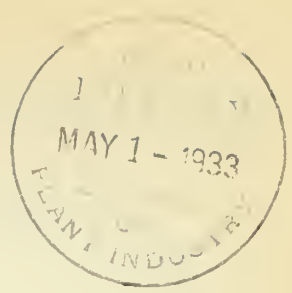


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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR THE TWO WEEKS ENDING APRIL 15, 1933.

HUNTLEY:

High winds which resulted in considerable soil drifting and damage to winter wheat visited this section during the first week in April. Many fields of winter wheat were entirely blown out, and in one case where spring wheat had been sown the soil was removed by wind to the depth of planting. Wheat drilled into stubble land generally survived the storm period with little injury. On the plots the location of the planting, rather than the tillage method, apparently governed the amount of harm done to the winter wheat by wind and soil movement. The light snows and showers, were not of much benefit to crops. Alfalfa and cultivated grasses are starting slowly, and show the need of warm weather and moisture. Field work on the experimental tracts was begun March 27, and all tillage operations for early crops were completed April 11. Planting of all crops except corn in the rotation field was finished April 8, and some seeding in the pasture and miscellaneous crop tests has been done since that date. Judging from the number of inquiries which have come to the station this spring there appears to be a renewal of interest in corn production on the drylands of this part of the State. Seed of small type corn which can be handled with a grain binder and threshing machine is in demand.

Maximum temperature, 73°; minimum, 17°; precipitation, 0.46 inch.

DICKINSON: (Report for the week ending April 8, 1933.)

Dry, windy weather at the first of the week was followed by a light snow and cool, unsettled weather for the balance of the week. Tillage, started in preparation for seeding small grains, was stopped by the snow, but was continued the last of the week. All plots are now ready for seeding wheat, oats, barley, peas, and sweet clover. Some pruning of trees and several clean-up jobs were completed about the station.

Maximum temperature, 58°; minimum, 17°; precipitation, 0.24 inch.

MANDAN:

Agronomy - (report for the week ending April 8, 1933.) Field work in the rotations started on April 3. Weather during the week was unfavorable for field work, as it was cold. Plowing of plots started on April 4, which is 2 or 3 days earlier than for sometime. Plowing was delayed one day because of cold and some frost in stubble plots. Plowing for small grain was completed on the 8th. Crested wheatgrass resumed active growth by April 1 and now shows green in many spots. Bromegrass has not started much growth to date. A little snow fell on 2 or 3 days.

Maximum temperature, 50°; minimum, 23°; precipitation, 0.11 inch.

Agronomy - (report for the week ending April 15, 1933.) About six inches of snow fell during the night of the 8th. No field work was possible during the week. The weather remained cool and snow melted slowly. The ground froze hard each night. The moisture has soaked into the soil, which should be in good condition for seeding. Work should be resumed early next week.

Maximum temperature, 51°; minimum, 11°; precipitation, 0.67 inch.

Arboriculture - Shipping of shelter belt hardwood nursery stock commenced on April 6 and was completed on April 14. Approximately 40 farmers, for whom trees were reserved this spring, have failed to reply to letters requesting information if they were prepared to plant the trees this spring and shipping instructions. Fifteen farmers who were to receive new plantings this spring requested that their shipments be either postponed until 1934 or canceled entirely. The heavy frosts during the present week have prevented the digging of evergreen stock which is to be shipped this spring. The precipitation of the present week should be favorable for the germination of tree seed previously planted.

Horticulture - Work with vegetables and flower plants under glass in greenhouse and hotbeds is well under way. An ample number of geraniums were propagated last fall. Cannas were started March 10 and have recently been potted up. Cabbage, cauliflower, and tomato plants for variety tests, garden work, and breeding project are being transplanted as quickly as possible. Four newer varieties of tomatoes, intended to be tested under two cultural methods, and nine main station selections, making a total of about 4,000 plants, are being handled this year. The recent cold snap has kept all manner of growth back quite noticeably. Buds have not begun to swell nor grass started to grow, except a newly planted lawn of crested wheatgrass, which in spite of a very dry season last year, seems to have survived beautifully.

COLBY:

The weather continues dry with frequent high winds. High temperatures alternate with unseasonably low temperatures. On 6 of the last 15 days high winds have caused considerable soil blowing in this vicinity. There has been practically no damaging soil blowing on the station except in the orchard. Many fields throughout this county have blown badly, however. The winter wheat prospects at this station continue very close to the zero mark. The wheat on fallow appears to be almost all gone. On some of the other plots it has begun to come up during the last week. The stands will be very thin at best. There are a few fields of fairly good wheat in this county, but they are few and far between. Thousands of acres have sprouted, however, during the last two weeks so that the fields are greening up. A few of the spring small grain plots have come up, but on most of them the plants are showing above the ground only in spots. Rabbits are very numerous and are doing some damage by eating the tender plants as they emerge.

