WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING AUGUST 1, 1925.

HAVRE:

The past week was cool and dry, but small grains made very satisfactory progress. The medium seeding of small grains filled im good shape. Early seeding of wheat was harvested on the station and combining started to the west where conditions were drier during the past three weeks.

Corn is growing very well. The most of the Northwestern dent is in tassel and some in the silk. The last two days some rolling occurred during the middle of the day. With cool weather corn should make a very good grain yield for this section. Flax is well along in bloom and where not too weedy should make a very satisfactory yield. Flax seeded in April was harvested. Weeds were short in this planting but were very thick.

Mr. Merrit N. Pope, of the office of Cereal Investigations, was a station visitor on the 1st.

Maximum temperature 78, minimum 47; precipitation .15 inch.

HUNTLEY:

Harvest of small grains and flax was completed on the plats early in the week when the late maturing crops on fallow land were cut. Weather conditions since harvest have been very favorable for curing the grain in the shock and although more or less shrunken the grain is of very good color in most cases.

Cooler weather has enabled corn and similar late crops to make growth with the minimum expenditure of moisture from the soil. Although the leaves curl tightly during the daytime, the plants appear fresh and thrifty again in the morning of the following day.

The spring pigs were taken from the plat of peas in the pasture rotation and placed on the "holding pasture" of soy beans and Sudan grass where they will remain until the plat of corn in the regular rotation is ready for grazing. The Sudan grass in this field is not as luxuriant as it has been in former years but the soy beans are better than usual. Both crops at this stage are grazed impartially by the pigs and appear to be very palatable. Gains made on peas were very low as the crop was poor and dried up before much seed was formed.

Maximum temperature 87, minimum 42; precipitation, 0.

SHERIDAN:

Harvesting of small grain was completed during the week, with the exception of the later dates of seeding spring wheat. A large part of the grain about the country still remains to be harvested, however.

Weather continued dry, but fairly cool. The harvest round of soil samples showed the moisture to be about exhausted from the upper 3 feet on land in small grain. On corn ground there appeared to be a fair supply of moisture below the second foot, and some still in the second foot. The appearance of corn remains good.

Maximum temperature 88, minimum 42; precipitation .10 inch.

DICKINSON:

A shower of .60 inch on July 26, followed by cool weather, was of much benefit to grain crops. Considerable damage from hail resulted in nearby localities though none fell at the station.

Since the shower, grains have matured slowly and filled much better than during the hot weather. Some grain is filling fairly well, but the crop in this district will be much lighter than a year ago.

Most of the oats on the main rotations were cut July 27, and the balance on August 1. Oats on the Normal School field, which were reseeded after the freeze, are just heading.

Early varieties of wheat were cut July 31. Field pea varieties were cut July 30. Fallow plats on the rotations were cultivated with the duck-foot the second time during the season.

The seed house and machine shed are being painted.

Visitors included Messrs. T. R. Stanton, J. H. Martin, and J. A. Clark, of the Office of Cereal Invistigations, and J. T. Sarvis, from Mandan, N. Dak.

Maximum temperature 79, minimum 37; precipitation .64 inch.

Precipitation for July, 1.29 inches.

MANDAN:

Agronomy

The past week has been unusually cool and dry. All field work went forward without delay.

Harvest of small grain started during the week. Ripening of the grain is uneven, and some of it has dried up so that the time of harvest has advanced. Nearly all of the oats and part of the wheat has been cut.

Mandan, continued:

Corn still remains in good condition, but is short. It has been delayed by the cool weather, yet with hot weather and the dry condition of the soil, it would, no doubt, dry up.

Alfalfa varieties and the alfalfa nursery were cut for the second time for the Office of Forage Crop Investigations. One small feed field was also cut.

Selfing of Northwestern Dent corn in the breeding rows, has been continued during the week.

The rainfall for July was .33 of an inch. The 50-year average for July is 2.33 inches. The total precipitation for the year to July 31, inclusive, is 10.54 inches. The 50-year average is 11.70 inches. The July rainfall for this year is the least that has been recorded for July since the station started. During the 51 years that records are available for this area, there was only one other July when the rainfall was less.

Maximum temperature 79, minimum 43; precipitation .10 inch.

Cooperative Grazing Experiment

The native vegetation still remains in good condition for grazing. The growth of all vegetation was light for the month. The cattle made fair gains during the month. The gains are above the average, but less than during 1924.

The steers on the new sweet clover pasture made fair gains during the 15 days on the pasture, and about 6 pounds more per head than steers on the reserve pasture during the same period.

Just why the steers in the 70-acre pasture made less gain than the others is not clear. One steer was lame the last few days of the month, and failed to show a gain for the month. The steers in the rotation pasture were getting short of feed, which accounts for their lighter gain.

Mandan, continued:

The following table shows the steer gains for the month of July, and for the 75 days the cattle have been on pasture:

Pasture	Number of Steers	Gain per head for July	75 days
100-acres	10	91.0	211.0
70 "	10	72.0	186.5
50 "	10	83.0	184.5
30 "	10	89.5	164.5
Rotation 70-acres	16	75.9	165.6
Brome 25-acres	10	87.0	180.0
Sw. Clover 10-acres	10	32.0*	.....

* Gain for 15 days.

Horticulture

Work in the sweetcorn breeding plat has been pursued extensively for the past two weeks. About 2200 pollinations have been made with about 500 more shoots bagged. There are a lot of varied types to be found among the 500 selfed ears planted this spring. Several ear rows show such uniformity in the plants that intercrossing of the best types should be possible next year. Rain is needed in the near future, however, or all the work done will not amount to much.

The acre-garden is yielding well considering the drought. Early cabbage and cauliflower have been exceptionally good this season. Tomatoes are due to be late in all plats, owing to non-setting of the earliest blossoms.

Selection work with sandcherries and chokecherries has been in progress during the week. Budding has started today, August 1.

Farmers continue to visit the station in large numbers, and appear mostly interested in the growing of fruit and trees. Mr. Geo. H. Dishmaker, Superintendent Gardens and Parks, Great Northern Railway Company, visited from St. Paul, Minnesota, and has since written for some additional information on tree subjects. The New Salem Girl Scouts, camping in the Tourists' park spent two afternoons at the station. Mr. John H. Martin, of Cereal Investigations, visited early in the week, and Mr. J. Allen Clark, Cereal Investigations, returned this morning for a stay of probably several days. Mr. E. R. Ausemus, Junior Agronomist, arrived the evening of July 28, and took up his duties in wheat investigations the following morning. Robert Wilson returned to the station this morning from an inspection trip in South Dakota and Wyoming.

ARDMORE:

Crop conditions generally have improved somewhat during the past week. The total precipitation during the week was only .67 inch, but the weather has been much cooler. The total precipitation for the month of July was 1.32 inches. The 13-year normal for the same month is 2.19 inches.

Small grain crops are for the most part harvested. The yield in the surrounding country will be fair. On the station there has been less precipitation than in the surrounding country a few miles away. Corn and forage crops now are making a very good growth.

Pastures continue remarkably good, considering the small rainfall for the entire season. Steers used in the grazing experiment were weighed on July 30. The average monthly gain per steer were as follows:-

150-acre pasture	71.5 pounds
80-acre pasture	61.5 "
160-acre rotation pasture	38.1 "

Maximum temperature 90, minimum 42; precipitation .67 inch.

ARCHER:

The outstanding feature during the past week has been the abundance of rain on three successive days. On Monday evening, July 27, the precipitation was 1.56; July 28, .36; and July 29, .59 inches. There was a large run-off on July 27 and considerable on July 29. However, the 2.51 inches has changed the complexion of the prairies and produced marked changes in the appearance of the corn and sunflower crops. The potatoes will be greatly benefited as they were just beginning, in most cases, to put on tubers and were being restrained by the severe drought.

Due to the rain, field work has consisted of renewed efforts in weeding, repair of machinery, plowing of some sod land for trees and the duck-footing in the general field for the 1926 crop of sunflowers.

Mr. Robert Wilson and Mr. Emmerson were visitors at the station, July 27, and 28.

Maximum temperature 86, minimum 44; precipitation 2.51 inches.

AKRON:

All favorable time during the past week has been devoted to threshing. One and one-half days were lost because of rains. The barley, the winter wheat, the oats, and the spring wheat plats on the rotation project were threshed in that order, the spring wheat plats having been finished Friday evening. Today, Saturday, the Cereal Variety spring wheat plats are being threshed.

Akron, continued:

Barley yielded 18.1 bushels per acre on fallow in the M. C. Series. Spring plowing in the M. C. Series yielded 7.7 bushels per acre, representing the average yield, while the sub-soiled plat in the M. C. Series yielded 3 pounds of grain, or .6 of a bushel per acre.

Winter wheat yielded from 2 to 4 bushels per acre on most treatments. There was a marked response among the new rotations established, and on the old rotation block, to fallow treatment. Fallow in Rotation 28 yielded 18.8 bushels per acre, just .6 of a bushel more than the fallow in the M. C. Series. The top-dressed with manure plat on fallow in Rotation 269 gave the highest yield with 27.5 bushels per acre. The manured fallow plat in Rotation 269 yielded next with 23.00 bushels per acre. The straight fallow plat in Rotation 267 yielded next with 20.8 bushels per acre. This is nearly 5 bushels more than the average of the two fallow plats on the old rotation block. The wheat seeded in 18-inch furrows on fallow yielded 13.8 bushels per acre. The two corn ground plats in Rotations 251 and 252 yielded approximately 3 times as much as the corn ground plats in Rotations 26, 81, and 97 on the old rotation block. The manured corn ground in Rotation 252 yielded 2.3 bushels more than the corn ground in Rotation 251. Winter wheat did not respond to fallow in the Method-of-Fallow Series. The highest yield among these 4 plats was 5.8 bushels on the spring plowed fallow. Neither did winter wheat respond to fallow on the Cereal Variety Project, yields from which were reported last week.

Oats yielded from 2 to 10 bushels per acre. The highest yield of 30.0 bushels per acre was obtained on the M. C. Series fallow plat. Oats did not respond to fallow in Rotations 8 nor 81.

Spring wheat yielded from 2 to 5 bushels per acre. The highest yield of 13.5 bushels per acre was on fallow in the M. C. Series. Spring wheat did not respond to fallow treatment in Rotation 5.

Rains totaling .70 inch have revived the corn and the forage row crops somewhat. Most corn will only make stover, but ample rains would still aid the rowed forage crops.

Maximum temperature 96, minimum 44; precipitation .70 inch.

NORTH PLATTE:

Precipitation amounting to .83 inch early in the week, followed by cool weather, made conditions for growing crops more favorable than for some time previous. A start was made on the third cutting of alfalfa but poor drying conditions made progress slow. The hay yield is light.

North Platte, continued:

Two plows were started on the D. L. A. project immediately after the rain, and all plats marked for early plowing have been plowed. The soil was not wet a full plow depth in all places, but thistles were starting rapidly and it was thought best not to wait longer.

COLBY:

Just a few light showers fell during the week. There was none that could hardly be called a rain. In this immediate vicinity the local showers have been light while in a few other localities the showers have been of sufficient volume to furnish precipitation that would do some good. The rainfall at the station during the month of July was 1.50 inches, which fell on eight different days. The highest precipitation at any one time was .39 inch which fell on the night of the 18th. The evaporation remained high through the month; the total evaporation for the month of July being 10.892 inches. With the exception of July, 1916, this is the highest evaporation recorded on the station in the past eleven years, for any one month. The precipitation for the first seven months of the year is 8.48 inches. This may be compared with a 38-year average for the first seven months of 12.02 inches. This shows a deficiency from the normal, or 38-year average, of 3.54 inches, for the first seven months; this may be compared with a seasonal precipitation in which the deficiency for the months of April, May, June, and July is 3.74 inches. The accumulation of the deficiency of rainfall may be shown by giving the rainfall for the months of the year to date and also the 38-year average precipitation.

