Mobridge, S. Dak.	Ryder, N. Dak.
21	Havre, Mont.	Belle Fourche, S.D.	Williston, N.Dak.
27	Shelby, Mont.	Sheridan, Wyo.	Terry, Mont.
Aug. 1	Great Falls, Mont.	Cheyenne, Wyo.	Kildeer, N.Dak.
3			Mandan, N.Dak.
5	Moccasin, Mont.	Lusk, Wyo.	
7		Ardmore, S. Dak.	
11	Billings, Mont.	Phillips, S.Dak.	
18	Miles City, Mont.	Winner, S. Dak.	
23		Onida, S. Dak.	
27	Mandan, N. Dak.	Mandan, N. Dak.	

Visitors of the week included Mr. W. R. Chapline, In Charge, Office of Grazing Studies, Washington, D. C.

The Annual Legion State Convention, meeting in Mandan the first half of the week; the unveiling of the statue to Theodore Roosevelt on Wednesday, the 2nd, and the Mandan Roundup, during the latter part of the week, combined to bring large numbers of farmers to Mandan. Many visited the station, and all possible has been done to explain the work, and answer the many questions asked.

**BELLE FOURCHE:**

The drought continues unbroken. The only rain during the week was a slow rain of .21 inch on the 29th. This hardly settled the dust. The temperature remains moderate and wind velocity has been below normal. These two factors have served to keep spring grains from suffering. All plats of spring grain are now well headed and are apparently in thrifty condition. No sign of firing has been noticed. Soil samples, however, show that practically all of the available moisture has been used and that rain must come soon or serious damage will result.

The winter grains have been firing for the last ten days. At least two-thirds of the leaves are dead and the remaining ones are nearly so. The heads of the winter wheat seem to be filling fairly well in spite of this and show promise of a fair yield. The rye is not filling as well as the wheat.

The yields of the hay crops were as follows: Alfalfa .39 ton, Brome-grass 1.19 tons, and Sweet clover .73 ton.



Bellefourche, continued:

The total rainfall for June was 1.27 inches. This was distributed in small showers. The largest amount of rain in 24 hours was .21 inch on the 29th. There were 18 days during the month with a trace or more of rain. The rainfall for the first six months of the year was 4.42 inches. The average rainfall for this period is 8.36 inches.

Temperatures ran low during the whole month. The absolute maximum was 87.

Maximum 89, minimum 43; precipitation .21 inch.

ARDMORE:

Weather conditions continue extremely deplorable. The total precipitation for January 1 to June 30 was 4.84 inches. Last year the precipitation during June alone totaled 5.93 inches.

Small grain crops now have advanced to a stage of development that rain probably would be of little benefit to them. Most of the plats will not be worth harvesting. A 40-acre field of oats probably will be plowed under next week for green manure.

Corn and cane crops still are making a remarkable growth considering the conditions, but both crops are late and it is not expected that they will make much yield.

Pastures on the station and in the surrounding country are the poorest in the history of the station. Farmers generally are very hard up, and will have to ship out all their stock before winter.

ARCHER:

The weather has continued dry with gentle breezes, for the most part from the south and east. The humidity has been moderate.

The winter wheat which made rapid growth during the early part of June is burning considerably on the fallow plats. That seeded on oat stubble did not make the rank growth and standing the dry weather much better.

The spring cereals are still in good shape but unless rain comes very soon the early seedings will burn. The corn and sunflowers have made rapid growth. These crops on the Dry-Land plats are being cultivated the second time within a week in order to cover weeds more completely and save hoeing.

The clover hay is being hauled to the barn, today. It is in the best of condition.

Maximum temperature 79, minimum 41; precipitation 0.



NORTH PLATTE:

Dry weather continues. No rain has occurred during the week. The total for June was 1.90 inches at North Platte, only .19 inch occurred since June 11.

Winter grains are ripening rapidly but drought injury is less than would be the case if temperatures were high. Unless moisture is received soon, spring grain yields will be considerably reduced.

COLBY:

The weather remains cool and dry. Two showers totalling 0.43 inch fell the first of the week. There was not sufficient precipitation in either of these showers to do much good. Winter wheat is ripe enough to bind. The straw looks ripe but the grain for the most part is in good stiff dough, with some kernels which are in the soft dough. Their kernels are going to be of good size and fair plumpness. Just enough harvesting was done today to get the binder in good working order. Cutting of winter wheat and Prelude spring wheat will start the first of the week. Most of the plats will do to harvest now. Some of the plats are very uneven and show the marginal effect to a pronounced degree. On the plats where the winter wheat has suffered most the short straw, about a foot in height, shows a well developed grain.

Spring wheat for the most part will not make much, if anything, unless a good rain comes soon, as there is some drying up before the heads emerge. Oats are in the same condition. The fallow plats of both of these crops should make fair yields, however. Barley is thin but may make a fair crop. The spring plowing in the MC- series of the spring grains are thin but look fairly good.

Corn on surface planted is growing fine. The commercial field of corn is growing nicely and was thrown in this week. All sorghum plats were cultivated during the week. Those plats which were replanted do not show a stand at the present time, in fact none is up. Thinning of corn was completed and a start was made at thinning sorghums. The last date of planting sorghums was made on the 30th.

An attempt was made during the week to get the irrigation plant in working order. Apparently we have not succeeded in our attempt at the present time. Both pumps were pulled and other work done on the two wells.

The late cherries are just beginning to get ripe.

Harvesting of commercial fields in the county will start sometime during the coming week.

Visitors during the week included Prof. John H. Parker and Mr. Ruppert of the Kansas Station. Mr. Ruppert will remain for about one week to assist in the harvesting of nurseries of wheat and barley.





HAYS:

Dry weather continues. The month of June was the driest June on record for Hays.

The temperature during the past week ranged between 43 and 90. Generally it was very agreeable and pleasant for harvesting, especially where binders are being used. It has been a little too green for headers until the last of the week. Harvesting of small grains was finished on the Dry-Land project July 4, except for the spring wheat which is still too green. After harvesting was commenced on the project not an hour was lost on account of bad weather.

Soil samples were taken on the M. C. series of winter wheat plats during the week. One series of kafir plats were cultivated. It has become necessary to spread considerable poison for grasshoppers.

GARDEN CITY:

The past week has been rather cool for this time of the year. All row crops are making a satisfactory growth even though little moisture has been received since planting time.

Most of the winter wheat plats were harvested this week. The yield of most of the plats will be high and the quality is fair.

A plat of Winona flax was seeded this spring on dry land and at present is almost ready to harvest. It will probably make a fair yield. A car load of flax seed was distributed to the farmers of this county this spring by a seed house. Most of the seeding was done late and as a result the crop will likely be a failure. A plat on the station was seeded at the same time the farmers were planting and the same variety of seed was used. The hot winds completely killed the plants which were about three inches high at the time.

Maximum temperature 84, minimum 48; precipitation T.

TUCUMCARI:

The extremely hot weather existing during the fortnight ending June 28 has been followed by unusually cool, cloudy, rainy weather. During the past week precipitation totaling 2.23 inches has been received in five rains, but since all rain fell during the nights, hoeing and thinning has been possible every day, although the soil has been too wet to cultivate. As a result of the wet week, practically everything is in need of cultivation and this will be pursued the coming week if no more rain falls.

Wheat harvest is in progress on the plains south of Tucumcari and yields on early sown winter wheat will be fair; as a result of the dry June much late sown winter wheat and most of the spring sown small grains will be low in yield.



Tucumanari, continued:

Row crops are as a rule unusually late, both on the station and in the surrounding vicinity. Farmers who lister planted crops early had difficulty in securing good stands, for seeds planted shallow did not germinate, due to soil drying below depth of seeding as a result of the extremely hot weather with several days of high wind. Seeds planted deeply did not emerge to good stands, for the surface soil crusted heavily.