Maximum temperature, 79°; minimum, 14°; precipitation, trace.

The precipitation was in the form of snow on four different days.

NORTH PLATTE:

Extremely dry weather continues. A light flurry of snow on the 12th with only a trace of precipitation is the total for the month to date. Strong winds are keeping the air heavily laden with dust, but soil blowing has not been as injurious as in some other years, except on some of the sandier soils where the damage has been extensive. Spring grains seeded in March have emerged with fair stands. Winter wheat on fallow is making a fair growth and has a good color. On early plowing the condition is less favorable than on the first of the month. Alfalfa has made very little growth, and pastures are still almost wholly dormant. The annual Smith-Hughes high school judging contests were held here on April 13-14. There were 14 schools with 148 boys in attendance. This is about a 30 per cent decrease from last year.

DALHART:

Continued dry and windy weather just about describes the climatic conditions for the first half of April. At some time of the day, if not during most of the day, the wind causes severe soil blowing. Many fields are a mass of sand hummocks, and the more frequently travelled sandy roads are becoming almost impassible with blow holes and sand dunes. Row crop fields, in the main, have blown worse than wheat fields. Winter wheat, where it is not already blown out or dead, has remained in fair condition, but the past week has injured all wheat severely. The highest wind velocity of the year and the worst soil blowing occurred the night of April 12. This wind and soil blowing was general for this section of the Great Plains. The relative humidity, has been unusually low. In spite of these unfavorable conditions planting of evergreen seedlings proceeded when it was at all possible to work. This planting operation was slowed down because of the large amount of water used at planting time. Winter wheat and rye on the station is still good on the fallow plots. The past few days have injured these crops on cropped land so severely that most any date now could be assigned as a date of definite abandonment. This is drying out rather than soil blowing. Only a few oat and barley seedlings have emerged. Recent low temperatures have killed plums in full bloom and have delayed leaf emergence on all trees. Farmer inquiries for sorghum seed has been rather light. This is owing almost exclusively to a lack of any money whatever in farmers hands. The demand for good seed is here, but the outlet for cash sales is limited.

Maximum temperature, 77°; minimum, 21°; precipitation, none.

TUCUMCARI:

Drought and high winds continue, making this the most severe winter and spring since 1918. The average wind velocity this month to date, 8.7 miles, is the highest recorded any month since April, 1920. Precipitation in 1933 to date totals 0.31 inch, with a total of 1.61 inches since September 30. Trees which were planted this spring have been watered since planting. Wheat and rye, which looked reasonably healthy at the close of March, has deteriorated greatly. The majority of the plants on the A and B rye plots are dead, and A and B wheat plots are in critical condition. Arizona cypress injured by hard freezes are slow in starting growth, and very probably several are dead, the others injured in varying degree. Apples and pears were in bloom April 14 when a temperature of 20° was recorded. Apparently considerable damage was done, but many blooms appear to have survived. Cherries are now bearing a light crop of blooms. Soil blowing has been very severe this winter, and some weeks ago the surface became so hard and dry that surface cultivation to further lessen blowing was impossible. The past ten days some fields have been listed, but soil is dry nearly to the bottom of lister furrow. Failure to list will permit soil to blow unchecked, but conditions are very unfavorable for listing, large, hard clods turning up. Farmers have given up listing in despair, waiting for rain.

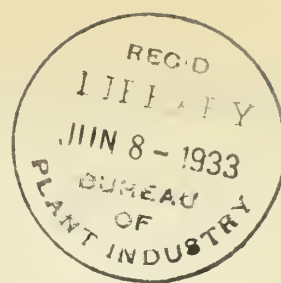
Maximum temperature, 79°; minimum, 20°.

LAWTON:

Temperatures covered a wide range during the first 15 days of April, varying from a maximum of 89° on the 4th to a minimum of 31° on the 14th. This low temperature resulted in only a minimum of damage. The tops of a small percentage of alfalfa plants were killed and a few tender garden vegetables showed some injury. The daily wind velocity varied from 6 to 18 miles per hour, and on a good many days the atmosphere was clouded with drifting soil. Extra field cultivation was necessary to control soil blowing and the surface soil was rapidly depleted of moisture. A rainfall of 0.91 inch, April 4, fell rapidly resulting in excessive runoff. Wind of high velocity followed immediately and the surface of cultivated land was baked and crusted. Small grains that were planted on well prepared land made satisfactory growth during the first half of the month, but the need of additional moisture and less wind was evident by the 15th. Much of the basal foliage was yellow and large soil cracks were present in the plot alleys. Wheat and barley carry an extreme infestation of adult chinch bugs. Corn planted March 28 emerged to good stands April 9 to 12. The March 15 seeding of alfalfa and sweet clover emerged March 27, and the stand of young plants has survived the hazards of beating rains, high winds, and low temperatures.