	Jan.	Feb.	Mar.	Apr.	May	June	July
1925	0.23	0.25	0.47	1.44	3.52	1.07	1.50
38-year Average	0.30	0.60	0.85	2.20	2.42	2.93	2.72

As one might easily gather from studying the precipitation for the months of June and July, the row crops, corn and sorghums, are for the most part very badly burned. The corn is a total failure except in the low places in the fields or in a few favored communities where the seasonal showers were large enough to do some good. The surface planted corn has long since been dried beyond recovery on the D. L. A. project. The sorghums on the project are very fast reaching that state where recovery would be doubtful. In fact, some of the sorghum plats on the project (where a stand was secured) are dried completely. On the commercial fields on the station that were worked quite thoroughly and extensively, the sorghums still could make a favorable yield with a good rain soon. One redeeming feature of the past week has been the cooler weather. The temperature on one night reached 44 and the succeeding night the temperature reached 45 degrees. This is fully 20 degrees cooler than the first half of July.

Colby, continued:

Threshing was completed on the station on the morning of the 28th of July. Since then the main work has been disking of the fields that were in small grain this year, cultivating the orchard and some fields of sorghums, and resetting one-half mile of fence. The latter was made necessary due to the fact that the road in front of the station was made six feet wider and our fence had to be set back three feet to the new property line. The bindweed areas that are still under cultivation were also worked during the week.

Mr. E. F. Chilcott, of the Woodward, Oklahoma, Field Station, visited the station the first of the week.

HAYS:

Temperatures for the week have been lower than the normal for July. Maximum for the week, 99, minimum, 49. Precipitation 3.11 inches.

Precipitation for the month of July was 6.34 inches on the Dry Land Project, and at the station buildings, 6.73 inches, or double the normal for July.

Although the corn crop, especially that planted early, was damaged by drought before the rains set in, it now looks like there is a chance for it to make some grain. All sorghums have made good recovery and look good for a good grain crop. However, our rains have been quite local in character and it is reported that crops are suffering for want of moisture in some of the adjacent localities.

The ground has been too wet for much field work during the week, except for the first two days which were spent in cultivating fallow and fall plowed ground, all of which was getting weedy.

Chinch bugs have damaged more or less the milo on listed ground which was less vigorous than that surface planted on plowed ground.

Mr. E. F. Chilcott was a visitor at the station July 27 and 28, having left early in the forenoon of the 28th for Garden City.

GARDEN CITY:

Two showers totaling .47 of an inch of precipitation were received in the early part of the week. These showers combined with low temperatures the last five days have enabled growing crops to hold their own. Sorghums growing on fallow are making a satisfactory growth while those on ground cropped last year are standing still. Cowpeas seem to be withstanding the drought well.

Garden City, continued:

Some work was done this week on early fall plowed plats in order to get the larger clods broken up. Because of the dryness of the soil little could be accomplished.

Mr. E. F. Chilcott was a station visitor this week.
Maximum temperature 104, minimum 46; precipitation .47 inch.

DALHART:

This has been a week of cool weather and plenty of precipitation. The rains have been general and have cooled things off over the entire panhandle section. In some sections not far from Dalhart, seven inches of rain is reported. The total rainfall recorded here for the week was 1.57 inches. All of this rain came in slow steady downpours so that there was no washing or runoff from fields. The rain was sufficient to cause the canyon to flow all week. For one day it was so high that cars could not cross. One car tried to cross and was washed off the bridge, the occupants were uninjured and the car was removed within a short time as plenty of help was available.

The only field work with teams was done the first of the week before the rains. The whole north field was gone over with the cultivators for the milo and cowpeas, and the kafir and corn with the harrow. The rain came Monday night and no further work with the teams was accomplished in the fields. The remainder of the week was spent in working of grain heading baskets, hauling gravel for roads where washing has occurred, mowing, dragging the roads, hoeing, etc. If no other rains are recorded before the first of the week the field work will be resumed. There are plenty of weeds coming after these late rains to make up for the lack of weeds in the early spring. The plats, however, are clean except for the M.C. fallows in the south field and they have only a few scattering weeds and are too wet to work. The field cultivator will make short work of them as soon as it can be used. Most of the weeds were in the general field which was cropped to oats and barley last year and then only on the south end, extending nearly the full length of the field. Cool, moderate winds prevailed all week.

Prospects for a good crop here are very flattering. The rains could not have come at a better time by special order. The first two dates of milo, feterita and the first date of broom corn were heading and the milo and feterita will be short. The broom corn will make a good yield. The other crops were holding out so that they are heading now since the rain and never looked better. The varieties are not heading yet as they did not emerge until after the rain the latter part of June. They are making rapid growth, however, and stand a chance to make excellent yields.
Maximum temperature 96, minimum 53.

TUCUMCARI:

Six rains, totaling 2.45 inches, the past ten days revived all crops and brought the total precipitation for the year to date to 7.00 inches, only about 3 inches below the twenty-year average for this period. July rainfall totaled 3.09 inches, while the total for the preceding six months had been only 3.91 inches. Late crops are now looking well, while early planted plats which headed during the drought promise a light yield, for heads are small, and suckers which may form will probably not mature heads.

As a result of the recent general rains, farm and range conditions are in much better shape. Many row crops were abandoned during the drought, but where weeds were kept out there is still a possibility of fair yields. Grass was short over the entire northeastern portion of the state, but new cattlemen are much encouraged. Within the past ten days many farmers have planted cane and drilled millet, for many of them had planted no feed crop previously.

Work the past week has consisted of making heading baskets during rainy weather, hoeing, cultivating, and disking orchard, vineyard and tree rows.

Mr. J. R. Horton, In Charge of the U. S. Entomological Laboratory, Wichita, Kansas, was here the first of the week, making a survey of the Southwestern cornstalk borer. During the past few years this pest has probably reduced the corn yield one-third in this locality, but this year does not appear very serious, possibly due to the fact that most corn was planted late. Infestation was found to be about 40% on the oldest station corn, while no infestation was found on later plantings. The writer accompanied Mr. Horton to Dalhart, via Clayton, making examination of corn fields en route. Above the 5000 foot level very few borers were found, while no borers were found on the Dalhart station. According to Mr. Clemmer, this pest has been found there in previous years. Crops and ranges in the vicinity of Clayton, Dalhart, and Nara Visa are in much better condition than near Tucumcari, for these places received much more May rainfall.

Maximum temperature 97, minimum 55; precipitation 1.01 inches. Evaporation 1.855 inches. Average hourly wind velocity 4.4 miles per hour.

LAWTON:

Gently falling rains to the extent of 1.68 inches during the first half of the week brought relief from the intense heat, added cheer to farm life, and renewed hope of crop production. Cloudy skies and comfortable temperatures prevailed throughout the week with a maximum of benefit to cotton and to some of the sorghum crops. There was no loss of water by runoff and the water requirements of live stock continue in an aggravated form for many men.

Lawton, continued:

Practically all of the water was absorbed by the surface soil, penetration extending to a depth of about 8 inches where cultivated crops are growing.

Where chinch bug injury has not been severe, grain sorghums have renewed vigor and growth is quite rapid. Climatic conditions following the rains were particularly favorable for cotton in that the abortion of young squares was almost negligible. On the other hand, if moisture conditions do not continue to improve the small plants may be too heavily fruited.

Although the climatic changes of the past week are highly appreciated and of much benefit, the lack of soil moisture is only temporarily relieved.

Cowpeas were turned under for green manure on the rotations August 1. The vegetative growth was about one-half of that which is usually produced.

Preparation of land for fall seeding of wheat and barley is going forward rapidly and satisfactorily.

Although it is considered very late in the season to plant feed crops there is quite a demand for feterita, millet, and darso.
Maximum temperature 106, minimum 55.

WOODWARD:

The cloudy and rainy weather of the last week continued through the fore part of the present week. A total of 1.33 inches of rain fell in four showers, varying from a trace to .93, the latter falling within about an hour. This rain was driven by a heavy wind, but very little damage was done, and the soil was in excellent condition to absorb it rapidly.

Crops which were not too far advanced are now in excellent condition, and are growing rapidly. All row crops on the D. L. A. project, with the exception of the corn, were cultivated just before the last rain. The cotton variety and date and rate tests, and cowpea variety and the late planted corn varieties were also cultivated.

Some manure has been hauled out, and one small wheat field listed. Not much other field work has been done. Other work has consisted of cleaning up lawns, fence rows, grading up roads and around the new dairy buildings. Some peaches, plums, and grapes have been picked. The crop on most varieties of peaches is light. Grapes will probably average about the same or a little better than last year.
Maximum temperature 104, minimum 54; precipitation 1.33 inches. Evaporation 1.548 inches. Average hourly wind velocity 4.2 miles. Precipitation for the year to date, 9.59 inches. Average for same period 14.07 inches.

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REPORT FOR WEEK ENDING AUGUST 8, 1925.

HAVRE:

The past week was dry and the days were warm. The nights, however, were cool. While corn rolls some during the day, it is not firing and has made fair progress. Many of the silks are brown.

All spring grains on the rotations are harvested and most of the varieties. Second cutting alfalfa hay under irrigation was stacked.

Professors F. M. Harrington and H. E. Morris, of the Montana Experiment Station, were at the station on the 3rd. Mr. E. Z. Russell, in charge of Swine Investigations, Bureau of Animal Industry, visited the station on the 5th.

Maximum temperature 95, minimum 44; precipitation 0.

JUDITH BASIN:

The week has been moderately warm and the drought which has prevailed for the last month has continued unbroken except for a light shower of .18 inch on August 3. The total precipitation for the month of July was only .52 inch, or nearly 1.50 inches below normal. All small grain crops, however, have withstood the dry weather much better than might be expected. Winter wheat on summer fallow will yield in the neighborhood of 30 bushels per acre and yields of early seeded spring grains apparently will be slightly better than average.

Field work has consisted primarily of harvesting operations and the cultivation of corn. Harvesting of small grains on the rotations and all large commercial fields has been completed.

Both wells on the station have become practically dry and it has been necessary to haul water for household purposes and livestock.

Visitors during the past week were Mr. O. C. KuKula, of Czecho-Slovakia, and Mr. M. N. Pope, Mr. M. A. McCall, Mr. J. H. Martin, and Mr. K. S. Quisenberry, of the Office of Cereal Investigations.

Maximum temperature 88, minimum 46; precipitation .18 inch.

HUNTLEY:

Threshing of all small grains and flax from the Dry-Land plats has occupied a good share of the week. While average yields have not yet been calculated it appears that wheat and barley will be about normal while oats and flax will be less than the average in yield. The range in yield of spring wheat was from 1.8 to about 34 bushels per acre; oats from about 4 to 58 bushels; barley 2 to 34 bushels and flax 2 to 10 bushels per acre. The quality of the wheat was very good but the other grains were poor, especially oats which in many cases was little better than hulls.

Huntley, continued:

The prolonged drought is beginning to show serious injury to the corn, beans and sorghum crops. In many plats the foliage is burning and looks gray. Silk on the corn appears to be drying up although still green in color. Beans are in bloom but many of the flowers have fallen off during the last few hot days, and the crop prospects are slim unless rain comes soon.