Maximum temperature 92, minimum 57; Evaporation 2.112 inches.

Wind velocity, 5.7 miles per hour.

BIG SPRING:

The weather this week has been considerably cooler than the two or three weeks previous, and it has also been a little dryer. All crops seem to be making a good growth in spite of the dry condition of the soil.

The work this week consisted mainly of cultivating and hoeing weeds. The roadways were all cleaned out with the grader.

Maximum temperature 102, minimum 57; precipitation .00 inch.

DALHART:

Another radical change has taken place in this section of the Panhandle. Three small showers have been recorded netting .44 inch. The temperature has been extremely low all week with little sunshine. The precipitation even though small is doing lots of good when accompanied by the cool weather. In spite of the cool days the crops are responding in good shape. The temperature has been so cool over several days that a fire was necessary for comfort in the houses. This is very unusual for this time of year.

The remaining rye plats were harvested during the week and all the oats plats. Oats and barley in the general field were harvested early in the week. Indications are that a good yield will be obtained in spite of the dry hot weather which prevailed during the most of June. However, the yield might have been better with a little more rain. The row crops are making fine growth. The last date of planting which was made June 30 is not up yet. All other dates are growing off good. The first and second dates are about knee high.

Many farmers over this section are now replanting their crops which were either cut off or covered up by blowing sand. In some cases it is due to the soil being so dry at the time they planted that the crop failed to germinate. Where proper measures were taken early in the spring in moisture conservation the moisture has held out and good stands were the result of plantings in such cases. The farmers taking this precaution have no complaint on the weather. The ones now replanting are making up for neglect at a time when it was thought that the soil contained sufficient moisture to mature a crop. Wheat harvest is in full swing in this section now. The present estimate is that wheat will make around 15 bushels. The price here is 94¢ per bushel. Several farmers are running combines.



LAWTON:

The hot days of June were followed by the lowest temperatures recorded in July over a period of 30 years. On the night of June 29 a rainfall of 1.67 inches was recorded. Since that date the weather has been very cool, mostly cloudy, and interspersed with showers and local rains.

Naturally threshing has progressed slowly since the first of July. Those who threshed early, however, are now favored with ideal conditions for plowing. Yields of wheat, oats, and barley, throughout the county are the largest in the history of the country.

The present condition of row crops is all that could be desired except early planted corn and such injury as has been caused by grasshoppers. Early planted corn tasseled and silked during the hot wind period in June and fertilization was poor. Corn that was planted later in the season is silking and tasseling under optimum conditions.

Corn that is adjacent to alfalfa or small grain fields has, in many instances, been ruined by grasshoppers. Farmers throughout the county and adjacent counties continue reports of much damage to cotton. The cool, wet weather of recent date has checked the damage to some extent but the "hoppers" are very numerous and work rapidly on warm, sunny days.

An average of 5 to 10 farmers visited the station each day for a period of about 10 days for the purpose of observing a hopperdozer. Many of the farmers have constructed hopperdozers and have raised the runners sufficiently high to permit the pan being drawn over the tops of the cotton plants. There is considerable doubt as to the success of this plan because it is desirable to keep the pan close to the ground. Wet weather has prevented the operation of the hopperdozers and results are not yet available.

Another day's work will complete the threshing of experimental plats. Eight acres of oats, grown for feed, also await the thresher.

Maximum temperature 98, minimum 52. Total precipitation for June 3.38 inches.

Yields of small grain that have been determined are recorded as follows:

Rate and Date Test.  
W. Wheat.

Seeding Rates. Per acre.	Seeding dates.					
	9/1	9/15	10/1	10/15	11/1	11/15
2 pks.	32.1	40.5	33.5	30.2	22.9	10.3
3 "	31.5	41.6	34.6	34.6	26.3	15.6
4 "	30.2	39.8	36.0	34.3	23.5	13.4
5 "	35.5	37.2	37.4	32.1	26.5	20.4
6 "	38.0	37.7	36.9	33.0	25.7	17.0



Lawton, continued:

Oats Variety Test.

Variety:	Bushels per acre.
Fulghum.....	37.8
Fergusson Fulghum....	40.0
Texas Red .....	35.8
Albion .....	17.2

Oats-Rotation Plats.

Rotation 142.	Oats on Alfalfa sod .....	44.4	Bu. per acre
Rotation 276.	Oats on F. P. Cotton .....	85.6	" " "
Rotation 391.	Oats on Disked cotton .....	68.8	" " "
Rotation 261.	Oats on F. P. Wheat .....	52.5	" " "
Rotation 262.	Oats on Disked Wheat .....	53.8	" " "

Wheat Variety Test.

Turkey Red .....	37.2	Bushels per acre.
Kharkof .....	36.2	" " "
Kanred .....	36.6	" " "
Blackhull .....	35.8	" " "
Fulcaster .....	37.7	" " "
Mediterranean .....	29.0	" " "
Harvest Queen .....	31.7	" " "
Fultz .....	33.8	" " "

Yields of wheat on such rotation plats as have been threshed range from 34 to 46 bushels per acre.

WOODWARD:

The past week has been rather cool, with .39 inch of rainfall. This fell very gently there being no runoff.

Harvesting on the station has been completed, and over the county it is probably from two-thirds to three-fourths finished.

Threshing has been started on the station, but was stopped by rain. Considerable threshing has been done throughout the county south of us and unusually good yields are being reported. The orchard was sprayed with self-boiled lime and sulphur and arsenate of lead. All of the young trees which were set in the orchard this year were watered before the rain. A field of milo is being planted on the dairy quarter today, the 5th.

Dr. Knapp, President of the A. & M. College, Stillwater, Oklahoma, visited the station on July 4.

Maximum temperature 91, minimum 53; precipitation .39 inch.

Evaporation 2.032 inches. Average wind velocity 5.0 miles per hour.







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JUL 12 1924



REPORT FOR WEEK ENDING JULY 12, 1924.

HAVRE:

The past week has been the warmest of the season with a maximum temperature of 92 degrees on the 9th. Two light showers on the 6th and 8th totaled .05 inch. All spring grains are heading except the late seeding. Early barley is filling and winter rye will be ready to harvest within a few days. There has been no hot winds and grains are standing the dry weather in good shape although some methods show firing at the base of the plant. Corn made good progress and is being cultivated for the second time.

Grasshoppers are rather thick in certain localities but the damage will probably be negligible. Sugar beet web worms have hatched in large numbers the last week and in some cases are causing damage to gardens. Their work is confined mostly to Russian thistles which, of course, is a benefit rather than a detriment.

This county in general would be benefited by a rain. A rain in the near future would insure a large crop but without a rain the yields will soon be decreased.

JUDITH BASIN:

The week has been comparatively warm and calm with precipitation occurring on four days out of the seven. The weather has been exceptionally favorable for plant growth. Oats are heading, flax is in bloom and corn has made an unusually rapid growth.

A canker disease, apparently the same as that which is so destructive to Canadian poplars, has made its appearance on most of the Northwest and Antelope Lake poplars in the shelterbelt experiments.

Field work during the week has consisted of plowing summer fallow fields, cultivating fallow plats and row crops, cultivating orchard, hoeing alleys and corn plats, and harvesting alfalfa and sweet clover. All alfalfa and sweet clover hay on the experimental plats has been cut and shocked, and attention is now being given to the harvesting of the general alfalfa fields.

Maximum temperature 35, minimum 41; precipitation .57 inch.

HUNTLEY:

The warm weather of the past week has benefited corn but has caused considerable burning in the spring grains. Winter wheat and rye are beginning to ripen on the plats while these crops in neighboring fields are ready for cutting.