N O T E

See note in News Letter for March on resumption of weekly news letters April 15.



WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR THE WEEK ENDING APRIL 22, 1933.

JUDITH BASIN: (Report for the period April 1 - 22, 1933.)

A heavy fall of snow, together with temperatures well below normal, has characterized the weather during the first three weeks of April. There was but little wind movement and most of the snow laid where it fell and all the water soaked into the soil. A rain of .68 inch April 15-16 also added to the moisture received. Fields should be dry enough for field work by Monday, April 24. Spring plowing of the plots that are to be seeded to small grains was completed before the snowstorm, otherwise no field work has been done. Grass is beginning to green up, but the growth is very small. Winter wheat appears to be in no better condition than a month ago, and much of that seeded on fallow will have to be reseeded.

Maximum temperature, 60°; minimum, -4°; precipitation, 2.46 inches.

HUNTLEY:

Chilly, cloudy weather with frequent light showers and snow flurries has prevailed during the last week. Although the total amount of moisture received was small, evaporation was light and a large part of the precipitation entered the soil and should be available to shallow rooted crops. Grasses appear to have made some growth during the week, but fall-sown grains and alfalfa have seemingly made no progress. A few plots of early seeded small grains are beginning to look green with new growth, although stands are still incomplete. All vegetation would be greatly benefited with a few warm days to stimulate development.

Maximum temperature, 62°; minimum, 26°; precipitation, 0.35 inch.

SHERIDAN: (Report for the period April 1 - 22, 1933.)

No field work of consequence has been possible this spring. Snow on the 8th and 9th, just as the ground was beginning to dry; and snow, sleet, and rain on the 19th and 20th has kept the ground too wet for much work. Dates-of-seeding small grain were sown on the 17th, but the ground then was too wet for tillage generally. The side hill in Field G was duckfooted and a part of Field O, also on a fairly steep slope, was disked on the 18th. This morning, the 22nd, there is four inches of snow on stubble in the rotations, about four inches less than yesterday morning. During the storm the maximum depth of snow at one time was about nine inches. All vegetation has been slow in starting. Crested wheatgrass would have furnished some grazing for the last two weeks, and native grass will now furnish some feed when uncovered. Winter wheat and rye have made practically no growth.

Maximum temperature, 72°; minimum, 9°; precipitation, 2.80 inches.

DICKINSON:

Field work was delayed by rain during the middle of the week. Wheat was seeded on the Rotations on April 17, four days later than the 27-year average. The seeding date has ranged from April 1 to 26. Oats were seeded on the Rotations on April 18; and barley, peas, durum wheat, and crested wheatgrass were seeded April 15. Plums were sprayed April 22

with lime-sulphur, mainly for the control of plum pockets, a disease which has caused heavy loss of some varieties if left unsprayed. Most of the apples, crabs and plums were planted in the new orchard. Grasses have greened up well during the week but are somewhat behind as compared with this date a year ago. Crested wheatgrass has made more growth than any other grass and is now far enough along to provide grazing. Visitors included Dr. J. R. Parker, and R. L. Shotwell, of the U. S. Entomological Laboratory, Bozeman, Mont., and Sam Sloan, Extension Agronomist, Bozeman, Mont.

Maximum temperature, 76°; minimum, 26°; precipitation, 0.19 inch;
precipitation to date in April, 0.83 inch.

MANDAN:

Agronomy - Field work was resumed on April 17, after the previous week's delay because of snow. High winds and cold raw weather made field work disagreeable the fore part of this week. Wheat was seeded on the 21st and oats on the 22nd. The average date of wheat seeding is the 18th and oats the 21st. The high winds caused some soil blowing on the lighter soil on the west side of Field M. The wind averaged nearly 13 miles per hour for five days, from the 17th to 21st, and averaged 21 miles per hour during some of the day time. The top soil is badly dried out. The small grains went into moisture in most places. Crested wheatgrass is about six inches high. Alfalfa is just starting.

Maximum temperature, 81°; minimum, 24°; precipitation, none.