Maximum temperature 95, minimum 46; precipitation .06 inch.

SHERIDAN:

The weather still continues dry. Millet is burning badly, and corn is beginning to show some effect from the continuous dry weather. The condition of sorgo and Sudan grass still remains good.

Miscellaneous work about the station has taken up the most of the time during the past week. It was found necessary to change and strengthen the bracing under the floor of the implement shed before threshing is started, in order to take care of the new crop.

Maximum temperature 94, minimum 44; precipitation, Trace.

DICKINSON:

Good harvest weather continued through the week. Grain ripened fast and most of the grain on farms has been cut.

With the exception of two plats of wheat on fallow all of the wheat and oats on the main rotations has been cut. Oats on the normal field reseeded after the freeze in May will not be ripe for some time.

The Ellis Keystone separator, used for plat threshing was overhauled. The engine also was worked over some.

The cereal nursery is about all harvested. Wheat plats on the wild oat experiments were cut August 3 and 4. Flax on disked corn ground in rotation 245 was cut August 8, being the first of this crop to be harvested.

Corn is short and not very promising. Several days during the week the plants were wilted.

Mr. Karl S. Quisenberry, Associate Agronomist, arrived on August 4 to assist Mr. J. H. Martin in the winter wheat nursery. Mr. M. N. Pope visited the station August 4.

Maximum temperature 95, minimum 45; precipitation .05 inch.

MANDAN:

Agronomy

The past week has been hot and dry. The last good rain was on June 22; there has been only .35 of an inch since that time.

Harvesting of small grain in the rotations and in the feed fields was completed during the week.

The second crop of alfalfa in the feed fields was cut and hauled in. There was a good crop along the coulees, but not enough to cut on the higher land.

Corn still continues in fair condition. The leaves of the corn rolled on several days during the week. The chances for a good corn crop have decreased greatly during the past two weeks.

Maximum temperature 96, minimum 48; precipitation .02 inch.

Cooperative Grazing Experiment

Native pastures dried up badly during the week. Spots on the prairie are burned. The bromegrass pasture is rapidly being grazed down and cannot carry the cattle much longer.

Horticulture

The continued warm and dry weather is becoming rather trying to horticultural plants. Fruit trees in close planted combinations are suffering from the drought more than those planted at wider distances apart.

Sandcherries are now being picked and Opata plums will probably be ready to pick next week.

Nursery budding work has been in progress throughout the week. Cions and stock are a little dry for best results. It has been necessary to soak some of the cions in water before using. Sweetcorn breeding work has been completed. Tomatoes are beginning to ripen.

Arboriculture

Shelterbelt Nursery stock is all making a good growth, but the continued dry weather is beginning to check the growth of evergreen transplants. These will be irrigated the first of the week if the dry weather continues.

Mandan, continued:

To check a light attack of poplar beetles, the Northwest poplar cuttings were all sprayed with arsenate of lead on August 6.

Reports from shelterbelt inspectors show considerable variation in the condition of the trees - more especially the 1916 plantings. Lack of care is the principal reason for poor belts of trees, but climatic conditions, no doubt, also account for some losses.

Among the visitors of the week were J. Allen Clark, of Cereal Investigations, who returned to the station on Saturday, and now finally left for Washington, D. C. D. W. Williams, Professor, Animal Husbandry, Texas State Experiment Station; M. N. Levine, Asst. Pathologist, Cereal Investigations; Karl Quisenbury, Associate Agronomist, Western Wheat Investigations; U. J. Downey, Superintendent, Hettinger, North Dakota, Sub-Station; Merritt N. Pope, Agronomist, Cereal Investigations.

BELLE FOURCHE:

All of the grain plats in the dry land rotations were threshed during the week. Yields were for the most part a little above the average. Differences between methods were large. The average yields were increased considerably by high yields on corn ground. These high yields were largely the result of poor stands last year.

The average yield of spring wheat was 19.8 bushels per acre. The maximum yield was 27.5 bushels on Rotation 19. The minimum was 6.2 bushels on plat A of the M. C. Series. The average yield of winter wheat was 23.6 bushels. The maximum was 39.7 bushels on plat D of the M. C. Series and the minimum 12.7 bushels on plate E of the same series. Winter rye produced an average yield of 21.6 bushels per acre. Very little difference was shown between methods. The average yield of oats was 52.2 bushels per acre. The maximum was 73.8 bushels on Rotation 8, and the minimum 18.4 bushels on plat A of the M. C. Series. Barley produced an average yield of 32.3 bushels per acre. The maximum was 49.6 bushels on plat D of the M. C. Series and the minimum 21.7 bushels on plat A of the same series. The one plat of flax produced 3.0 bushels per acre.

Corn commenced firing the latter part of the week. The corn on almost all plats has been wilting to some extent daily ever since the 12th of July but has been able to recover nights sufficiently well to avoid permanent wilting. In this it has been helped by the cool weather that prevailed until the last few days. All plats of corn are very much stunted and yields are certain to be low. On many plats less than 50% of the stalks produced silks. The development of the ears that have formed requires immediate rainfall. Yesterday every plat of corn except the one on fallow showed some firing. A very small shower last night revived the corn temporarily but more rain immediately is essential to the production of any ear corn.

Bellefourche; continued:

Fall plowing commenced August 7. The soil is, of course, very dry but turns over fairly well.

The rainfall for the first seven months of the year was 3.15 inches below the average. The rainfall for July was .39 inch.
Maximum temperature 96, minimum 48; precipitation .08 inch.

ARDMORE:

The week has been hot and dry with no precipitation. Corn and cane and all cultivated crops are badly in need of rain. Native pastures are getting very dry.

Part of the threshing was done on the station this week. The average yield of the spring wheat rotation plats was 16.7 bushels per acre; the highest yield was 30.0 bushels on Rotation No. 32; the lowest 5.2 bushels on Rotation No. 2. The average yield of the rotation plats of oats was 33.4 bushels; the highest 70.0 bushels on Rotation No. 76; lowest 16.4 bushels on Rotation MCE. Generally speaking the summer fallow plats and green manure plats showed up to good advantage.
Maximum temperature 95, minimum 54; precipitation 0.

ARCHER:

The fore part of the week was cloudy with high humidity and rather cool temperature with heavy dews and a couple of light showers. These conditions prevented threshing of winter cereals as had been planned. However, the corn and the sunflowers have made rapid growth and the midseason and late oats are sending up a number of new shoots as a result of the rain last week.

The pastures are in splendid condition. However, plowing was attempted this morning and the soil in most places was found to be rather too dry for successful sod breaking.

On this date the early varieties of oats and barleys are being harvested, the growth in each case being rather short. The spring wheat and the oats on the dry land plats are ripening very fast except those plats of oats which were practically dead before the rain of last week, where a second growth is being made and heading is now in progress. The corn is in the early dough stage in most of the fields. Gehu on early seeding is in the roasting ear stage. The potatoes are putting on a rather large crop of tubers which at the present time are small.

Archer, continued:

The green manure plats of peas and the alfalfa and brome grass sod was plowed during the week and the threshing of the increased field of Kherson oats. Threshing was discontinued because of mechanical difficulties but will be resumed as soon as repairs can be secured.
Maximum temperature 80, minimum 48; precipitation .06 inch.

AKRON:

The week has passed with two showers totaling .03 and .04 inch, respectively, which gave no relief from the drought. The temperature continues to be moderate which tempers somewhat the extreme nature of the dry weather.

The Cereal Variety barley was threshed early in the week, and the Cereal Variety oats immediately after. These plats, though reseeded April 27, yielded better than these crops at other places on the station seeded April 1. One increase field of Colburt oats was threshed, and the flax seeded for the State College. The flax did not return seed.

The sheep rotation winter wheat fields were threshed Wednesday and Thursday. The sheep were turned into these fields Saturday. There are no weeds on either the wheat or the barley fields, and it now seems that we will be shorter of feed for the sheep on these two rotations than we have been in the past six years.

The sorghums and the sorgos are breaking into head. Several heads were bagged Saturday.
Maximum 88, minimum 51; precipitation .07 inch.

NORTH PLATTE:

Fall disking on the D. L. A. plats was completed. Due to the heavy growth of Russian thistles all D. L. A. stubble plats not yet disked or plowed were gone over with the mower.

Corn on all the rotations is much in need of moisture. On some of the rotations it is burned badly, while on others it has just about held its own.

The harvest date of soil sampling has just been completed. The supply of available moisture is completely exhausted on all stubble plats but there is a little left in the 5th and 6th foot in the corn plats. There has been no appreciable storage of moisture in summer tilled plats below the fourth foot.

Mr. L. L. Zook left the station August 7, on his vacation.

COLBY:

Weather still continues cool and dry. A small rain of .45 inch fell during the week which was insufficient to do very much good. The rain which fell at this time was more or less general and ranged from a trace to approximately an inch over considerable territory. With us, the sorghums still continue to dry up (where drying had commenced) and unless a good soaking general rain is received soon the feed crop will be very short.

Disking was completed on the station of those fields that had been in small grain crops. Fence building still took some time during the week. The sorghum plats on the D.L.A. were trimmed to size during the week. The cultivated plats that go into winter wheat were worked during the week.

Rebuilding of the pasture fence took considerable time. The County Agents at Goodland and Atwood were visited during the week.

The wind velocity during the week has been very low. So low, in fact, that stock water is running rather short. The wind blowing hard enough only at times to furnish us with power for pumping. Permission has been granted by the State Board of Regents to connect with the water supply of the city of Colby. A special appropriation is available for this. It is planned to have this done before cold weather.

HAYS:

Generally it has been cool but warmed up during the last two days. Maximum temperature 87, minimum, 59; precipitation, total of two showers, .69 inch.

All feed crops continue to make good growth. Corn previous to the rainy period in July had burned considerable, many of the tassels having been damaged beyond recovery, but there are on the Dry Land project about 25% of the stalks developing live tassels, and shoots are coming out well on all stalks. If there is sufficient pollen on the few stalks bearing pollen to make a crop of well filled ears, then the prospects are good for a good yield of corn.

All sorghum crops are looking fine and heading, except milo which is suffering from the effects of chinchbugs which have completely killed a small percentage of the plants and are badly damaging all of it. The strange thing about it is that the most damage is being done to plats farthest away from any small grain plats. It appears as if the adult bugs have deposited eggs in the milo plats.

Hays, continued:

The stubble plats which are not to be plowed until spring have developed a heavy growth of weeds. The weed growth is very much heavier than usual for this time of the year, due to the early harvest of small grain and the rains since harvest.

It has been necessary to continue tillage work on the days when the ground was dry enough in order to kill volunteer and weeds.

GARDEN CITY:

Low temperatures have prevailed throughout most of the past week. On several days rain threatened, but only one shower netting .28 of an inch of moisture was received.

The low temperatures together with the absence of high winds have enabled crops to withstand the lack of moisture well. Some milo and kafir on well prepared seed bed are beginning to head.

The sorghums in the date test that were planted on June 30 have just emerged to a good stand on most varieties.

Field work has consisted of completing the early fall plowing and hoeing weeds.

Maximum temperature 90, minimum 60; precipitation .28 inch.