Haying operations were completed on the Dry Land project early in the week. Yields obtained from the alfalfa plantings were very good but those from brome-grass and sweet clover were about average. The type of season was favorable to weed growth in the latter crops which influenced the yields to some extent.



Huntley, continued:

In the pasturing experiments the hogs were moved from the rye pasture to the plat of field peas while the animals on the perennial pastures were placed in the feed lot for finishing.

Station visitors during the week included Mr. J. M. Stephens and Thos. Killan of the Mandan Station.

Maximum temperature 90, minimum 42; precipitation .18 inch.

#### SHERIDAN:

Weather conditions during the past two weeks have been quite variable, ranging from quite cool to quite warm at different times, and with several light showers. All crops have been making rapid growth and weeds also are coming quite thick. All grain crops except the later seedings are headed. Winter wheat in the rotations is beginning to turn. Seedings of winter wheat in the rates and dates of seeding seeded prior to October 15 have lodged considerably. Early varieties of corn are beginning to tassel.

Corn in the rotations has been cultivated the second time, and the second cultivation of other row crops is in progress. Brome, alfalfa and sweet clover in the experimental plats has been weighed and the greater part of it put in the stack. Yields, however, have not yet been calculated.

Week ending July 5 - Week ending July 12.

Maximum temperature	88'	91'
Minimum temperature	44'	44'
Precipitation	.49 inch	.51 inch.

#### DICKINSON:

A rain of 1.30 inches on the night of July 7 greatly improved crop prospects. Small grains now show excellent condition. Early grain is almost fully headed but later varieties and fields have not started to head. Early flax is beginning to bloom. Corn has grown rapidly but is fully two weeks behind last year.

Alfalfa varieties were cut July 7. The best varieties will yield about one and a half tons. An Argentine alfalfa, Chubut, was the poorest, the yield being reduced by winterkilling and disease. About half of the alfalfa hay was stacked and the balance cut and punched.

Peas on the Rotations were plowed under July 12.

The first ripe strawberries were picked July 7. The yield is heavy and the berries of unusual size.

Maximum temperature 37, minimum 40; precipitation 1.53 inches.



MANDAN:

Agronomy.

Weather conditions for the past week have been moderate for the most part. The high temperature for the week was 91° and occurred on Thursday. This was the hottest day of the season thus far. Favorable temperatures and high per cent of sunshine promoted a maximum of growth of all crops. Corn, notwithstanding that it was set back about three weeks by the subnormal temperatures and sunshine of June, is making rapid development. Dakota White Flint in the Variety test is just commencing to tassel. The date of complete tasseling last year was July 9.

It is evident that the stored moisture will soon be exhausted from continuous grain plats. Even at this time firing of under leaves is in evidence. On the heavier soil of the South Field, this condition has become acute, and only immediate rainfall will prevent complete loss for grains are just heading.

Haying has been in full swing all week. Favorable weather has permitted rapid curing and hauling has gone forward without delay. The quality of the hay has been much above the average, and the yield is greater than during any other year since the station was started.

Maximum temperature 91, minimum 47; precipitation .10 inch.

Shelterbelt.

Inspectors visiting Shelterbelt Demonstrations have reported during the week as follows:

A. W. Emerson.

Plentywood, Montana, July 5: Plantings in good shape, roads excellent. Crop prospect best in years.

Scobey, Montana, July 8: Rain near Plentywood. Plantings in excellent condition. New ground in good shape. Crops very good.

R. W. Hansen.

Flasher, North Dakota, July 1: Roads very rough. Rye good outside of haled area. Other small grains backward.

Bowman, North Dakota, July 7: Crops and prairie hay look good although rainfall has been limited. New plantings look fine, very good stands.

Buffalo, South Dakota, July 8: Heavy rain last evening. Crops and prairie hay good.

Hettinger, North Dakota, July 9: Wheat starting to head. Corn ahead of any I have seen. Plenty of rain.





Manian, continued:

E. J. George.

Washburn, North Dakota, July 5: Roads good, crops good, new plantings fairly satisfactory.

Goodrich, North Dakota, July 7: Crops good. Conifers seem to have done badly. Saw a row of Russian olive, replacements shipped this spring - every tree living.

Fessenden, North Dakota, July 8: Crops looking good. Wells County Fair started today - farmers all away from home.

Drake, North Dakota, July 9: Crops and trees look good.

Trees in nursery at the station doing nicely. Fair stand of Chinese and American elm. Northwest poplar cuttings have shown lowest percentage of stand on record, probably due to cold and dry conditions during May. Other species doing well.

Visitors included W. Irving Glover, Assistant Postmaster General; Charles Clark, formerly in charge of Flax Investigations, Office of Cereal Investigations; R. S. Towle, Mrs. Towle and baby, enroute to Sheridan, Wyoming; E. J. Delwiche, Professor of Agronomy, University of Wisconsin; A. H. Shunk, Field Agent for the Land Classification section of the Geological Survey, formerly in the Office of Dry Land Agriculture. An exceptional number of farmers also visited during the week, apparently mostly from points in North Dakota.

J. M. Sterhens leaves Huntley, Montana, today, for Moccasin, Montana; J. T. Sarvis and T. K. Killand, are at Ardmore, South Dakota.

Horticulture.

Strawberries were picked twice during the past week, but the quality was poor. Minnesota and Warfield were the best yielding varieties. A good rain at the present time is needed to size up the berries.

The fruit has been thinned on plum trees in the several orchards. Early blooming varieties of plums are carrying very little fruit, while late blooming varieties will produce a heavy crop.

Peas are yielding well in the acre garden. The final thinning of most root crops is now going on. Corn in the breeding plat has also been thinned.

It was necessary to spray most of the plums for plant lice, which seem to be unusually troublesome this year. Nicotine sulphate was used.



BELLE FOURCHE:

The past week was the hottest of the season. The temperatures recorded were not extreme for this season of the year, but were high enough to start spring grains firing. On the 7th practically all plats of spring grain except those on spring plowing were noticeably affected. Showers and cooler weather on the 8th and 9th stopped the firing temporarily but with the resumption of hotter weather later in the week firing was resumed. The late heads on the wheat and oats are being blasted as fast as they appear.

Practically all of the leaves on the winter wheat and winter rye are dead, and these crops are ripening. It appears that fair yields of both crops will be secured. Barley is also ripening. It is too short to cut with a binder but the heads are filling well and a reasonably good crop seems assured.

The hot weather has helped out the corn. It is now about knee high and the color and vigor are good. Stands are scattered due to the poor germination of corn on spring plowing. It is very evident that the spring plowed corn in the rotations containing hay crops has better stands than that in rotations not containing sod crops. The poorest stand on any plat is on rotation 13 where only 17 stalks have come up on the entire plat.

The sorghum on fall plowing has an excellent stand and is growing rapidly. Very little of that on spring plowing has emerged.

Maximum temperature 96, minimum 46; precipitation .34 inch.

ARDMORE:

Rain amounting to .55 inch on the 9th gave some relief from the long continued dry weather. This precipitation will do little or no good for small grain but will be of material benefit to corn and cane.

Pastures are very short and it is believed that the beef cattle on the 80-acre pasture will have to be removed by August 1.

The Farm Boys' and Girls' Camp held during the week was attended by 42 girls and 20 boys. Eight members of the Extension Department of the South Dakota State College were here to assist in giving instruction.

From fifteen hundred to two thousand people attended the annual Farmers' Picnic on Friday.

Mr. J. T. Sarvis has been at the station all week and will be here part of next week.

Maximum temperature 93, minimum 47; precipitation .59 inch.



ARCHER:

The weather conditions have not produced any precipitation of value to crops. The temperature has been mild, the humidity at times being rather high. Winter wheat continues to withstand the drought fairly well. Other crops are beginning to show the ill effects of continued dry weather.