Horticulture - Raspberries, grapes, and budded stock in the nursery were uncovered during the week. Planting of fruit trees has been completed in the orchards and breeding blocks. Top-working Hibernial trees in the west block and hillside orchard is now in progress. A number of the station's new selections are being top-worked on these trees. Most of the fruit trees appear to have passed the winter in good condition. Some winter injury is evident on most of the plums from New Zealand and Australia.

Arboriculture - Shipping of trees to cooperating farmers is practically completed. Planting of tree seed and cultivation of the nurseries is in progress.

Dr. J. R. Parker and R. L. Shotwell visited the station on April 18.

ARCHER: (Report for the period April 1 - 22, 1933.)

During the first half of April the weather was rather cold with considerable wind. Snow has been falling from the night of April 19 to the time of writing. The total precipitation to date from this snowstorm is 0.93 inch. This is the first precipitation in the last ten months that will result in any material benefit to agriculture. Before the storm stubble land was slightly moist to a depth of 3 to 4 inches, but the row cropped land was very dry. There was no visible survival of winter wheat, and the seed of the late dates-of-seeding was dry and sound. Spring seedings have not made any growth, although some of the seed has been in the ground for more than a month. Owing to the dryness of the soil, little field work was attempted before April 17, when the plowing of the rotation plots was started and tillage of increase fields was undertaken. The manuring of all manured plots was finished April 19. Director W. L. Quayle and members of the County Agricultural Council visited the station April 8.

Maximum temperature, 71°; minimum, 6°; precipitation, 1.02 inches.

NORTH PLATTE:

The weeks weather has been very unusual. The wind velocity record was broken and precipitation was a runner-up on the previous high. From the 17th to 20th, inclusive, wind held steadily from the southeast with daily velocity of 18.4, 21.3, 27.1, and 25 miles per hour. The previous high 24-hour record for this station was 25 miles per hour, and few records above 20 miles per hour have been made on consecutive days. Rain began on the night of the 19th and was almost continuous for 72 hours. The rainfall measured for this period was five inches on the bench and 5.16 inches on the table. There was very little run-off for this amount of rain. On table sod-land the penetration of moisture had reached 22 inches on the morning of the 21st and 30 inches on the morning of the 22nd. This is deeper than moisture penetrated on sod land at any time in 1932. The three days rainfall on the table is one inch more than double the April normal of 2.08 and higher than the April total for any year except 1915. With the exception of the planting of potatoes on the 17th, no work has been done on the D. L. A. project during the week.

AKRON: (Report for period April 1-15, 1933.)

Slight soil blowing occurred several times. All early spring seeding in the rotations was accomplished in good season. Winter wheat on the rotations did not emerge last fall, and quite generally did not snow more than 20 per cent stands early in April. Winter wheat on the rate and spacing corn project seeded October 10 showed excellent stands. The rotation winter wheat plots were seeded September 16.

Maximum temperature, 73°; minimum, 32°; precipitation, 0.32 inch.

AKRON:

Slow drizzling rains have brightened the agricultural outlook considerably. Just before the rains set in on Tuesday night, a hard northeast wind did considerable soil blowing damage on the station. Up to the time of this wind the winter wheat nursery was in good to excellent condition. The rains should aid the whipped and harrassed wheat to recover. Work up to the rains beginning the middle of the week was devoted to preparing ground for seeding to corn and sorghums. The rainy days were occupied by hand picking bean and soy bean varieties for seed.

Maximum temperature, 77°; minimum, 34°; precipitation, 2.65 inches.

COLBY:

The long drought which prevailed over this section since last July was broken by intermittent showers which have continued since Wednesday night. At present there is ample moisture for planted crops to germinate. It is raining to-day. The winter wheat prospects have not improved very much. Much of the wheat that did not germinate last fall is coming up now. In most cases, however, the stand appears to be only fair, at best. High winds on the 18th and 19th caused further damage on many fields. Hessian fly appear to be present in most fields in unusually large numbers and have apparently done very serious damage in fields where the wheat came up last fall. The spring sown grains have made indifferent progress. On some of the plots only scattering plants have come up because of the dry seed bed and most of the others show spotted stands.

Maximum temperature, 84°; minimum, 31°; precipitation, 0.84 inch.

HAYS: (Report for the period April 1 - 15, 1933.)