TUCUMCARI:

The past week has been characterized by almost continual cloudiness and unusually cool temperatures. The mean temperature was 72, compared with an August mean of 77, over twenty years. Unusually heavy rains have fallen in all directions, in many cases making field work impossible for two weeks or longer, but the station gauge showed a total of only .33 inch, in three showers, for the week. Farmers on the plains south of Tucumcari report the fields too wet to permit of working for wheat preparation, but claim the late row crops are promising an unusually heavy yield. From all reports, Tucumcari has been favored with much less rain than other localities the past three weeks, although our July rainfall was above the July average, 1905-1924.

Station work has consisted of staking and trimming all plats, rogueing plats, cultivating, making a roadway around the vineyard and tree planting, and miscellaneous hoeing. The most discouraging work has been bird shooting. Both sparrows and lark buntings are unusually numerous and are playing havoc with the early milo. Poisoning has, to date, given very poor results. The birds are so tame they cannot be frightened more than a

Tucumcari, continued:

few yards, and will then duck down among the plant leaves where it is almost impossible to see them. Since they are so wary and fly singly or in small groups, rather than in flocks, it is impossible to "pot shot" them or kill more than one or two at a short range on the wing. Hunting begins at five A. M., lasting until seven A. M.; the fields are scoured from six to seven P. M., with intermittent shooting throughout the day. While large numbers are killed each day, there has been no apparent diminution in the number left, although the remaining ones are more wary and more persistent in their attack on the plats.

Maximum temperature 90, minimum 58; precipitation .33 inch.

Evaporation, 1.638 inches. Average hourly wind velocity, 4.5 miles.

LAWTON:

Another week of optimum weather for row crops prevailed, following the rains of the previous week. Two rains on the 4th and 5th amounted to 1.59 inches. Since that, cloudy skies and an atmosphere high in humidity has permitted the surface soil to dry slowly.

Cowpeas have renewed growth with more rapidity and vigor than any other row crop. Kafir and cotton continue improvement in a very moderate degree. The soil is in excellent shape for wheat and barley preparation and work along that line is receiving close attention of the farmers.

The following sorghums were planted August 3 for observation in comparison with the late feed crops which many farmers are attempting to grow: Sudan, Millet, Sunrise kafir, Black Amber, Red Amber, Darso, Barchett, Kaoliang, Dwarf feterita, and Spur feterita.

In the June 15 planting of cotton a full stand has just now resulted following the recent rains. Cultivated ground is literally covered with a growth of young weeds.

Maximum temperature 91, minimum 63.

WOODWARD:

August to date has been very cool and pleasant, with a maximum temperature of only 89 degrees. Rain has threatened several times but only two very small showers have fallen, though heavy rains have been reported at several places within a radius of 100 miles.

Woodward, continued:

The row crops, with the exception of corn and very early row crops, are now in excellent condition. Heads are beginning to form in the boot on some of the kafir plats. The Reed kafir is apparently going to head before any of the Dwarf yellow milo planted at approximately the same date.

Most of the work during the week has consisted of cultivating late fields, the entire D. L. A. project, with the exception of corn and including fallows and early plowed plats, also cotton, cowpeas, and a part of the Cereal project, and disking the orchard, vineyard, and windbreaks. Some work has also been done on roads and lawns. Some peaches and plums and several hundred pounds of grapes have been picked.

Dr. Geo. C. Husmann, from Washington, D. C., visited the station from August 2 to 4, in the interest of grape experiments. Dr. Husmann, accompanied by Mr. L. F. Locke, visited vineyards in the vicinity of Laverne, Oklahoma, on the 4th.

Maximum temperature 89, minimum 64; precipitation .13 inch.
Evaporation 1.431 inches. Average hourly wind velocity 4.8 miles.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING AUGUST 15, 1925.

HAVRE:

Temperatures during the past week were about normal. Maximum temperatures varied from 73 to 89, and the minimum from 44 to 56.

Harvesting of small grains was about completed. Corn made very good progress, the most of the Northwestern dent being in the roasting ear stage. While the season was severe on small grains, especially during the early part of July, there was no time when corn was injured. The most of it rolled on many days but there was no burning. Today, the 15th, a heavy rain is falling which should materially aid in the filling of both corn and flax.

Threshing in the community has started and some wheat has been marketed. Because of the light weight per bushel, very little of this will grade Number 1. Some shows as low as 52 pounds per bushel.

Visitors during the week included Messrs. M. A. McCall and C. KuKula, of the Cereal Office, Robert Wilson, Office of Dry Land Agriculture and Mr. H. L. Wilson, of the Office of Forage Crop Investigations.

HUNTLEY:

A shower amounting to .20 inch occurred during the week but gave little relief from the drought which has prevailed for the past six weeks. While the days continue warm, the nights have become much cooler than usual for this time of year, a minimum of 37 degrees having been reached on one occasion.

All crops are in a serious condition from lack of moisture and it is doubtful if corn, beans, and potatoes will make yields worth harvesting unless rain comes soon. Forage crops are also drying up and promise poor returns.

Hogs in the grazing experiments were moved from the first to the second emergency pasture of soy beans and Sudan grass where they will remain until the plat of corn is ready for pasturing.

Maximum temperature 90, minimum 37; precipitation .20 inch.

SHERIDAN:

The weather still continues dry. Corn shows increasing effect from the lack of moisture. The crop seems to be well eared, however, and the ears are fairly well filled. Millet dried badly, and was cut for hay during the week. Sorgo and Sudan grass still appear to be in good condition, except some sorgo drilled solid. This was burned badly and was cut during the week. Corn planted the first of May is ripening.

Sheridan, continued:

The varieties of field peas, all of the Sixty-Day oats and Kharkof winter wheat, and all of the Trebi barley in plats, were threshed. Some of the yields of these crops in the rotations are as follows:-

Yields per acre---Bushels

	Ave.	High	Low	Ave.Plats in Rot.	Ave.CC.& 570 Series
Oats	58.2	82.5 (Rot.71)[1]	33.1(578-C)		
Barley	45.0	62.7 (MCD)	31.9(MCA)		
Winter wheat	28.4	49.5 (Rot.135)[2]	5.5(MCB)	39.2[3]	12.2

Yields were consistently low on all plats continuously cropped to winter wheat, plowed plats averaging the lowest.

1- on manured fallow 2- on fallow 3- includes MCD.

Maximum temperature 87, minimum 42; precipitation .05 inch.

DICKINSON:

Harvesting of small grains is almost completed in the locality and threshing has started. Wheat is of excellent quality but yields are below average. The estimate for this county is 8.9 bushels while the 1924 yield was 15.0.

Rye, barley and oat varieties were threshed. Rye made around 11.0 bushels, barley, 20 bushels, and oats, 40 bushels. Barley was of poor quality, weighing only 40 pounds per bushel. Oats weighed about 32 pounds per bushel. Early varieties of oats made the highest yields. Both oats and barley yields were reduced by the freeze of May 16, as well as by dry weather.

The first sweet corn and ripe tomatoes were picked on August 14. An increase field of N.D. 114 flax is being cut today.

The rain of the 11th was of much benefit to corn, late flax and forage crops.

Official visitors of the week included Mr. M. A. McCall, Mr. J. H. Martin, Mr. O. C. KuKula, and Mr. T. K. Killand.

Maximum temperature 94, minimum 44; precipitation .74 inch.

MANDAN:

Agronomy

The past week has been cool and cloudy with light showers. Corn still continues in fair condition, and will, no doubt, make some grain in spite of the long continued drought.

Threshing was started during the week, but has been delayed on account of the light rains.

Crested wheat grass, winter rye and most of the oats in the Main field have been threshed. Winter rye averaged 15 bushels per acre. The highest yield was 25 bushels in Rotation 246-M. The lowest was 7 bushels on stubble drilled in without cultivation in continuous cropping plats.

Oats is running from 34 bushels per acre in Rotation 69, to 90 bushels in Rotation 8. The average yield of 47 plats in the Main field, that have been threshed, is 55 bushels per acre, which is slightly higher than last year. The highest yield exceeded that of last year by 10 bushels per acre. Oats is weighing from 24 to 34 pounds to the bushel. It is lightest in the rotations that contain manure.

Some alfalfa along the coulee in Field P was cut during the week. The total yield of hay for the season from Field P will be about the same as last year, or about 33 tons from 28 acres. This may be compared with the best prairie hay which is running less than a half ton per acre.

Maximum temperature 93, minimum 49; precipitation .36 inch.

Cooperative Grazing Experiment

The larger pastures still remain in good condition for grazing, but the smaller pastures are very short. The cattle in the rotation pasture will be moved into the last division of the pasture today, and weights of the cattle in the smaller pastures will be checked to see if they have started to lose weight.

The native hay in the mowing was cut and weighed during the week. The average weight of the hay from three acres that are cut annually was 212 pounds per acre field-cured, and the average of three acres cut biennially was 827 pounds per acre, or about four times as much. This is the greatest difference that has been obtained between the two series since the experiment started in 1921. The large difference may be accounted for by the high yield of 1924 and the poor crop in 1925. The 2-year units contain a higher percentage of old hay than in 1924. The yield from the 1-year units is the lightest that has been obtained since the experiment started. The light yield of hay accounts for the smaller pastures getting short earlier than usual.

Mandan, continued:

Horticulture

Horticultural plants, especially fruit trees in close planted formations, continue to suffer from the effects of the continued dry weather. Some of the fruit is showing a tendency to ripen prematurely, and drop on the ground. Trees that are spaced a good distance apart are generally standing the drought very well.

Opata plums are now being picked. Yields are generally good, although not quite as heavy as last year. The grade of the plums varies from good where the trees have plenty of room, to poor where the trees are crowded.

Early tomatoes and sweet corn are now being harvested from the acre garden.

Mr. M. A. McCall, Agronomist in Charge of Cereal Agronomy Investigations, in company with Mr. A. C. KuKula, Czecho-Slovoka Legation, Washington, D. C., were at the station on Friday, August 14, studying the flax and cereal work. Owing to receipt of a telegram while at the station, advising him of the sudden death of his father, Mr. KuKula left by the first possible train for Washington, D. C.

A number of farmers from Braddock, North Dakota, spent most of Thursday, August 13, studying the work done at the station.

Mr. A. C. Dillman, on the evening of August 11, left for University Farm, St. Paul, Minn., where he will await the coming of Mr. M. A. McCall.

Mr. T.K. Killand, Assistant Horticulturist at the station, expects to travel to Bottineau, N. Dak., early next week, to assist President F. E. Cobb in plans for landscaping the grounds surrounding the State Forestry station there.

During the week Robert Wilson, Arboriculturist at the station, has been inspecting shelterbelts at Great Falls, Fort Benton and Moccasin, Montana, in company with E. J. George. C. A. Gillett is in the neighborhood of Baker, Montana, and J. L. Emerson is in the neighborhood of Fort Pierre, S. Dak.

ARCHER:

The weather has been cool with precipitation every day except Thursday with a total of .80 inch. The maximum temperature was 79, and the minimum 46 degrees.

Archer, continued:

The corn and sunflowers, peas and potatoes have thrived and good yields of these crops are expected. The oats, which were so bady burned that all hope of any crop was given up, have continued to send up a considerable number of culms which are heading. The maturity of oats on these plats is doubtful as the season is well advanced and the weeds are also making an equally rapid growth and in no small numbers. Plats of wheat in the old rotation which followed small cereals and the oats on the continuous cropping series were harvested with the mower. There were very few heads with grain in them and the shortness in connection with the abundance of weeds made this necessary.

Due to the wet weather and the necessity for indoor labor, the harnesses were oiled and repaired. The rain made it possible to break sod, which is still in progress.