The work at the station during the week has been devoted to the finishing of the second cultivation of all corn and sunflowers. This work was completed July 11. The hoeing and cultivating of weed patches consisting mostly of *Franseria Discolor*, a *Compositae*. This weed is acquiring the common name of "Fire Weed" because all crops fire wherever it becomes established.

Potato bugs are very numerous and the crop backward. Spraying of this crop will be finished today. The roadways are being cultivated with the duck-foot and road drag in preparation for the annual farmers' day at the station which will be held July 16. At this writing the inside of the dairy barn is being whitened.

Maximum temperature 84, minimum 42; precipitation .11 inch.

NORTH PLATTE:

Dry weather continues. A shower of .40 inch on Tuesday was the only rain of the week. This afforded temporary relief to row crops, but did not check the rapid ripening of small grains.

All but a few plats of winter wheat have been harvested. A start has been made on barley and oats. Practically all small grains on the station will be in shock by the close of the coming week.

COLBY:

Work during the week has consisted principally of harvesting of winter wheat. All plats of winter wheat were harvested during the week; this included D.L.A. plats, method of seeding plats, rate of seeding plats, date of seeding plats and variety plats. Most of the wheat was sufficiently tall to bind nicely. Preliminary estimate of the yields of wheat are from 1 bushel to 35 bushels per acre. Wheat will be of good quality. Some of the wheat in dry spots was very short -- this had suffered from dry weather early -- but the surprising feature of this short wheat was that there was considerable wheat in the short heads.

Some oat variety plats and barley variety plats as well as some of the D.L.A. barley plats were harvested during the week. Some of the barley was too short for successful binding. Rather than mow the plats the bundle carrier was removed from the cinder and a platform or box was built in place of the bundle carrier to catch the loose grain. This, while slowing up the operation of cutting, greatly facilitated the saving of the grain. Barley is going to be too thin on the ground to make any big yields at all. Practically all of the barley in this immediate vicinity is thin on the ground.



Colby, continued:

Thinning of sorghums progressed throughout the week. Sorghums made good growth during the week. Several showers fell during the week. Most of the showers are rather local in extent. One, today, barely reached the station, while less than a mile east one-half inch of water fell.

At the present rate of cutting it will take most of the coming week to finish harvesting of the small grains. Just a good beginning was made towards harvesting the barley and winter wheat nurseries. Most of the material in these nurseries will not do to harvest until sometime during the coming week.

Harvesting is just well started in the county at the present time. Corn is thin and backward. For the most part the sorghum crops are also thin.

Mr. A. L. Hallsted visited the station the first of the week.

HAYS:

The weather during the week was generally cool for this time of the year. The temperature ranged from 50 to 90. .63 inches of rain fell on the night of the 3th.

A heavy wind accompanied the rain storm on the night of the 3th, causing the corn to lodge badly, but most of it has straightened up again. There is, however, a small percentage of it that was broken off.

Chinch bugs are more numerous than they have been here for several years, and are causing some damage to corn and sorghums, especially where these crops are growing close to a barley field.

Grasshoppers are so numerous as to make it necessary to spread poison bran mash frequently.

All sorghum crops on the project which had been planted by listing were cultivated after the rain early in the week. The surface planted crops could not be cultivated without disturbing the roots too much which would have caused more harm than good.

Threshing was commenced Friday noon. During the afternoon of Friday and Saturday 52 plats were threshed. The oats and barley plats were finished, and a few of the winter wheat plats.

Some extremely surprising yields have been threshed. The lowest yield of oats was 39.5 bushels, and the highest 69.4 bushels. The barley yields ranged from 25 bushels to 47.4 bushels. Of sixteen winter wheat plats threshed to date, only one yielded less than 30 bushels, 11 plats made yields above 40 bushels and one made 50 bushels per acre.





Hays, continued:

Spring wheat was suffering extremely with drought. It was cured almost like hay by July 10 when it was harvested. None of this has been threshed. The yield will be very light, - some plats are a failure.

The barley yields would likely have been somewhat higher but for chinch bug damage.

GARDEN CITY:

Growing conditions have been quite favorable during the past week, and most of the row crops are looking good. Although little moisture has been received for the past sixty days, most crops are able to use the moisture already stored in the soil. Showers have threatened on several days but only very light rains were received.

Wheat harvest in this part of the state is well under way and excellent yields are being reported. Yields of from twenty-five to forty bushels of wheat on dry land are being obtained.

Field work this week has consisted of harvesting the remaining plats of wheat and cultivating all row crops.

Maximum temperature 96, minimum 52; precipitation .27 inch.

DALHART:

Conditions here continue very unfavorable to crop productions. The temperature has been high with some hot winds although there has been less hard wind than in June. No precipitation of consequence was recorded during the week. One small sprinkle was recorded netting .03 inch.

In spite of the continued drought, blistering winds, grasshoppers, western army cutworm, white grub, etc., field operations have continued in regular order. The plat fields and increase fields were never in better condition of tilth. They are practically clean of weeds over the entire station and cultivation of everything is completed. The thinning is also finished with the exception of some milo where the stand is ragged and uneven, due to delayed germination in places over the plats. In some places the grasshoppers and other insects have damaged the crops to such an extent that replanting was necessary. Several applications of poison have been made in an effort to check the damage. It is rather a hard matter to do much in way of checking this damage since the station is surrounded by range where the grasshoppers are in untold numbers. The season being so dry has driven them to green pastures which happened, in this case, to be the crop fields. Fortunately the bulk of the experimental work is in good shape and good stand prevails. However, some of it is badly damaged to the extent that the plats cannot be comparable with others.



Dalhart, continued:

In spite of unfavorable conditions the station has been quite popular this year. More picnics have been held here than ever before. Two large ones were held during the present week. These picnics are held at a time so that no interference is made in the station work. Most of the crowd begins to gather around 7:30 p.m. and none sooner than 7:00 p.m. They are good about cleaning up so that no extra work is required. There were somewhat over 500 in attendance this week. Many were people who had never visited here before.

Farmers over the Panhandle are beginning to get rather blue. Many are having to replant and the soil is too dry to work. It makes the situation rather grave under prevailing conditions. Winter wheat is making a pretty good yield, far better than was thought before harvest. Cotton is suffering badly from grasshoppers.

TUCUMCARI:

Cultivating is again in progress, after a rainy period of two weeks, during which time 3.34 inches of rainfall was received. As a result of frequent rains hoeing was the only field operation possible and since July 1 much of the row crop area has become very weedy, due to impossibility of cultivating. With favorable weather all fields and plats will be cultivated before the close of next week.

Wheat harvest was delayed somewhat by the frequent showers, but harvesting of fall sown grain will be completed in this locality within about a week. Yields of winter wheat are estimated at from five to twenty-five bushels, while the average will probably run slightly below fifteen. The acreage planted to cotton was perhaps 25% of the amount estimated in early spring, due to the lack of moisture and windy weather of May and June. Farmers in many cases decided it wiser to risk the sorghums under such unfavorable conditions. Early planted row crops emerged to poor stands in practically every case, while stands were more satisfactory on late plantings. Station stands range from satisfactory to fair, while emergence was very uneven in some cases.

Maximum temperature 93, minimum 59; precipitation 1.11 inches.

Evaporation 1.778 inches. Average wind velocity 5.4 miles per hour.

LAWTON:

Row crops responded satisfactorily and rapidly in growth to the favorable weather of the past week. The temperatures have been moderate, wind velocity low, and the humidity high. Four showers during the week amount to 0.66 inch. The present prospects for sorghum crops is the best that it has been at this time of the year since 1919. The absence of chinch bug damage this year contributes largely to the present encouragement.



Lawton, continued:

The condition of cotton is good. Growth is normal and soil moisture conditions should carry the plants without check for some time. A few blooms are showing and squares are forming in appreciable numbers.