Weather continues dry and windy. The wheat and rye wilt every day and some of the top growth has browned. There is still considerable moisture in the subsoil, and this is feeding the crop through one of the most prolonged droughts in the history of this station. The wheat fields in this locality look very green and pretty from a distance, but that is practically all that is green. Not even the weeds have made a start, and all forest trees are slow to start growth, very few showing any green leaves yet. Plums and cherry trees are about the only fruit that have bloomed, pear and apples are now beginning to show some bloom. Alfalfa is making a very scanty growth on bottom land and on the upland it has not started, nor is there any sign of growth of bromus inermis. After waiting for rain to improve seedbed condition until it seemed late for good seeding, barley, and spring wheat plots were seeded in a dry soil April 5, the following day spring wheat and Canada Field peas were seeded, and brome grass was seeded April 7. Spring plowing for the corn and sorghum crops was done soon after seeding of spring small grains.

HAYS:

A six-months drought was broken by 1.56 inches of rain on April 20, 21, and 22. Wheat and rye which had been wilting badly for some days looked much improved by the afternoon of the 22nd. None of the barley, oats, or spring wheat seeded early in the month has germinated, except for a very small percentage of the seed sown on fallow and green manured plots. All the seed should now germinate promptly. Work during the week consisted largely in trimming winter wheat plots, collecting a set of soil samples, planting a few shrubs around the seed house, and some repair work.

Maximum temperature, 87°; minimum, 28°; precipitation, 1.56 inches.

TUCUMCARI:

The past week has been generally cool, cloudy, windy, and dry, with periods of calm and sunshine. Wheat and rye are rapidly deteriorating, but alfalfa is growing normally and trees are coming into full leave. Ranges are showing but little new grass, which is to be expected, with only 1.61 inches precipitation in 6-3/4 months. To stop soil movement, the north field was listed the past week. A hard crust 3 to 4 inches thick necessitated changing lister points at the end of each day's listing. Peach trees were pruned severely, as winter freezes killed all buds. Dead wood was removed from other orchard trees. In spite of temperature of 20° on April 14, it appears that a number of apple, pear, and cherry blooms were uninjured.

Maximum temperature, 81°; minimum, 29°; precipitation, none.

DALHART:

High winds and dust storms still continue. The Chinese elms are starting leaf emergence. The first emergence was killed by a hard freeze. A few cherry trees are sending forth a few blooms. A more unfavorable spring could hardly be imagined. Tree planting was completed this week. Some plowing of miscellaneous fields was attempted. The soil ranged from too hard to plow, or with the furrow slice a series of lumps the width of the plow share, to a friable soil which could be worked into a dry seedbed. In no place would there be sufficient moisture to germinate seed. The County Assessor reports to the writer this morning that he finds "an

unbelievable courage without optimism" among the farmers after two months spent in assessing them. He also states that only a relatively small percentage of fields that were seeded to wheat have any possibility of making a crop.

Maximum temperature, 81°; minimum, 29°; precipitation, 0.08 inch.

BIG SPRING: (Report for the period April 1 - 22, 1933.)

With the exception of a few light showers in February, little or no moisture has been received since January 1. Several hard wind storms have occurred during the month, but very little soil movement has taken place. This is due to the fact that there has been no rains to pack the soil since it was listed or plowed. There were two nights during the month when the temperature dropped below freezing; only the tips of some of the more tender flowers were injured by this. Many reports have been received that the China trees were killed by the -6° temperature of February. Numbers of these trees, which are reported to be more than 20 years old, are being dug up. The winter wheat plots still present a healthy green color and have made a good growth, but they can not stand it much longer without rain. Station work has consisted of watering young evergreen trees and cutting dead wood from shade trees. Threshing and grinding milo for the cattle feeding experiments has required considerable time.

Maximum temperature, 90°; minimum, 30°; precipitation, none.

LAWTON:

A dashing rain of 0.91 inch, April 19, was highly beneficial to small grains and to seed beds that were recently prepared for early planting of sorghums and cotton. A small amount of hail that accompanied the rain did no damage. Minimum temperatures varied from 41 to 63 and the maximum from 71 to 88. Eight varieties of cotton in the date-of-planting project were planted April 17 on a seed bed that was mostly dry and quite cloddy. A uniform planting depth could not be obtained. With the subsequent improvement in moisture on the 19th favorable germination may result if warmer weather prevails. The first planting of sorghums in the chinch bug sorghum resistance project was made April 18 and 19 on a fairly good seed bed. Two-year-old sweet clover, growing in paired rows continues to make a rank growth and now stands from 26 to 36 inches in height. Growth of alfalfa on the upland, either rowed or drilled, is still scant. Winter barley in the variety test and in the date of seeding test is heading. Thin, patchy stands and irregular growth will likely result in very ununiform maturity. In the wheat variety test, Nebraska 28 was fully headed April 21, and the first heads were showing in Early Blackhull.