BELLE FOURCHE:

A rain of .49 inch fell on August 10. This is the first rain of any consequence since the middle of June. The benefit to the corn was much less than anticipated. By the afternoon of the day after the rain the corn was again wilting. The corn has not fired much during the week, as the weather has been cool most of the time. However, yesterday and today it burned in spite of the cool weather. Unless rain falls within the next few days some of the plats must be cut in order to save the stover.

Sorghum has apparently ceased growth but has not fired. Potatoes appear to have ripened up and would not be helped by rain. The tubers are small and there are few of them in a hill.

Almost all of the fall plowing was done during the week. The soil turned up exceptionally lumpy.

Maximum temperature 93, minimum 47; precipitation .54 inch.

AKRON:

The week has passed with showers up to heavy rains on all sides. Showers have been purely local all season, as will be noted in the summary of crop conditions given below. The station has recorded two consequential showers totaling .74 of an inch. In Akron, approximately 5 miles west, a rain was received heavy enough to cause Sand Creek to run freely where it crosses the road approximately one-half mile south from the station buildings.

Akron, continued:

Threshing is well under way throughout the county. In the section where the station is located wheat has yielded from 3 to possibly 5 bushels per acre. Northwest from Akron reliable reports are that wheat is yielding from 12 to 18 bushels per acre. In the Burdette neighborhood, approximately 25 miles northeast from the station, where wheat was viewed earlier in the season, unquestionable reports come that wheat is yielding from 18 to 35 bushels per acre. This Burdette area is a relatively restricted area. South as far as Anton, 29 miles south, wheat is very poor, there being many fields which have never been harvested. Corn and sorgo is almost universally poor between here and Anton. Northwest, north, and northeast from Akron the promises are for an average crop of both corn and sorgo.

The fall listing and the disking of the stubble plats was completed the end of last week. The early fall plowing was completed early this week. The rotation corn plats are being harvested this week. Corn on the station, unless on fallow or on land which grew corn last year, has completely burned and is now at a point where a high wind would blow away much of the foliage. The rotation corn plats averaged about 34 inches in height. Not more than two or three small ears were promised to the plat, and these on the ends of the plat. The manured corn plat is holding well and promises to mature some little grain.

The grain sorghum and the sorgos are heading on fallow but are standing only 18 inches high on small grain stubble. Later rains may help these crops. The sorgo and grain sorghum nursery this year reveals that marked progress has been made in purifying some of the early strains of Modocs and Kafirs. Some of these strains planted June 13 were in full head August 10, just 58 days.

Maximum temperature 91, minimum 52; precipitation .75 inch.

NORTH PLATTE:

Corn on the D. L. A. plats is just about holding its own, due to cooler weather and several light showers the past week. A rain of .60 inch occurred the evening of August 14. It was accompanied by some hail but no damage occurred.

Most of the week was spent preparing the field records and summarizing small grain yields.

Maximum temperature 91, minimum 50; precipitation .85 inch.

COLBY:

Weather conditions have been a change for the better this week. Two rains, each .56 inch, have fallen during the week on the station. These have revived the prospects for feed crops very appreciably. The corn was for the most part too far gone to be benefited. Volunteer wheat and barley are coming fast now.

Colby, continued:

Weeds were hoed from the borders of the D.L.A. stubble plats during the week. A few more of the corn plats were cut where drying had occurred sufficiently to kill plants.

Fence building and repairing took four and one-half days during the week.

The rains which fell during the week were very unevenly distributed as to the amount. Certain localities are reported to have received as much as 7 or 8 inches during the week. With the cooler weather which prevails now the sorghums should make good growth on the supply of moisture received.

HAYS:

Maximum temperature, 90, minimum 59; precipitation, total of four showers, 1.65 inches. Three of these were very light, but the last one, during the night of the 14th, measured 1.25 inches.

The showers have usually occurred at night and have made the ground just moist enough to make week killing a hard job. Volunteer wheat and weeds are now quite a problem on the wheat fields. Sufficient tillage to destroy the growth is very apt to make the surface soil too fine to be safe against blowing unless considerable care is taken in doing the work.

All sorghums are developing good heads except where damaged by chinch bugs as reported in previous reports.

GARDEN CITY:

Cool weather has continued throughout the past week. Two showers were received which netted 1.16 inches of precipitation. Most of this moisture came slowly and little was lost by run-off.

Most crops are making a satisfactory growth. Milo and kafir on fallow are heading.

Field work has consisted of finishing the early fall listing and spring tooth harrowing all fallows and early fall plowed plats.
Maximum temperature 90, minimum 57; precipitation 1.16 inches.

DALHART: Week ending August 8, 1925.

The past week has been cool, partly cloudy and wet. One day (Monday) was favorable for field work. The remainder of the week has been wet. Four rains were recorded as follows: .07, .71, .47 and .71 inch. The water has been running all week in the Rita Blanka canyon, two days of which it was impossible to cross. The water was higher this year in the canyon than it has been in the past seven years.

Dalhart, continued:

All teams were put in the field, Monday, cultivating. The plats have all been cultivated now except a few fallows. These were left on account of time until Tuesday. Indications were favorable at the time for fair weather but about 9:00 p.m. the sky clouded over rapidly and the rain started. The remainder of the week has been too wet for team work. The time has been spent on hoeing, cleaning up the plat ends, finishing up baskets for heading, repairing windmill tower, and other odd jobs.

Mr. F. E. Keating, of Big Spring, stopped in for a couple of hours on Friday of this week. The time was spent in going over the entire station inspecting the station crops. Mr. Keating was well pleased with the prospects in this section of the Panhandle.

On Monday, August 10, there will be a Farmers and Business Mens' luncheon held at the station at which time there will be some prominent speakers to make addresses concerning marketing of farm products. A Masonic picnic will be held here on Wednesday, the 12th, beginning about 6:00 p.m.

Maximum temperature 88, minimum 53; precipitation 1.96 inches.

DALHART:

The past week has been very favorable to crop growth and for the grass on the range. The temperatures have been warm, ranging from 77 to 88 degrees and the minimum at 55. No precipitation was recorded during the week except .01 inch. A pretty hard wind prevailed all day Friday with a good breeze on Saturday.

The crops over this section are excellent. There is going to be an abundance of both feed and grain with plenty to ship to other sections. The cotton on the station is far better than it has ever been before. The early plantings are much better than the late ones. The May 10 date of planting will have open cotton within the next 20 to 30 days and the May 20 date is close behind. The other three dates are not nearly so good as the early ones. The last three plantings are very uneven on account of some germinating soon after planting and the remainder lying in the ground until it rained. This same condition exists on most of the varieties and some rotation plantings.

Considerable cultivating was done during the week. There is still some cultivating to be done in the alternate cereal and forage block that is too wet on one end to cultivate at this writing. The field cultivator has been in use for two days of this week. Everything in way of fallows will be finished by evening today except three which are too wet. The wet weather grass has certainly made good headway in the past three weeks when it has been too wet to cultivate. The fallows were pretty well covered but the field cultivator makes short work of it.

Dalhart, continued:

Harvesting of the first three dates of Sudan and Sudan grass on Rotations 83, 84, and 87 was done today, August 15. Some of this Sudan grass has been ready to cut for some time, but the plats have been too wet to run the binder. Considerable hay has been put up this week from roadways and the meadow in front of the houses. This is excellent hay and is being stored in the barn. This is the first year that hay of this quality has been obtained since 1915. Soil samples had to be postponed until Friday of this week on account of the plats being too wet. The first two dates of broom corn will be ready to pull the first of the week.

A Masonic picnic was held at the station on the 12th with a good attendance. A party was taken out over the station and the various things explained. Much interest was manifested in the crop prospects.

TUCUMCARI:

Although all surrounding localities have been flooded with rain the past two weeks, this station remains in the dry area, only .69 inch being received in 20 days. While precipitation to date for 1925 totals only 7.69 inches on the station, compared with an average of 11.58 inches for this period, we daily hear that farmers thirty miles south of here are unable to plow sod, the soil is so wet. Indications point to an unusually heavy wheat acreage this fall on the plains south of Tucumcari, while milo and kafir promise good yields.

In spite of the coldest weather ever experienced here in August, many station crops are rolling and firing. Kafir is withstanding the drought better than milo and will probably make a higher yield. Cowpeas are growing very slowly and many leaves are turning yellow before the plants bloom. Broadcast plats are firing and rolling so extensively that only an early rain will permit them to produce a yield. Rowed cane, increase, seems to be making the best headway of anything on the station and will probably produce sufficient yield to warrant steer feeding.

Cultivation of rotation plats with the walking cultivator is now being done and during the week the late date plats were cultivated with the sulky. Birds continue to be a serious problem and in spite of a continual fight to hold their damage to a minimum they are greatly injuring milo plats. Sudan grass and cowpeas for green manure are being plowed today, although the soil is so dry it is almost impossible to plow.

Maximum temperature 93, minimum 55; precipitation .36 inch.
Evaporation, 1.977 inches. Wind velocity, 5.2 miles per hour.

BIG SPRING:

The long dry spell was partially broken when a rain of .58 inch fell on July 31. With two more rains of more than a half inch each falling on August 8 and 10; this total of about 1.75 inches helped to relieved conditions considerably. Many of the milo plats, which were nearly burned up, are now putting on new growth, but it is rather problematical as to whether they will produce much grain or not. Sumac, both in the plats and in the increase fields, is reviving in good shape, and now promises to make a good yield.

All of the rains during the past three weeks have been very spotted. Some sections of the county report rains of two and three inches while other sections have only had light showers.

The cowpeas in the rotations and in the varieties have been cut, but they are not dry enough to weigh, as yet. Other work has consisted of cleaning out the feeding pens, fence rows, and roadways, and in cultivating cotton.

Maximum temperature 99, minimum 55; precipitation 1.70 inches.

LAWTON:

Another rain of 1.86 inches on the 9th prevented field work until the middle of the week but added much assurance to an increased yield of cotton, peas, alfalfa and some of the sorghum crops. Since the 27th of July the rainfall amounts to 5.13 inches, 3.45 inches of it having fallen during August. The last rain relieved the stock water situation and also added much moisture to the soil. Since the middle of the week the clear skies have prevailed and the temperatures have gradually increased to a maximum of 99 for the week. The wind velocity has varied from 1.3 to 7.7 miles per hour during the week.

Kafir in the rotation plats is putting out a second crop of heads. Cowpeas are renewing vine growth and setting a heavy crop of seed. Alfalfa is also growing satisfactorily and will yield a fair to light second cutting. Cotton continues to make considerable plant growth and is putting on considerable fruit.

Observation during the summer throughout northeastern, northern, and northwestern Oklahoma indicates that the lightest production will probably prevail on the tight land of southwestern Oklahoma. However, on the sandy soil in the southwestern part of the state the indications for a satisfactory yield are good.

A heavy growth of weeds and crab grass have sprung from the soil since the rains and late seasonal cultivation of row crops is necessary.

WOODWARD:

Two light showers occurred this week, and weather has been generally balmy and pleasant allowing steady growth of crops. Prospects for a heavy yield from the grain sorghums is now good. Cowpeas, especially, have made a very heavy growth. The rains during the first half of August came in excellent time to give grapes fine quality, whough not to increase the yield which was only fair. Late peaches from the station and neighboring orchards were all fine. Cantaloupe and watermelons are being hauled in in such quantities, that they are worth but little. On the station and about the country the week has been spent largely in preparation of land for winter wheat and rye.