Grasshoppers continue but their damage seems somewhat abated. Interest in the use of the hopperdozer and poisoned bran increases and many satisfactory results are reported.

The results for the season of continuously cropped wheat are as follows:

Previous Crop.	Tillage	Bushels per acre.
Wheat	Late fall plow, shallow	40.3
"	Early fall plow, shallow	38.8
"	" " " , deep	37.7
"	" " " , subsoil	33.2
"	" " " , deep	39.5
"	Disk	40.2
"	Disk at seeding time	34.2
"	Disk as needed	34.2
"	Single list	43.0
"	Single list, manure	46.0

WOODWARD:

Our drought seems to have finally been broken. We have received 2.31 inches of precipitation since the 1st of the month, and 1.44 inches of that during the past week.

Threshing has been started in this community but has been considerably interfered with on account of the rains.

Most of the work on the station during the past week has consisted of fencing, cultivating, hauling manure, picking fruit, cutting and hauling in alfalfa and threshing; these latter two have been considerably interfered with by the rains.

All of the experimental plats have been threshed out are not weighed as yet. Some of them apparently made very good yields. Most of the thinning on the Cereal project has been completed. Some more poisoned bran for killing grasshoppers was scattered during the week.

Maximum temperature 96, minimum 56. Evaporation 2.109 inches.

Average wind velocity 7.8 miles per hour.





WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUL 19 1924





REPORT FOR WEEK ENDING JULY 19, 1924.

HAVRE:

The first four days of the past week were warm. Small grains on many methods of tillage were burning. The last three days have been cool which has relieved the grains to a certain extent. Thirteen hundredths of precipitation was recorded on the 18th.

Barley and winter rye are about ripe and will be harvested the early part of the coming week. The grain on some plats will be light weight.

Corn is making a good growth and is nearly normal height for this season.

The annual Boy's Camp will be held at the station July 22 to 25. Club boys from this and two adjoining counties will be in attendance.

Mr. J. M. Stephens was at the station on the 16th and 17th.

County Agent Robert Clarkson of Teton County, accompanied by farmers from his county, was at the station on the 18th.

Maximum temperature 94, minimum 52; precipitation .13 inch.

JUDITH BASIN:

The week has been comparatively hot and dry. A light shower was received on the 18th but the amount of precipitation was not sufficient to be of any benefit to crops, and only served to interfere with field work. All small grains are commencing to suffer from lack of moisture, but corn and potatoes are making a very rapid growth. Spring wheat and barley have headed out and winter wheat is commencing to turn color.

Field work has been devoted chiefly to haying operations, plowing of summer fallow and preparing for the Annual Farmers' Picnic next week.

Mr. J. M. Stephens was a visitor at this station for several days during the fore part of the week.

Maximum temperature 90, minimum 42; precipitation .15 inch.

HUNTLEY:

Daily maximum temperatures have been high during the past week but the nights were unseasonably cold. Two light showers followed by partly cloudy weather have given some relief to crops which have begun to dry up. Spring wheat, oats and barley will need considerable moisture to carry the crops to a well filled maturity. Corn as yet shows few signs of distress but is beginning to tassel in good shape.



Huntley, continued:

Winter wheat and rye has ripened rapidly during the last few days and in neighboring fields harvesting operations are under way. The principal field work during the week has been the cultivation of fallow, soil sampling and plat roguing.

Maximum temperature 100, minimum 42; precipitation .25 inch.

SHERIDAN:

The week has been quite warm and dry, but on only one day so far has the temperature been above 90. A light shower was recorded on the 13th. Winter wheat is turning fast, and some of the oats are beginning to turn. The early varieties of barley also are ripening. Corn and late forage crops have been making rapid growth. Soil samples taken during the week showed the soil on the wheat plats to be dry to a depth of over three feet, the ground being moist below about that depth. Moisture was found in the lower part of the first foot of corn ground. None of the crops on the station appear to show any lack of moisture at the present time, although the stand of spring grains is not as rank as during both of the past two years.

One half of each plat of field peas, except Kaiser, was cut on the 18th, for forage, the other half being left for seed. Cultivation of all row crops for the second time was completed.

Computation of alfalfa yields shows Ladak to have yielded the best of the varieties in rows, 2700 lbs. per acre. Grimm yielded next at the rate of 2020 lbs. Yields of the same varieties from solid seedings were much higher, Grimm yielding the highest of these plats, 3750 lbs. per acre, with the other varieties in about the same proportion. Ranking of the different varieties was practically the same by both methods of seeding, Ladak being grown only in the rows. In the rotations the plat seeded in 1922 yielded at the rate of 2320 lbs. per acre, and last year's seeding about 400 lbs. less, while the corresponding plats of brome yielded at the rate of 3900 lbs. and 2950 lbs. respectively. Practically all of the hay on the plats was gotten up without any rain on it.

MANDAN:

Arboriculture.

All of the shelterbelt nursery stock has been gone over to remove weed growing in the rows, and in places where the stand is dense the trees are now being thinned out.

Reports from the Shelterbelt Inspectors sent in during the week are as follows:-

A. W. Emerson

Poplar, Montana, July 12. Arrived over rough roads - Broke a spring. Now two days behind schedule.



Mandan, continued:

R. W. Hansen

McIntosh, S. Dak. July 11. Fair roads today - yesterday found them rough and muddy - crops good. Much of the spring grain headed.

E. J. George

Towner, N. Dak. July 10. Crops not as good here as at Rugby. Hot wind for three days burning things badly.

Minot, N. Dakota. July 11. Crops look good here.

Ryder, N. Dakota. July 12. Crops and trees good in this vicinity.

Tagus, N. Dakota. July 15. Crops good. Have seen three plantings of Black walnut, all alive.

Carpio, N. Dakota. July 16. Heavy hail last week took crop completely around Donnybrook.

Horticulture.

Tomatoes have been tied and pruned in the breeding plat. Thinning and hoeing has been in progress in the acre-garden. Peas, beans and cauliflower are being harvested. All vegetables are of very good quality. While the various crops have made excellent growth lately, they are still about 10 to 14 days later than usual.

The blue grass lawns were irrigated during the week. Shrubbery and perennials are doing well. Spirea Fortunei and Sorbaria sorbifolia are conspicuous by their blossoms in the shrubbery, while Delphinium Coreopsis and Gypsophila brighten the perennial border.

Juneberries are being picked, and are better than usual this year. Currants and gooseberries have their usual fair to good crop. Some varieties have been picked. Black currants are also ripening.

The nursery has been irrigated during the week.

Arthur A. Bryan, Office of Cereal Investigations, with headquarters at Ames, Iowa, is here for a few days conducting investigations in corn breeding.

Agronomy.

Haying operations were completed early in the week. From a total of about 55 acres of tame hay land, the yield was approximately 75 tons. This consisted of alfalfa, brome, wheat grass, and a small amount of sweet clover. The weather during the entire period of haying was unusually favorable, which fact is chiefly responsible for the complete success in rutting the hay up.



Mandan, continued:

Rains amounting to .71 inches occurred during the latter part of the week, of which .45 fell last night. Quite general rains have been reported in this section. Precipitation at this time is very timely for considerable suffering of grain crop has already occurred.

Peas for green manure were plowed under during the week.

Hoeing of cultivated crops has been in progress during the week. Maximum temperature 91, minimum 47; precipitation .71 inch.

ARCHER:

Save for two showers of .12 and .16 inch dry weather still prevails. While the moisture received from such showers is small and of little direct benefit to growing crops the temperature is generally lowered. Thus it is that the crops, especially winter wheat, are not burned. Most of the winter wheat plats are turning and preparations are in progress for harvest.