WOODWARD:

April has been characterized by numerous days of high temperatures and desicating winds. The winds were not only ruinous to the wheat, but were particularly disagreeable because of the amount of dust in the air. Many farmers have evidently given up all hope of a wheat crop and are purchasing larger amounts of seed of the grain sorghums than at any time in the past ten years. Precipitation of 0.68 inch occurred on the 19th. This came as a hard, dashing rain, but there was practically no run-off. Since then it has been cloudy. Wheat on the station has a chance of making a fair yield if rains continue. Some of it on fallow may make heavy yields. Work to date this month has consisted largely of planting and

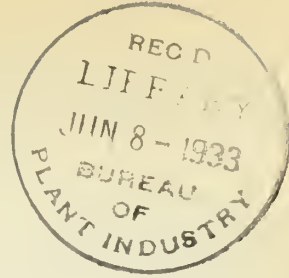
transplanting nursery stock. A couple of small fields were planted to alfalfa, and some work was done on roads. Owing to a combination of drought and cold, the bloom on most flowering shrubs is sparse and many twigs and branches have died. Trees have come into leaf very slowly because of drought.

Maximum temperature, April 1 to 22nd, 90°; minimum, 27°; precipitation, 0.75 inch.

BELLE FOURCHE: (Report for the period April 1-22, 1933.)

The first half of April was comparatively cold. Unusually warm weather prevailed from April 15 to 19. April 19 a heavy rain of two days duration commenced, in which a total of 2.11 inches precipitation was recorded. Over 1.75 inches precipitation fell during the night of April 19, but only a comparatively small amount of run-off took place. A total of 2.64 inches precipitation has been received in April to date, which is 1.13 inches above normal for the entire month. Work in the field began about the first of April. Seeding of spring wheat, oats, barley, field peas, sweetclover, and brome grass on the rotations was completed April 8, and the snow which immediately followed made soil moisture conditions ideal for the germination of all crops. Very little plant growth took place until after the middle of the month, when the weather turned warm. Spring-sown small grains are well germinated, and hay crops have resumed growth. Winter rye has recovered with fair stands on all plots. Surviving winter wheat plants which had started to resume growth were seriously damaged by soil blowing on April 2, and the extent of recovery of the crop is still uncertain.

Maximum temperature for the week ending April 22, 83°; minimum, 31°; precipitation, 2.11 inches.



WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

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U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR THE WEEK ENDING APRIL 29, 1933.

HAVILE: (report for the period April 1 - 29, 1933.)

April was generally favorable for field work except the week beginning April 7, when there was an 11-inch snow storm. Total precipitation for April to date is 0.67 inch, long time average 0.94 inch. Wind velocity was high on the 4th when 20.4 miles was the 24-hour average. During the first two weeks, vegetation made a fairly good start, but development the last two weeks has been slow. Spring rye seeded on March 17 has made good growth. Spring grains seeded April 5 are up nicely but are making slow progress. The varieties and nurseries seeded about 10 days ago are near emergence. All small grains were seeded on the rotations the past week. Seed beds are in very good condition with the exception of fall plowing, which was cloddy in places after seeding even though it was cultivated several times. Winter survival of winter wheat is not uniform. That seeded August 15 is very poor. The best dates are October 1 and 15. Some of the hybrid Turkey X Minessa are better than the ordinary varieties for survival. The rotations show quite a lot of variation, fall plowing being the poorest and some of the fallow the best. Furrow drill now seems much better than surface plantings. Survival of winter rye, sweet clover and alfalfa, is excellent. It appears that fallow has more and land that was cropped last year, less moisture than the usual storage. Range conditions are not good as yet due to cold weather. Moisture is ample and with warm weather, grass should make rapid growth. Cattle are in fairly good condition due to a good supply of feed. The snow storm caused losses where lambing was in progress. Shrubbery and trees seem to have withstood the winter in fairly good shape. A few Norway pine have died. Fruit trees that survived the drought of 1929 to 1931 were given rather severe pruning this spring, especially where there was some dead wood.

Maximum temperature, 73°; minimum, 33°.

JUDITH BASIN:

Conditions have been favorable for field work during the past week, and good progress has been made with spring seeding. All seeding of spring grains on the rotations and the greater portion on the cereal project will be completed to-day, April 29. Soil moisture conditions are very favorable, and germination should be prompt on all methods. Cool, cloudy weather most of the week has retarded plant growth, and all vegetation is unusually backward for this time of year. Winter wheat on fallow looked to be almost a total loss two weeks ago but is showing some recovery, and much of it will not be reseeded even though the stands are thin and spotted. Four winter wheat plots on the rotations have been reseeded.

Maximum temperature, 68°; minimum, 34°; precipitation, 0.04 inch.