Mr. Locke left Thursday for a visit to orchards and vineyards about Lawton and Oklahoma City. Mr. Osborn, of the Lawton station, and two prospective vineyardists from near Lawton were visitors over Tuesday and Wednesday.

Maximum temperature 95, minimum 63; precipitation .65 inch.
Evaporation 1.66 inches. Average hourly wind velocity 3.6 miles.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING AUGUST 22, 1925.

HAVRE:

Cooler weather the first of the week was followed by a decided rise in temperature during the last three days. A high drying wind occurred on Friday with a maximum temperature of 95 degrees which caused corn to roll considerably.

Barley in the rotation field was threshed. Eight inch summer fallow in the Depth of Plowing series gave the highest yield at 49.6 bushels per acre, the other extreme being 14.4 bushels for the listed plat in the MC series. Spring and fall plowed plats were somewhat similar in yield, both of these methods being excelled to some extent by disked corn and markedly by fallow. A forty acre field of Sixty-Day oats on the station yielded about 35 bushels per acre.

Threshing is progressing rapidly in this vicinity with considerable variation in the yield and quality of the grains.

Maximum temperature 95, minimum 46; precipitation .51 inch.

HUNTLEY:

Another week has passed without rain in this locality. While most crops are too far gone now to be saved by a rain, the precipitation would be of great benefit to alfalfa and brome grass as an insurance, to some extent, against winter killing due to fall and winter drought as was experienced last year. Rain is also needed to put the ground in shape for fall plowing and especially land that is to be fall plowed and sown to winter wheat.

With the exception of the outside rows and end plants, corn in the plats will make practically no grain this season and the stover yield will be very light. The yields of field beans and potatoes will probably be largely confined to the edge rows of the plats also.

The Annual Project Picnic is in progress today in the park adjoining the station grounds, and maintained by the Experiment Farm. About 3000 people are in attendance. The speakers secured for the occasion were Governor J. E. Ericksen of Montana, and President Atkinson, of the Montana State College.

Maximum temperature 96, minimum 43; precipitation 0.

DICKINSON:

Threshing on farms is getting well started. Yields are better than estimated earlier. The better fields are running 12 to 15 bushels of excellent quality grain. Local quotations are now above those of Fargo as a result of the high quality of the wheat in this district.

Threshing of wheat, oats, barley, and flax varieties was finished Tuesday. Yields of wheat were better than expected. Marquis and Kota each averaged 17.4 bushels; Ceres, a Marquis Kota cross, and two Marquis Kanred crosses each averaged 20.1 bushels. Durum wheats yielded less than the common wheats.

Eight varieties of winter wheat seeded in standing corn averaged 25.7 bushels, while in oat stubble these same varieties averaged only 14.5 bushels. Kharkov made 28.1 bushels in standing corn and Kanred 18.6 bushels in oat stubble.

The rotations will be threshed the coming week. Failure in delivery of a separator has resulted in about a week's delay in this work.

Visitors of the week included, Hon. L. B. Murphy, Chairman of the State Board of Administration; Mr. T. K. Killand, from Mandan; Mr. H. L. Westover, Forage Crop Investigations; Messrs. J. H. Martin, F. A. Coffman, and K. S. Quisenberry, of the Office of Cereal Investigations.
Maximum temperature 102, minimum 44; precipitation .08 inch.

MANDAN:

Agronomy

Three light rains during the week delayed threshing. It was possible to thresh only two days and a half during the week. A light hail fell last evening, but very little damage was done to field crops on the station.

Threshing of barley, oats, and wheat was completed in the rotations during the week. Barley in the main field rotations ran from 19 bushels per acre on disked flax stubble, to 44 bushels per acre on fallow. The average yield was 28 bushels, which is about 4 bushels less than in 1924.

Wheat in the main field rotations ran from 14.2 bushels per acre on fall plowing in the continuous cropping series, to 34.7 bushels per acre on two plats that were fallow in 1924. The average yield of all fallows was 31.8 bushels per acre, and of the disked corn ground 24.2 bushels. The average of all plats was 24.7, which is .3 higher than in 1924. Wheat weighed from 56 to 62 pounds per bushel. The lightest weights per bushel were in the rotations which contained manure. Some of the plats on fallow would have produced better than 40 bushels per acre if there had been more rain during July.

Mandan, continued:

Wheat is running better over this section than was expected from threshing reports that have come in. Yields of 20 bushels per acre are commonly reported, and some as high as 30 bushels per acre.

Corn still continues to make advancement, and now shows indications of a very good crop. The first cutting in the date of maturity test with corn is being made today.

Maximum temperature 93, minimum 48; precipitation .64 inch.

Cooperative Grazing Experiment

The larger pastures still remain in good condition for grazing. The smaller pastures are short, and the brome grass pasture is grazed close. The cattle on the 30-acre pasture are still making light gains.

The steers were taken off the sweet clover pasture at the end of 30 days. They gained 66 pounds per head, as compared with 61 pounds per head for the ones on the reserve pasture.

Horticulture

Tomatoes are ripening rapidly in all plats. The various strains in the breeding plat, which earlier in the season looked anything but promising, are now much improved and some selection work is in progress. The acre garden is still yielding well with a variety of vegetables.

The semi-formal beds on the grounds are now at their best. The showers of the last few days have greatly improved both the blue grass and brome grass lawns.

Spraying for weeds along roadways with sodium arsenite has been done with very good success. This spray solution, mixed in the proportion of one gallon of sodium arsenite to fifty gallons of water, is highly effective on all kinds of weeds, especially the Russian thistle.

Opata plums have been picked, and Compass plums are ready to pick. The Opatas yielded well, while the Compass will have only a fair crop this year. Yields on fruit trees are variable this year, some trees yielding heavily, and others having little or no fruit.

Mr. Charles A. Gillett is the first of the shelterbelt inspectors to return to the station. His itinerary took him through northern North Dakota, westward to eastern Montana. It also included one county in northwestern South Dakota. Mr. Gillett is a graduate from the Department of Forestry at Cornell University. Beginning September 1, he is to be engaged in Extension work in North Dakota, with headquarters at the Bottineau (North Dakota) State Forestry School.

Mandan, continued:

Mr. Ernest J. George and Mr. John L. Emerson, are both expected to be back here before September 1.

Preparations are being made in Mandan and Bismarck for the meetings of the Great Plains section of the American Society for Horticultural Science, and also for the meetings of the North Dakota Horticultural Society. The first mentioned meets Monday, August 24, at Fargo, and will then travel to Bismarck by automobile, visiting Valley City and Jamestown on the way. The State Society will join with the Great Plains society in visiting this station on the afternoon of August 27, and will hold other meetings in Bismarck.

Visitors of the week included:- Messrs. H. O. Herbrandson, Agricultural Statistician, Grand Forks, North Dakota; H. L. Westover, Office of Forage Crop Investigations; J. H. Martin, Office of Cereal Investigations; A. W. Henry, Flax Investigations, University Farm, St. Paul, Minnesota; O. L. Grover, U. S. Bureau of Public Roads, Washington, D. C.

ARCHER:

Very pleasant weather has prevailed during the past week during which time the harvesting of spring crops has been in progress. Most of the harvesting was done with the mowing machine. All of the D. L. A. oat and some of the spring wheat plats were harvested in this manner. The second growth of oats and the rapid growth of Russian thistles made this necessary where the crops were tall enough to harvest with the binder, but where a small grain crop followed a small grain crop the crop was a failure. It is expected that some of the varieties of common spring wheat will yield about 8 bushels per acre. Threshing was started Saturday.

U. S. Senator Warren visited the station on Friday, August 21. Maximum temperature 82, minimum 51; precipitation .02 inch.

AKRON:

Temperature has been high during the past week with only .8 of an inch of rain. Work during the week has consisted mainly of odd jobs, such as cleaning out the trench silo, duck-foot cultivating the small grain stubble to be used for rate and spacing corn experiment another year, plowing under two separate patches of poverty weeds, fencing in another section of the forestry for pasturing last year's crop of ewe lambs which will be added to the experimental lots this fall, and grading and treating wheat for fall seeding.

Akron, continued:

The date of seeding experiment with spring grains carried on for the Agricultural College was threshed during the week. Yields were very light. Worm damage to the early seedings was very heavy. The woven wire fencing has been completed around the north and east sides of the Forestry Quarter. The remainder of the fencing has been delayed all summer due to the County Engineer being unable to get his instruments in shape and to find the time to establish the corners. Thirty-four inch Elwood Type F fencing is being used with three barbed wires on top.

Sheep were out of feed on both the barley and the wheat stubble fields so they were weighed Saturday and turned into the two corn fields of Rotations 28 and 51--these being the numbers of the rotations used in the Sheep Pasturing Experiment. Leaves had already begun to leave the corn stalks at every wind of consequence. Very few, if any, ears will be formed on these two two-acre fields. Lambs which were weighed the 19th averaged 64.5 pounds on the native sod; 63 plus pounds on the Fallow Rotation, and 68 pounds on the Rye Rotation.

County Extension Agent H. H. Simpson and his assistant, Mr. Wagner, of Weld County, spent Tuesday afternoon at the station arranging for a field trip here August 28.

Maximum temperature 95, minimum 65; precipitation .08 inch.

NORTH PLATTE:

Rain totaling approximately 1.50 inches fell on the 19th. This is the heaviest rain of the season to date. It will be of much benefit to alfalfa, pastures, and some late corn. It will also facilitate the preparation of ground for fall seeding of cereals. Fully fifty per cent of the corn had been burned beyond recovery, and on a number of plats will be practically a total failure.

Fall listed fallows have been furrowed out and some plowing done since the rain.

GARDEN CITY:

High temperatures during the first half of the week had a bad effect upon crops that were already short of moisture. Crops growing on fallow still look promising and show little effects of the drought. This is a year when the better methods of farming show up exceptionally well. Nearly all the sorghums growing on fallow have headed, while those growing on land cropped last year are just emerging from the boot.

Cowpeas will be harvested the first of the week. A low yield will be secured from this crop.

Maximum temperature 102, minimum 57; precipitation .03 inch.

DALHART:

The past week has been warm with plenty of wind. Good growing weather has prevailed during the entire week. Nothing was recorded in way of precipitation except .04 inch which fell Thursday afternoon. This little rain followed a pretty heavy wind.

Field operations have gone ahead without delay. Considerable harvesting was done the first of the week. The first three dates of Sudan grass, Sudan on rotations 83, 84, 87 and some drilled Sudan for feed were harvested with the binder. The drilled Sudan was harvested with the grain binder. The first two dates of broom corn were harvested and the brush seeded. The winter rye was threshed. There was very little rye to thresh since the rabbits destroyed so much of it during the fall and winter. Only three plats of rye had sufficient grain to record. The field cultivator was run over the fallows in order to clean them up since the recent rains. They had become quite foul during the period that they were too wet to cultivate. They are now in good condition. The rye stubble plats were also cultivated with the field cultivator in order to get the weeds that had started growing on them. The milo and cowpeas on the alternate forage and cereal block and the sunrise kafir in the increase field were cultivated this week for the last time. The peanut varieties and peanuts on Rotation 293 were cultivated and dirt raked around the plants so that the spikes might easily enter the ground for maximum peanut production.

The winds of the past week have dried things out pretty thoroughly. However, the crops are making good headway. The warm weather with the drying winds has caused considerable firing in most of the crops, however, nothing seems to be suffering. Almost everything is headed except the last dates of planting. The station is getting quite a bit of publicity these days by visitors from all parts of the country. Many visitors have asked if these crops had been irrigated, stating that they looked better than many of the crops they had seen in the irrigated sections.