The work at the station has consisted of finishing odd ends of field work and preparing for the Laramie County Farm Bureau picnic which was held at the station July 16, with an attendance of about 500 people. Director of Extension A. E. Bowman, Dean Hill, Professors Quayle, Vass and Westley were visitors from the University, and Mr. Lloyd of the States Relation Service, Washington, D. C. The day, as a whole, was a success.

The work since then has consisted of thinning the sunflowers which are to be kept for seed and hoeing the varieties of corn.

Maximum temperature 92, minimum 48; precipitation .28 inch.

NORTH PLATTE:

Variable weather has prevailed during the week. A severe wind and hail storm on the afternoon of the 12th blew down most of the shocked grain on the station. .75 of an inch of rain fell on the 12th and 13th.

A maximum temperature of 98° was reached on the 17th, but most of the week has been cool.

All small grain has been cut, except last plantings in dates of seeding tests, spring wheat varieties, and spring wheat on the rotation fields.

Corn is developing rapidly.

W. W. Burr and several members of the Nebraska agronomic staff, of the Nebraska Station, visited the station enroute to the meeting of Western Agronomists, at Laramie.





COLBY:

Harvesting of cereal crops was the main work during the week. The harvest on the station is completed with the exception of spring wheat and oats plats. This will require about one day's cutting. Winter wheat is going to unusually good for the prospects that were evident all spring. Barley yields are going to be light, principally because of insufficient stands. Oats and spring wheat yields are also going to be rather less than normal.

Sorghum thinning was continued during the week. Sorghums are just now beginning to show above the ridges, except where the ground was well prepared previous to listing; sorghums planted on land which was worked previous to listing show a much more vigorous growth and a darker color. Corn is just beginning to tassel on the surface planted plats. The listed plats are not so far advanced. They were thrown in during the week. All rowed crops are clean. Corn has showed some tendency to "roll" on some of the warmer days. There have been several showers that had sufficient moisture to give relief from the drought within a few miles of the station but none have reached this far.

Some nursery material was harvested during the week. The orchard was cultivated with the spring-tooth harrow. A field of Sumac sorgo was worked during the week and the balance of the corn was thrown in that had not been thrown in previous to starting harvesting. The new separator arrived Thursday and was set up Thursday afternoon and Friday morning.

The precipitation for the first six months of the year was 0.40 inches which compares with a thirty-seven year average of 9.36 inches. Precipitation for July to date is 0.79 inch recorded on four dates. The precipitation for the months of April, May, and June was 2.53 inches, while a 37-year average for the same three months is 7.59 inches. The lowest precipitation recorded previously for April, May, and June in any one year was 3.59 inches in 1910. Thus we see that we received one inch less precipitation in April, May, and June than had previously been recorded in the lowest of the previous 36 years. Humidity remains relatively high and the evaporation is correspondingly lower than one might think. Evaporation for April, May, and June was 18,907 inches which is the highest evaporation recorded for the past ten years (records available for ten years only), though only 0.013 inch greater than the evaporation for 1918.

Director F. D. Farrell, Professor L. E. Call, Mr. A. F. Swanson, and Mr. R. E. Getty were station visitors during the week.

HAYS:

The weather has continued generally dry with varying temperatures, which ranged from 65 to 103. One day of strong, heavy and hot wind. During the week three light showers fell, which temporarily helped the row crops all of which are needing a good rain. The showers were too light to make plowing good and all having fallen at night, delayed threshing but little.



Hays, continued:

Threshing has been the program of the week. No other work of importance has been done except for the spreading of a batch of grasshopper poison.

Chinch bugs are causing slight damage to some plats of corn and sorghums. One 54 bushel per acre wheat plat has been threshed.

GARDEN CITY:

Growing conditions have been favorable during the past week. Rains have threatened on several occasions, but only one shower measuring .34 of an inch was received.

Most of the sorghum crops have made a rapid growth. Feterita in the first date of planting is now in the boot. Corn is beginning to tassel. The second cutting of alfalfa on the irrigated project was accomplished this week.

Field operations have consisted of thinning the late dates of planting sorghum and the replanted sorghum plats. All listed plats were harrowed.

Maximum temperature 103, minimum 62; precipitation .34 inch.

TUCUMCARI:

Field work has progressed rapidly the past week, cultivating and go-deviling of all row crops being completed, while the harrow followed the go-devil on the listed ground. Crops are growing very rapidly and in spite of the uneven size of plants on many plats, due to difference in date of emergence, the station fields in most cases present a good appearance and are comparatively free from weeds.

M. C. winter wheat was a failure, due to rabbit attack and soil blowing, while a rather light crop of M. C. winter rye was cut this week. Roads and lawns were mown, the orchard plowed between the rows, and the vineyard plowed.

While station crops are late, everything is growing well and stands are satisfactory except in a few cases. The station lawns, shrubs, orchard, and hedges are in excellent condition, while most of the 1924 planted trees in the variety planting are growing well.

Winter wheat harvest on the plains is nearing completion and farmers are enthused over the crop. They state the estimated average yield of 15 bushels is being exceeded in most cases, while most of the grain falls in grade one.

Maximum temperature 97, minimum 62; precipitation .09 inch.

Evaporation 2.387 inches. Wind velocity, 4.0 miles per hour.



ARDMORE:

Rain amounting to .90 inch on the 13th and 14th was of much benefit to corn and forage crops. Some improvement also was noted in small grain plats that were not too far advanced at the time of the rain. There is little chance, however, for any of the crops unless there is a heavy rainfall at an early date.

Some of the plats of small grains were harvested on Friday of this week, and harvesting of plats and fields will be in process next week. There will be a wide difference in the yields of small grain crops this season. Some of the poorer methods will not be worth harvesting and others will make a fair yield.

Maximum temperature 95, minimum 55; precipitation 1.10 inches.

BIG SPRING:

Last night the long dry spell was broken when .35 inch of rain fell. This was the first rain since May, and it did not come any too soon for the crops had begun to suffer, in fact some of the stuff on newly broken land had died. This dry spell will cause all early planted feed to be short but now the late planted crops will mature fair yields.

The first date of Sudan grass was cut last week; the crop was very short and of poor quality. Last week a field of Sumac was cultivated and all plats hoed out; this put everything up in good shape as far as weeds are concerned. This week most of the time was spent in cleaning out the cattle feeding sheds and corralls.

One variety each of peaches and grapes was picked; they had dried up to such an extent that they were of very poor quality.

Maximum temperature 105, minimum 71; precipitation .35 inch.

LAWTON:

Hot temperatures both day and night prevailed most of the week. Although the surface soil dried rapidly, row crops made excellent growth and continue to present excellent prospects for satisfactory yields.

Squares are forming rapidly on cotton and a good many blooms are found. Many of the sorghums are heading and practically all others, except late planted stuff, are in the boot.

Grasshoppers continue their existence with some damage to cotton. Dissemination of poison is necessary in some places although the work is reduced to a minimum.

Threshing of all small grain was completed during the week. The average yield of wheat under all methods of production, exclusive of the rate and date tests, is 33.3 bushels per acre.



Lawton, continued:

Preparation of wheat ground for fall seeding has progressed to some extent. Although there has not been much moisture lately stubble land responds very satisfactorily to the plow.

A light rain of 0.17 on the 19th reduced the temperatures and made atmospheric conditions more favorable to crops.

Maximum temperatures of 101 were recorded on four successive days during the week.

WOODWARD:

We are having excellent growing weather and the sorghums are growing very rapidly. Threshing was held up by wet weather and in the meantime all of the thinning on the D. L. A. Project, with the exception of the broomcorn which was planted late, has been completed. Threshing will probably be completed next week if the weather permits. Part of the plats and several of the fields have been cultivated.

Over a ton of peaches have been picked during the week. We are having the first real peach crop since the station was established, a few plums, cherries and nectarines were also picked.