HUNTLEY:

Good growing weather has prevailed throughout the week, and all crops have shown a marked response. Warm days have been followed by showers in the evening or during the night when loss from evaporation was small. All spring sown crops except those planted within the last few days are up, and the stands appear to be very good. Weed seeds have germinated and weed-control measures have been started. Winter wheat,

not badly injured by the severe climatic conditions earlier in the season, is recovering slowly, but stands are spotted in most plots and commercial fields. Most of the trees and shrubs on the station grounds are showing new leaves, and lawns and gardens are flourishing. Field work on the dry-land plots has consisted of cultivating grass and alfalfa plots with spike-tooth and spring-tooth harrow, and planting grasses, barley and flax varieties.

Maximum temperature, 72°; minimum, 31°; precipitation, 0.31 inch.

SHERIDAN:

Light showers fell almost daily over the first half of the week, and there were heavy showers in nearby localities the last of the week. Field work was again possible on light soil with a fairly good slope by the 26th. Practically all land outside of the rotation field, where only surface cultivation was required to prepare for seeding, was prepared for the seeding of early crops. Field G, blocks C & D, 10.5 acres, and 12 acres in Field O were sown to barley for feed, Field K, 5 acres, was sown to Gopher oats, and field peas and barley were sown in pasture blocks. A seed block of Vaughn barley and a part of a 2½-acre block on the steep slope of Field C were sown also, the latter to alfalfa. No work has yet been possible on the rotation field, the soil there still being much too wet and gummy to attempt to plow. Plots requiring only surface cultivation could have been prepared and seeded were it not necessary to wait on the spring plowing. Sheep were sheared early in the week, weights obtained, and gotten on pastures the last of the week. The lot to be placed on annual crops was placed in a field of brome-grass to graze until the winter rye is ready. Grasses made a rapid growth during the week. Winter rye, winter wheat, and alfalfa made only enough growth to show by the end of the week where there was a stand of those crops. The first leaves appeared on the golden willow to-day, April 29. The second group of the dates-of-seeding spring grain were sown on the 27th. Varieties of some vegetable crops were planted to-day.

DICKINSON:

Cool and unsettled weather continued through the week with very little precipitation. Seeding on farms continued. Probably 80 per cent of the wheat and about one-third of the oats and barley have been seeded in the district. Winter wheat plots on the rotations were all disked and reseeded on April 25. Although the snowfall during the winter was nearly twice the normal amount, and the winter seemed to be favorable for winter wheat, it is nearly all dead. Most of the winter wheat nursery was also disked and reseeded to barley. Winter rye came through with somewhat better stands, but the growth is still very short. Considered as a pasture crop, rye at present would not provide a tenth as much grazing as established stands of crested wheatgrass. Some early varieties of garden crops were seeded during the week.

Maximum temperature, 71°; minimum, 31°; precipitation, 0.13 inch.

Precipitation April 1 to 29, 0.86 inch, about two-thirds of normal for the month.

BELLE FOURCHE:

Moderately cool weather prevailed during most of the week, and two light showers were received. Conditions have been almost ideal this spring for the germination and emergence of crops. Spring wheat, barley, and oats are up with perfect stands; and field peas, sweet clover, and brome grass are beginning to emerge. Winter wheat has failed to make any appreciable recovery, and most of the plots will be reseeded to spring wheat as soon as the soil dries sufficiently. Flax and alfalfa plots were disked, harrowed, and seeded late in the week. Jackrabbits did such extensive damage to alfalfa during the fall and winter that reseeding of two plots was necessary.

Maximum temperature, 73°; minimum, 33°; precipitation, 0.19 inch.

ARCHER:

The total precipitation for the snow storm ending April 22 was 1.11 inches, and the snow was fairly well distributed over the surface of the land. The total precipitation for April, to date, is 1.23 inches, 20-year average for April 1.72 inches. During the past week the temperatures ranged from 31° to 68°. The trees at the station, before the storm, gave indications that they had about reached their limit of resistance to drought. The western Yellow pine showed burning, and the deciduous trees were not producing bud growth commensurate with the warm weather. Spring grains seeded before the storm have made good progress, and the early grasses have started growth. Work at the station consisted of shaping the farmstead roadway to conform to the new landscape plan and changing some of the tree plantings accordingly. The spring plowing of the rotation plots was completed April 28, and tractor work with the one-way disk was started the same day. The varietal seedings of small spring grains are in progress.

NORTH PLATTE:

Most of the week has been devoted to general station work such as dragging roads, cutting and planting potatoes, and preparing to seed alfalfa. On the D. L. A. project preparation of corn plots was begun and some fallow was duckfooted. Weeds are making very rapid growth due to the moisture received during the past two weeks. All small grains are looking very good at present.