Work is progressing on the east line fence. Most of the post holes are dug and posts are being removed from the old fence line today. As soon as the east line fence is finished, work will be commenced in moving the south line fence to the line. The east and south fences are being moved approximately 50 feet out each way.

TUCUMCARI:

All station crops were rolling and firing extensively early in the week, but relief came in the form of a 1.12 inch rain on the 20th. This makes the total precipitation for the year 8.84 inches, only about 3.50 inches deficiency for that period. Some crops will recover quickly and continue growth, while others, including the spacing tests with milo, may not fully recover.

Tucumcari, continued:

Rotation milo has been headed for some time and since the heads formed during a severe drought, they are small and poorly filled. It seems apparent that rotation milo will make a low yield. Rotation kafir has withstood the drought much better than milo and promises to surpass it in yield.

On a trip to the plains, 30 to 50 miles south of Tucumcari, this week, a very large acreage of land in preparation for wheat was noted. Although the crop produced this year was insufficient to seed the land which will be seeded this fall, farmers are enthused over prospects and are buying seed wheat when able to do so. Heavy rains the past two months have made the plains sorghum crop prospects very bright, while conditions are also ideal for wheat seeding.

Hopes of securing a federal irrigation project in the vicinity of Tucumcari are being expressed, the water to be taken from the Canadian River, running about twenty miles north of the city. Extensive damage to property in Oklahoma the past few years by the Canadian has caused Oklahoma to favor the building of dams for protection in time of flood. Both the Rock Island and Southwestern railroads, passing through Tucumcari, have appropriated large sums to aid in the early survey of the project, so with these numerous agencies pushing the matter it seems evident the reconnaissance survey will be made by the state within a short time. Engineers are beginning work, and the feasibility of the project will no doubt be determined within a few months. It is said this can be made the second or third largest irrigation project in the country. Irrigating can be done on both sides of the river, and Tucumcari would doubtless lie in about the center of the irrigated land. This project is not a new idea, as it was first proposed over ten years ago, but since the matter was not pushed, nothing was done toward its fulfillment.

Mr. A. Lincoln Fellows, Senior Irrigation Engineer, Bureau of Public Roads, with headquarters in Denver, spent a portion of the week in Tucumcari and on the Canadian. While in this vicinity he visited the station and secured data on yields, evaporation, precipitation, soil moisture, etc. He expects to return later this fall and stated he would then like more complete data of station results.

Maximum temperature 98, minimum 61; precipitation 1.15 inches, Evaporation 2.497 inches. Average hourly wind velocity, 5.0 miles.

BIG SPRING:

Weather conditions during the past week have remained hot and dry, and as a result all feed crops have started to burn again. After the rains of two weeks ago the grain and forage sorghums started to grow again, but their period of revival seemed to be of short duration.

Big Spring, continued:

Due to the fact that there was no sub-soil moisture in the ground, the recent rains only offered temporary relief. Although cotton is still looking green, it is making very little growth.

Rains during all of this season have been very local in character. As a result crops vary from a complete failure in the northern part of the county to excellent crops in the southern part.

Cowpeas were hauled in this week, and the cotton was cultivated. Other work consisted of making stand counts, hoeing weeds and hauling gravel.

Maximum temperature 99, minimum 66; precipitation 0.

WOODWARD:

The past week has been hot and dry. Most of the row crops are standing the weather very well, though some plats are beginning to show lack of moisture. Most of the kafir is headed, and some plats of milo are heading, but others are apparently waiting for more moisture.

The corn on the D.L.A. project has been harvested. The grain yield will be low, but the forage yield will be fair. Cowpeas were cut with the mowed; they were beginning to shed a few leaves at the base, and it was thought that by harvesting this early, there would be a possibility of getting a second crop.

All fallow and early plowed plats have been harrowed to kill the small weeds which were starting. The orchard has also been harrowed, and the vineyard disked. Some grapes and peaches have been picked. Both fruits are now nearly gone. A stack of wheat from scattering patches, and the late plats in the pasture experiments have been threshed.

Other work has consisted of repairing machinery, and cleaning up patches of cockle burrs and other weeds.

Maximum temperature 103, minimum 59; precipitation, Trace.

Evaporation 2.720 inches. Average hourly wind velocity 6.0 miles.

SHERIDAN:

The weather has coninued dry, and for the most of the time, quite warm. Corn has dried badly during the past few days, and a large part of it probably will have to be cut early in the coming week. There is now a good percentage of ripe ears on that in the rotation field. Sorgo in Rotation 58, and in some of the closer spacing of the methods of seeding, also is drying considerably. Sudan grass was cut during the week.

Sheridan, continued:

The remainder of the small grain in the rotation field, and the varieties of wheat and oats were threshed. The yields of wheat in the rotations ranged from 16.3 bushels per acre on MCF, listed, to 39.0 bushels in Rotation 17, on peas turned under for green manure. Fallow in Rotation 18 yielded at the rate of 38.0 bushels, and the average yield was 27.2 bushels. Marquis on the check plats, stubbled in on sorgo ground, averaged 28.8 bushels per acre. Following are yields of some of the varieties of wheat and oats:-

	Low	High	Principal variety grown on station.
	Bushels per acre		
Winter wheat	30.2 - Sherman	47.8-Beloglina	43.8 - Kharkof
Spring wheat	35.8 - Kota	47.3- Ceres (North Platte seeded.)	37.1 - Arnautka 38.4 - Marquis
Oats	56.7 - Early Mt.	76.3- Sixty Day	Sixty Day

Markton yielded the highest of the later oats, at the rate of 74.6 bushels per acre.

Maximum temperature 99, minimum 38; precipitation 0.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR WEEK ENDING AUGUST 29, 1925.

HAVRE:

Moderate rains and variable temperatures were the principal climatic features of the week. For the first time in several years the soil is sufficiently moist to insure ideal conditions for fall plowing.

Threshing of the D. L. A. plats of spring wheat, winter wheat, and oats was completed. Yields of spring wheat were between 29.5 bushels on a fall plowed plat (3-a c) to 11.5 bushels per acre for the listed plat of the MC series, being better than the nine year average. Average yields of all fall plowed, spring plowed, and fallow plats were very close, the methods ranking in the order named. Disked corn ground gave slightly lower returns. Test weight per bushel ranged from 55 to 57 pounds for fallow and disked corn and between 59 and 61 pounds per bushel for spring and fall plowing.

Oat yields varied from 55.6 bushels on a fall plowed plat (6b a) to 21.6 bushels per acre on continuous disking. Test weight per bushel was quite low in most all cases. Winter wheat on fallow averaged about 13 bushels per acre and fall plowed plats reseeded to Marquis about 11.0 bushels per acre. On disked corn, and disked stubble, the yields were considerably lower, varying from 2.5 to 4.0 bushels per acre.

Northwestern dent corn is beginning to glaze and show color. Fallow plats in the rotation field were weeded.

Maximum temperature 91, minimum 39; precipitation 1.19 inches.

JUDITH BASIN:

Three light showers were received during the week, but, as yet, no precipitation sufficient to be of any benefit to crops has occurred since June 30. Corn is rapidly drying up and the ears are unusually small. Likewise, potatoes have made very little growth during the past month.

Field work has consisted chiefly of threshing the remainder of the increase fields, and all but seven plats on the rotations. Although the yields on all the plats have not been determined, it is evident that the yields of all grain crops on the rotations are slightly below normal.

Maximum temperature 90, minimum 38; precipitation .36 inch.

HUNTLEY:

Several light showers during the week have freshened up crops not too far gone to respond to the moisture. Cloudy weather during much of the week has also benefited plants to some extent.

Huntley, continued:

Field work has consisted of miscellaneous jobs such as resetting broken fence posts, fencing the corn pasture for hogs and weighing and moving the hogs from the Sudan grass and soy bean pastures to the plat of corn.

Maximum temperature 96, minimum 37; precipitation .16 inch.

DICKINSON:

A shower of .34 inch last night will benefit corn and late forage crops, also the winter wheat and rye varieties just seeded.

Corn has developed fast during the week and where moisture was available promises a fair yield. Early corn is now ripe enough to pick for seed but most of the crop is only just past the roasting ear stage of maturity.

Some sweet clover was cut for seed. A late, tall growing yellow sweet clover, F. C. I. 40937, is the only one left to be cut. Although the second crop of alfalfa in rows is very short a heavy crop of seed is setting. There is practically no seed on the first crop where it was left for seed.

In the wild oats experiment the alfalfa, brome grass and sweet clover plats were clipped the second time to remove the wild oats which had headed.

Mr. K. S. Quisenberry, Associate Agronomist, Office of Cereal Investigations, was here most of the week in threshing and seeding the winter wheat nursery.

Maximum temperature 93, minimum 34; precipitation .39 inch.

MANDAN:

Agronomy

Several days during the past week have been hot, with hot winds. Threshing of grain varieties for the Office of Cereal Investigations was completed during the week. Oats and barley in the feed fields were also threshed.

Corn has been affected by the hot winds, and has dried up in some spots. It is reaching maturity and some seed could be picked now. All fallow plats were worked with the duckfoot cultivator during the week. One block of alfalfa for seed is being cut today, the 29th.

Maximum temperature 101, minimum 41; precipitation .28 inch.

Mandan, continued:

Cooperative Grazing Experiment.

There has been very little growth of the vegetation during the past month. The larger pastures still remain in good condition, but the smaller pastures are short and dry. Thistles were mowed on the sweet clover during the week.

Horticulture

From June 25 to August 25, 138 quarts of peas, 58 pounds of carrots, 93 pounds of cauliflower, 257 quarts of beans, 527 pounds of cabbage, 406 pounds of potatoes, 106 pounds of beets, 193 pounds of summer squash, 59 pounds of cucumbers, 438 pounds of tomatoes, 1279 ears of sweet corn and 6 pounds of eggplant, have been harvested from the Acre garden. The estimated value of this produce is $209.20, while the seed cost about $15.00.

Compass, Sapa, Red Wing, Mendota, Wolf, Cheney, and Waneta plums ripened during theweek. Nigra plums, such as Cheney, are unusually good this year. Florence and Olga crabs are also ripe, and are about the only crabs at the station bearing a fair crop this year.

Arboriculture

Mr. Gillett and Mr. Emerson have completed their shelterbelt inspection work, and Mr. George will have finished his territory by the end of the month.

A field estimate of shelterbelt planting stock has just been completed, and indicated the following quantities of trees as available for planting next spring. Green ash, 22,000; Boxelder, 100,000;Northwest poplar, 29,000; Russian olive, 18,000; Chinese elm, 2,000; Caragana, 26,000; a total of 217,000 trees. This is practically the same number of trees as was available last year. The stock is all of excellent quality.

Ash seed, which is generally a failure over the entire Great Plains area, was discovered at Buffalo, in eastern North Dakota, and is also reported as fairly abundant around Detroit, Minnesota. Arrangements have been made to collect seed for the shelterbelt nursery at these points.

BELLE FOURCHE:

The weather continues dry and moderately warm. A shower of .03 inch is the only rain received within the last two weeks. Most of the ears of corn are now drying up and are ready to harvest. The ears are scattered and it was thought advisable to husk some of the plats before cutting the corn. Seven of the plats were husked the last part of the week and a number of other plats can be cut the first part of next week.