Maximum temperature 100, minimum 66; precipitation .64 inch.

Evaporation 1.135 inches. Average wind velocity 0.9 miles per hour.







WEEKLY STATION REPORTS

OF THE OFFICE OF

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE



REPORT FOR WEEK ENDING JULY 26, 1924.

HAVRE:

Temperatures for the first five days of the week were cooler than for the preceding week. This accompanied by .39 inch of precipitation aided materially in filling of early grains.

Medium and late seedings are suffering but would make fair yields with a good rain at this time. Some early barley, oats, and winter rye were harvested during the week.

Corn is making good growth. Second cutting alfalfa will soon be ready to cut.

The Club Boy's Camp for Hill and two adjacent counties was held at the station July 21 to 25. While the number of boys was much less than for previous camps, it was, nevertheless, quite successful. The farmer's picnic was held on the 25th with about 400 farmers present. President Atkinson of the State College gave the principal address.

Professor C. N. Arnett of the State College was a visitor at the station on the 25th and 26th.

Maximum temperature 83, minimum 48; precipitation .39 inch.

JUDITH BASIN:

The drought which has prevailed for the past three weeks was broken by a slow steady rain of nearly two days duration early in the week. Although the precipitation was only .60 inch, no run-off occurred and all the moisture was absorbed by the soil. The rain was of great benefit to all spring crops and arrived just in time to save late seeded small spring grains.

Winter wheat is rapidly turning color and the yields on summer fallowed land promise to be exceptionally good. An abnormally large amount of smut is present in fields seeded after September 1, but that seeded earlier in the fall appears to be practically free from smut. Winter wheat, treated with copper carbonate and seeded on the rotations during the first week in September contains from 10 to 15 per cent smut.

The 15th Annual Farmer's Picnic was held at the station on July 24, and the attendance was nearly double that of last year, and was also the greatest of any year with the possible exception of 1916. Between 650 and 750 automobiles were parked on the picnic grounds and it is estimated that from 3500 to 4000 people were present. Aside from the usual program of sports and speaking, there were several special attractions, consisting of big team hitch demonstrations, aeroplane flights, and displays of different makes of combines, threshers and tractors. Speakers for the occasion were: President Alfred Atkinson and Professor C. N. Arnett of the Montana State College, Chancellor M. A. Brannon of the University of Montana, and Chester Davis of the State Department of Agriculture.

Maximum temperature 33, minimum 41; precipitation .07 inch.



HUNTLEY:

The first four days of the week were too rainy to permit field work but drying weather during the last two days has enabled farmers to resume harvesting operations. Winter wheat and oats have ripened rapidly and on the plats these crops are ready to cut. Spring wheat is still quite green except in spots where the crop was beginning to suffer from drought. The recent rains came at a very opportune time to aid in filling spring wheat, barley and flax. Corn has made a good growth and is now fully tasselled out.

Grasshoppers have begun to enter the plats from surrounding fields of ripened grain and from the roadside. One scattering of poison was made during the week with very good results.

Maximum temperature 88, minimum 47; precipitation 1.15 inches.

SHFRIDAN:

The weather has been quite cool during the greater part of the week, but the last day or so has been warm. All grains and corn are beginning to show the effects of a lack of moisture, but very little firing is evident yet. Winter wheat, oats, and barley are ripening fast. Three plats of winter wheat in the rotations and two plats of barley in the varieties have been harvested. The greater part of the winter wheat and oats in the rotations, the early oats in the varieties, and several more of the varieties of barley will be ready to harvest the first of the week. Corn curled badly yesterday, the 25th, but has assumed normal appearance again over night.

Row crops, alleys, and roadways have been cleaned of sunflowers and Russian thistles during the week. Summer fallow in the rotations has been cultivated with the duck-foot cultivator, and the fallow for cereal work is now being cultivated. Fallow has remained more free of weeds than usual so far this season.

Maximum temperature 83, minimum 37; precipitation .13 inch.

DICKINSON:

The weather of the past two weeks has been almost ideal for small grains but still too cool for corn. There has been ample moisture and grains which are just fully headed promise better than an average crop.

On the rotations, Nodak durum wheat averages about 3 feet 9 inches high and Victory oats just a little less. Stands are thick and all grains are cleaner than a year ago. Of the tillage methods, fallow and spring plowing are better than corn ground or fall plowing.

Corn is about two feet high and ready to tassel. Brome on the rotations was cut July 24.



Dickinson, continued:

Flax is past full bloom, about two feet high and looks like better than an average yield.

Stem rust of wheat was first noted July 15 on Buffum winter wheat and Hard Federation spring wheat. Since that time infection has increased very slowly. From all indications the amount of rust will be much less than in 1923.

Maximum temperature 80, minimum 46; precipitation 1.12 inches.  
Precipitation to date in July, 2.65 inches.

MANDAN:

#### Agronomy.

The past week has been fairly favorable for field work. Rain the fore part of the week delayed cultivating to a slight extent.

Fallow was cultivated with the duck-foot cultivator for the second time this season. Sorghum in the feed field was cultivated during the week.

Corn made a good growth during the week, and is now just starting to tassel. It is about two to three weeks later than usual.

Small grain is in good condition, and the indications are that some good yields will be obtained. Some rust has appeared but the grain is so far advanced that the chance of damage is slight.

Mr. A. A. Bryan, of the Office of Cereal Investigations, stationed at Ames, Iowa, has been here the past week in connection with the corn breeding work which is being started.

Rain fell on four days during the week.

Maximum temperature 83, minimum 51; precipitation 1.14 inches.

#### Cooperative Grazing Experiment.

Pastures remain in excellent condition for grazing. The cattle appear to have been putting on good gains during the month.

Needle grass (*Stipa comata*) headed out more this year than usual. The needles are starting to drop, but it will be several days before the grass should be cut for hay.

#### Horticulture.

Currants and gooseberries are now being picked, the Perfection, London Market, and Pomona currants and Carrie gooseberries doing very well. The Perfection was especially large and fine and yielded heavier than other large fruited currants. Some of the seedling currants and gooseberries look promising.





Mandan, continued:

Juneberries are also being picked, the Success yielding heavily this year.

Peas, beans, cauliflower, cabbage, and carrots are now being harvested from the acre-garden. The peas continue to be of very good quality, due probably to cool nights, and the fact that there is still ample moisture in the soil.

The tomatoes in the breeding plat are setting a good crop, and while they are going to be about two weeks late, good results are anticipated for this season.

The sweet corn is also growing well at present. A number of self pollinations have been made during the week in the ear to row planting. Mr. A. A. Bryan, of the Office of Cereal Investigations, has been here during the past week and has given valuable assistance in the starting of this work, which is cooperative with the said office.

Arboriculture.

Shelterbelt Inspection Reports:

A. W. Emerson.

Malta, Montana. July 21. Heavy rain. Excellent plantings here and some good applications for 1925.

Harlem, Montana. July 23. Heavy rain to north yesterday. Crops near here very good.

R. W. Hansen.

Faith, S. Dakota. July 15. Rough roads. Crops fair. Need rain.

Red Owl, S. Dakota. July 17. Dry here. Crops need rain.

Sturgis, S. Dakota. July 21. Crops look good. Hail at Rapid City Saturday with considerable damage.

Gillette, Wyoming. July 23. Roads rough, crops poor.

E. J. George.

Columbus N. Dakota. July 17. Heavy rain here tonight.

Crosby, N. Dakota. July 19. Heavy rain. Crops excellent.

Grenora, N. Dakota. July 21. Roads bad. Pulled out four times today. Had rained for three days. Crops in excellent condition.

Williston, N. Dakota. July 22. Crops excellent, roads heavy.

Watford City, N. Dak. July 23. Heavy storm here tonight. Rye harvest started.

Sidney, Montana. July 24. Crops good. Roads dry again.

Hoing and thinning has been carried on in the tree nursery all the week.



ARDMORE:

The week has been exceedingly hot and dry with no rain of any consequence. The prospects for a corn and cane crop are much poorer than they were a week ago. Corn has reached a stage of development so far advanced that it is doubtful if a heavy rain would be of any particular benefit. Cane is firing badly but will recover in case of a heavy rain. It looks now as though very little silage would be produced on the station.

From all reports Fall River County, without doubt, has the poorest crops of any county in the state. In this section a very small part of the grain will be harvested for threshing. There is practically no native or alfalfa hay, and pastures are in the worst condition for years. Stock is being shipped out of the country very rapidly. Farmers and ranchers are in a critical condition financially and many will be forced to leave the country.

Maximum temperature 45, minimum 43; precipitation .19 inch.

ARCHER:

Dry weather continues and all crops are succumbing to the lack of moisture. The seventeen acre field of barley which was intended for grain for the dairy is being cut for hay. Corn, millet and sunflowers have wilted during the last few days. The dry farmers' forage crops are in danger of total loss due to the continued drought.

On July 23 and 24, a number of the Agronomists, after attending the Western Agronomic Conference, at Laramie, visited the station and attended the Frontier celebration at Cheyenne.

Maximum temperature 90, minimum 43; precipitation .03 inch.

NORTH PLATTE:

During the week the Superintendent and one representative each of D. L. A. and Cereal Investigations, from this station, attended the Laramie meeting of Western Agronomists.

Of the 11 western states, nine were represented by one or more men. The plains states were represented as follows: North Dakota 1; South Dakota 1; Nebraska 9; Kansas 3. Washington representatives of the Department of Agriculture numbered 6. The total number of states outside of Wyoming was 36.

A wide range of agronomic subjects was covered by the program and time was given for the interchange of opinion and discussion.

Officers elected for the ensuing year were: Clyde McKee, Montana, President; D. W. Pittman, Utah, Secretary; and Alvin Kezer, Colorado, member of the Executive Committee. The 1925 meeting will be held at Fort Collins, Colorado.



North Platte, continued:

A good crop of winter wheat is being harvested in western Nebraska in Deuel and Cheyenne Counties, first reports from combine harvesters give yields of 25 to 35 bushels per acre.

Row crops are very backward, but not much suffering from drought is apparent.

Threshing on the station will be begun the coming week. Second cutting of alfalfa was put up during the week.

HAYS:

The weather continues dry. There was one shower of .14 inch but this barely laid the dust. Row crops are needing rain badly. Corn especially is suffering. The temperature ranging from 49 to 104 degrees. There was one day of hot wind.

Threshing was finished Tuesday, the 22nd. Since that date soil samples have been taken on a number of plats, seedbed preparation work started, bottom land alfalfa plats have been mowed (second crop), and considerable poison bait spread for grasshoppers.

Harvesting has been finished on the commercial fields. About 300 acres were harvested with the combine. The balance of the 600 acres of wheat was harvested with binders and headers and the barley, approximately 200 acres was harvested with binders. The station has commenced threshing the bound grain. To date, there has been threshed about 14,000 bushels of wheat. The indications are good for about 10,000 bushels more by the time threshing is finished.

GARDEN CITY:

The weather has been quite changeable during the past week. Showers have threatened on several days, but only one shower netting one-tenth of an inch precipitation was recorded. Most crops are making a satisfactory growth even though little moisture has been received since planting time.

All surface planted corn on the dry land project is in the silk. The lister planted corn is at least two weeks behind the surface planted plats. Feterita in the first date of planting is headed.

Field work has consisted of hoeing alleys and roadways. It was again necessary to spray the potatoes in an attempt to control blister beetles.

Maximum temperature 103, minimum 50; precipitation .10 inch.



DALHART:

Dry weather continues to prevail in this section of the Panhandle. In addition to the dry weather the insect activities continue. The damage by grasshoppers this year is greater than in a number of years. In some localities the damage by this one pest runs up to a large acreage where an entire field has been wiped out. The jack rabbits are doing a big damage this year also. Poison grain put out on the station during the week killed a large number of rabbits.

The crops continue to hold out in good shape in spite of the dry weather. One local shower was recorded here on the 17th which netted .34 inch. Just a quarter of a mile from the station it did not rain at all. Fortunately, the following day was cool and the little rain did some good. All fields have been cultivated since the rain. Soil samples were taken at the regular period. The first and second dates of Sudan are headed and the third date is just beginning. The first and second dates of broom corn are in the boot.

Maximum temperature 100, minimum 54;

TUCUMCARI:

Although the surface soil is becoming very dry, crops have grown well the past week and field work has progressed rapidly. Cultivation has been in progress, hoving has been done on some plats and on portions of increase crops, and thinning of late plats done. With the exception of numerous plats in the north field, in which plants are very uneven in size due to difference in date of emergence, most plats have satisfactory stands and are very uniform.

Mr. J. R. Horton of Wichita, Kansas, Federal Entomologist, has been here most of the week and has assisted various farmers in the control of plant insects and diseases. The corn borer larvae were found on the station corn, but in less numbers than last year. The corn ear worm is prevalent, as usual. Unless the second crop of borer larvae is more numerous than now appears probable there seems a possibility of producing a fair crop of corn on the experimental plats.

Maximum temperature 100, minimum 62; precipitation 0.

Evaporation 2.634 inches. Average wind velocity 5.3 miles per hour.

BIG SPRING:

The temperature during the past week has varied from being extremely warm during the first part to exceptionally cool during the last few days.

Crops in general were benefited by the rain of last week, but not as much as was hoped for. While cotton is making a steady growth, the feed stuff is needing more moisture before much grain will be developed.





Big Spring, continued:

The work this week consisted mainly of cultivating, hoeing, and some harvesting. About eight acres of Sudan grass was cut for the first time; this crop was rather light due to the long dry spell. Other odd jobs consisted of picking peaches and grapes, and cleaning up around the grounds.

Maximum temperature 101; minimum 60; precipitation 0.

WOODWARD:

All of the row crops on the station are making very good growth. All of the plats on the experimental projects have been trimmed and roads disked. The early fall plowing of wheat and rye plats has been completed. Cotton in the variety test, which was planted on June 1, is beginning to form squares. A good many peaches, plums, Compass cherries, and nectarines were picked during the week. The earliest grapes will probably be ripe within a week or ten days.

A trip was made about 12 miles northeast to advise on the control of melon aphid on a 40-acre watermelon patch. The owner of this patch and one of his neighbors, who has about 8 acres, are using the station duster and Black Leaf 40 hydrated lime dust.

Threshing of wheat on the station will be completed today, the 25th.

Maximum temperature 98, minimum 63; precipitation .04 inch.

Evaporation 2.124 inches. Average wind velocity 6.5 miles per hour.

NOTE:

The following instructions have been issued by the Chief of Bureau:

"The Bureau experiences a great deal of difficulty in connection with incoming shipments, in that they are addressed to an individual rather than to the Bureau of Plant Industry, Department of Agriculture, with the name of the individual added. When they come addressed to the individual, the freight and express companies almost always send the notice to the individual instead of to the Department, with consequent delay and often storage charges. These charges cannot be paid by the Department, and as a result further delay ensues before the material is delivered.

"It will be very helpful to all concerned if particular care will be taken to instruct shippers specifically to address incoming packages to the Department, adding the name of the individual. The following is given as a suggestion:

"Department of Agriculture,  
Bureau of Plant Industry,  
John Smith,  
Washington, D.C."

"If care is taken to follow the above suggestion, it will result in speeding up deliveries and avoiding irritating and unnecessary delays"