Bellefourche, continued:

For the first time at this station corn shows a material amount of damage from crickets. On some plats nearly every ear has been damaged to some extent. On nearly all plats the crickets have eaten through the stalk at the butt of the ears so that many ears have fallen to the ground. The damage is the greatest where the ears are immature.

The sorghums have ceased growth and have commenced to dry up. Yields will be much below the average. Fall plowing, except for corn ground, was completed during the week.

Maximum temperature 95, minimum 49; precipitation .03 inch.

The precipitation for August to date is .65 inch.

ARDMORE:

The past week has been exceptionally hot and dry with no precipitation of any consequence. Exceptionally hot winds were blowing from the 22nd to the 24th, inclusive. During this period corn and cane fired very rapidly, necessitating immediate harvesting for silage.

The total precipitation from August 1 to 29, inclusive, was .72 inch. This may be compared with the 13-year normal for the same month which is 1.25 inches. There was no reserve supply of moisture in the soil this year, and corn and cane crops have suffered more than usual during August.

Steers used in the grazing experiment were weighed on the 29th. The average gains per steer for the thirty day period were as follows:-

100-acre pasture	48.5 pounds
80-acre pasture	20.0 "
160-acre pasture	50.0 "

These are the best gains that have been made by the steers used in the grazing experiment at this station during any month of August.

Maximum temperature 100, minimum 55; precipitation .02 inch.

ARCHER:

The weather during the week has been rather pleasant with a few light showers totaling .15 inch of precipitation. At present the corn and sunflowers, especially the latter, are beginning to suffer for the want of moisture.

Work has consisted of seeding all the winter wheat on the Dry Land plats, the rate of seeding experiment, threshing some of the winter wheat, and the setting up of a new corn binder.

Archer, continued:

Some of the increase fields of small cereals which were cut with the mower were hauled for hay.

Speaker of the House, J. C. Underwood, Representative Stewart Grier, and Harold Vaughn, President of the Cheyenne Creamery, were station visitors August 27.

Maximum temperature 87, minimum 48; precipitation .15 inch.

AKRON:

Only very light showers were received here at the station during the past week though showers have been quite general over the countryside. A hard shower was received up to within four miles of the station on the east about the middle of the week. Another heavy shower approached as closely from the southeast last evening.

A new furrow drill of the Chase Plow Company make was received during the week and set up, purchase having been made by the State Agricultural College. What it is hoped will be a final weed cleanup was made early in the week. Some little time was spent in getting ready for the Weld County Field Day Delegation. Rate and Spacing corn was cut by plats and weighed and put into the silo the last of the week. The few stalks on the end of the plat which gave promise of maturing ears were left standing in order, if possible, to secure a continuing seed supply of Akron Yellow.

The Weld and Logan County delegation arrived at noon, Friday, for an inspection of the station. There were from 20 to 25 cars present. Professor Alvin Kezer, Professor D. W. Robertson, Mr. Waldo Kidder, Extension Agronomist, and Mr. E. J. Maynard, of the Animal Husbandry Department, all were present from the State Agricultural College. Congressman Charles B. Timberlake and State Senator King, and the Secretary of the Sterling Chamber of Commerce, were present from Sterling. Mr. George Wheeler, Managing Editor of Western Farm Life, and Mr. R. L. Ford, Agriculturist of the Burlington Railway, were present from Denver. County agents H. H. Simpson, of Weld County, James Morrison, of Logan County, and Robert Vance, of Washington County, were also present.

The Akron Chamber of Commerce was present with free lemonade and cigars. In the evening the Akron Chamber of Commerce was host for Dr. Charles A. Lory, President of the State Agricultural College, and Dr. W. T. Spillman, of the U. S. Bureau of Agricultural Economics, both of whom gave interesting talks to a representative group of farmers and businessmen.

Maximum temperature 99, minimum 55; precipitation .11 inch.

NORTH PLATTE:

The entire station force has been engaged for the week in filling silos. Three pit silos with a total capacity of 225 tons are being filled in a five day run. Dry land corn averaged about five tons per acre. Irrigated fields are making about eleven tons per acre.

The week has been without rain and with much high wind. The result has been a heavy loss of the moisture received during the week preceding.

Mr. W. W. Burr visited the station on August 19 and 20.

COLBY:

A rain of 1.19 inches which fell the previous week revived the sorghums considerably and they remained fresh until Friday of this week. By that time some of those that had dried and rolled previously were again rolling and showing dry spots. Many of the plats of milo are already too far dried and are too short to make much fodder and the listed and some of the surface planted are just heading good, so that very little if any grain can be produced on them. The summer tilled plats that are in milo are showing good growth, though they, too, are short and the heads are relatively small. The Dwarf Yellow milo on continuous cropped and surface planted is for the most part less than knee high and the heads that are out are very small indeed. The feterita on the project at this time looks very much better than the milo or kafir. The kafir on summer tilled land looks very much better at this time than the milo on summer tilled land.

Sorghum varieties are very short and only the very earliest of the grain sorghums are showing many heads. The ambers in the sorgos are showing heads and are looking very much better at this time than the sumacs. The field of sorghum that was double rowed the 3rd of July is looking very promising at this time. The Sudan grass is ready to cut for feed. The Early Sumac is not showing heads and the amber is heading nicely. One small field of milo looks very much better than the milo on the surface planted summer tilled plats.

All land that was in small grain on the station this year that does not go into fall crop has been listed to pass through the winter.

Work during the past two weeks has consisted of listing the stubble fields and weeding the roads and alleys, also miscellaneous cleanup work around the farmstead, cleaning wheat, and treating seed wheat that had been sold for seed.

Weeds have started on stubble land as well as volunteer wheat since the rains.

HAYS:

Generally the week has been dry, hot, and at times windy. The effect of such weather has been to hurry up the feed crops. Corn is drying up rapidly and the lower leaves of the sorghums have fired to considerable extent, but chances are still good for the sorghums to mature a very satisfactory grain crop as well as heavy fodder crop.

Work on the project has consisted largely in weed killing and cultivation of wheat plats to destroy volunteer which is very heavily loaded with hessian fly, especially the volunteer that came up early. Some of the fly are now going into the flax seed stage.

A gust of wind harshly treated a neighbor living north and west of the project about one-fourth mile, by razing his barns, chicken house and windmill, in fact destroyed all buildings but his house. This particular spot seems to be a special target for wind storms. It is the third time in four years this man has lost his barns by wind storms.

Maximum temperature 95, minimum 55; precipitation .24 inch.

GARDEN CITY:

Continued drought has made prospects for a sorghum crop poor. It is doubtful if sorghums growing on land cropped last year could make a crop even if favorable conditions should prevail from now until harvest. All crops growing on fallow continue to withstand the dry weather and give promise of making a crop.

All cowpeas were harvested for hay the first of the week and are now curing in the shock. A light yield was secured on all except the plat growing on fallow.

Early fall listed plats were cultivated in preparation for fall seeding. Early fall plowed plats were spring tooth harrowed to kill volunteer.

Maximum temperature 98, minimum 53; precipitation .03 inch.

DALHART:

The past week has been hot with plenty of wind. One or two days were quite windy, causing some firing in some of the crops. There was .01 inch precipitation recorded this week. A few times there has been indications of rain but nothing further developed. Some fairly good rains have fallen in local showers but nothing close to Dalhart. A good rain at this time would be a good help to crops generally.

Dalhart, continued:

Considerable harvesting was done during the week. The drilled plats of Sudan grass and millet were harvested with the grain binder, also the drilled wind break strips and some millet which was planted for horse feed. An excellent yield will be obtained from these crops. The last two dates of Sudan grass and the Sudan grass from the variety planting were harvested with the row binder. It is quite likely that a second cutting can be made later in the season from these plats.

The field crops in rotations, varieties, etc., are looking good and making good progress. These crops have made such growth since the recent rains that the moisture conditions are not so favorable as it was thought they would be at this time. The crops do not seem to be suffering for moisture but a good rain would be appreciated. Nearly all the crops are headed, and those not in full head are in the boot and will be headed within a few days.

The roadways were mowed again this week to get the crop of grass burs which went to seed after the last mowing. Roguing was continued this week on some plats and on the increase field of milo. The rogues were carried out and loaded on the rack. A full load of about a ton was secured from the fields and plats which was brought to the barn for feeding. The bundle feed from the windbreak strips was hauled in and ricked up to cure so that it can be put in the barn for winter feed. All this feed was removed in order to have a clear field for the growth of a second crop if possible. The millet was shocked on the field where cut. Work was continued on the new fence lines this week and they are about ready for the wire.

There has been a large number of visitors at the station this week. These were from about all parts of the country, some from Iowa and Illinois, looking over the Dalhart country for a location. They were well pleased with the crop outlook.

BIG SPRING:

Two rains, totaling, .93 inch, fell during the week. This relieved the dry spell to some extent, but it came too late to be of much benefit to anything but the late crops. Sumac had burned badly, but it may revive. The grain sorghums in most instances are not showing much improvement.

It is interesting to note the way the different methods of seed bed preparation have withstood the dry weather this year. The fall plowing, in nearly all cases, has caused the crops to withstand the dry weather much better than the spring plowing. The difference is very noticeable this year, while in years of normal rainfall there is very little difference.

Big Spring, continued:

This week the time has largely been devoted to hauling gravel and doing some concrete work around the feed pens. Some stand counts were made and the orchard cleaned out.

Maximum temperature 100, minimum 62; precipitation .93 inch.

LAWTON:

During the last two weeks the wind velocity has been low and, although the temperatures did not exceed 100 degrees, the heat was oppressive. During the past week the weather has been partly cloudy and threatening. As yet, only local showers have been reported.

Cotton has continued steady growth and the bolls that were set early in the season are opening rather early. It is very probable that some picking will be done throughout the county within a very few days. Two varieties, Half and Half, and Oklahoma 44, which were planted April 15 and May 1 on the station, yielded a light picking August 25. This is the earliest picking on record at the station. The first picking throughout the cotton fields will be light and likely the second picking may be somewhat delayed as the young bolls which were put on after the rains the last of July and the fore part of August will require considerable growth.

The cotton boll worm has caused considerable damage throughout the southern part of the state. On some of the bottom land fields, where a good yield was anticipated, the damage has been heavy. Some damage was inflicted on the station but control measures have so far reduced the injury to a minimum.

Alfalfa was harvested about two weeks before maturity because of the web worm.

Cowpeas were harvested on the 24th. The average yield of hay was about 1200 lbs. per acre. A heavy crop of seed was produced after the late summer rains.

Kafir continues the development of a late crop of poorly formed heads which will not, in all probability, produce a satisfactory yield of grain.

WOODWARD:

All sorghums on the D.L.A. project, with the exception of a very few plats, are headed and prospects for a fair crop are good. A few plats, such as manured fallows and top dressed plats, are firing considerably. The CC-A broomcorn plat is very short, and much of it will be much later than the B, if it heads at all.

Woodward, continued:

Very little field work has been done the past week, most of the time being spent in digging ditches for sewers and water pipes, and cleaning up around the house and new barns on the Dairy farm.

Most of the grapes have been cleaned up, there being only four varieties left. The clusters on these are being bagged in an attempt to hold them until September 12, the date of the Farmers' Field Day at this station. Two varieties of cowpeas in the variety test have been harvested.

Cotton in the May 10 date of planting has from 2 to 5 bolls per plant open, while that in the May 20 has from 1 to 3 bolls open on scattering plants, with the exception of the Mebane which has practically none open.

Maximum temperature 98, minimum 56; precipitation, 0.
Evaporation 2.149 inches. Average hourly wind velocity 6.0 miles.