Maximum temperature, 79°; minimum, 37°; precipitation, 0.51 inch.

ARLON:

Some field work was accomplished, but the most of the week was devoted to removing dead trees from Forestry Experiment 1. Spring seeded small grains have emerged to excellent stands. Winter wheat is still questionable on all projects except the Nursery and the seedings on the rate and spacing corn project. Dr. D.W. Robertson spent the week-end at the station making nursery spring counts and in going over the winter wheat prospects on other projects on the station.

Maximum temperature, 72°; minimum, 34°; precipitation, 0.78 inch;

April precipitation to date, 3.66 inches.

COLBY:

The drought has been checked and there is an abundance of moisture in the soil for present requirements. A high wind is blowing to-day, April 29, and although there is no soil blowing on the station, the air is so full of dust that the sun is barely visible. After the rains of last week it became apparent that there would be no winter wheat on any of the plots, so they were all seeded to barley to keep down weed growth. The rye plots were also seeded to barley. They showed somewhat better stands than the wheat plots, but on none of them was there as much as a 10 per cent stand. On all but the fallow, corn stalk ground, and spring plowed small grain stubble, the spring small grains which were seeded on March 17 are just beginning to emerge, except in spots where a snow drift permitted earlier germination. Plowing and other first spring cultivation was done for row crops and fallow methods.

Maximum temperature, 80°; minimum, 37°; precipitation, 0.86 inch.

GARDEN CITY: (report for the period April 1 - 22, 1933.)

The first three weeks of the month was a period of unusual high wind velocity, dust storms, and drought, tillage work with the duck-foot cultivator and lister has prevented much damage from blowing on the station. Winter wheat ranges from a total failure to good prospects. Wheat on the new seedbed studies is practically a failure owing to the loose, mellow condition of the ground. Wheat on the old project is good, except on row crop stubble where all the available moisture had been exhausted by the kafir and milo up to wheat planting time. April 12 to 15 all wheat seedbed plots on the new project were seeded to barley. Wheat on old land prepared early with the oneway or plow is in good condition and may produce a normal crop. Spring grains were seeded the week of April 9. The seed bed was so dry that germination will be delayed. All planting was done with a deep furrow drill, in order to get the seed down to what little available moisture there was. Very little of the winter wheat seeded in the country last fall is alive. Some fields seeded with a deep furrow drill or on a well prepared seed bed have excellent chances of producing a good to fair crop. A lot of the abandoned wheat land will be planted to row crops, some will be fallowed, and lots of it will lay idle because of shortage of working capital. Many farmers have applied for seed loans.

GARDEN CITY:

Rains the past week have made the ground ideal for spring work. Plowing that is usually done about April 1 was completed on the 28th. Listing and plowing for fallows will not be started for another two or three weeks in order to allow weeds to get started. Wheat is greening up and showing promise of making something. Farmers have planted a large acreage of barley in the abandoned wheat land. We consider it too late for barley planting, but many of them feel that it is worth the chance in order to raise some feed and a crop that will at least pay for working the ground. Barley seeded on the station April 12 is hardly up yet. Reports from Blkhart, about 150 miles southwest of here are that no rain has fallen there yet, while we have had 1.88 inches during the last 10 days.

Maximum temperature, 71°; minimum, 36°; precipitation, 0.37 inch.

HAYS:

Daily rains April 20 to 24, inclusive, have greatly improved conditions. Pastures are already getting green, spring small grain seeded in dry soil are coming up nicely, as are Canada field peas. Winter rye is heading at a height of about 12 inches. Field work consisted largely of cultivation of alleys and roads to get rid of wheat. The annual boys and girls judging contests were held at the Experiment Station Friday, and the Annual Feeders Roundup is in progress to-day, April 29.

Maximum temperature, 81°; minimum temperature, 36°; precipitation, 0.24 inch.

TUCUMCARI:

April was similar to previous months but somewhat more severe. Considering drought and wind movement, the year to date has been more discouraging than any spring since 1918. The four months of 1933 have been higher in wind movement than like months in ten or more years, and total precipitation of 0.43 inch is among the lowest on record. Precipitation for the seven months, October to April, is 1.73 inches. On April 28 the 2-foot anemometer showed average velocity of 32.4 miles per hour from 8 a.m. to 3 p.m. Airports at Tucumcari and Amarillo recorded velocity of 52 and 60 miles, respectively. An attempt to "strip" unplanted fields was made during the storm, men riding the tractor-drawn lister beans in an attempt to make them penetrate below the hard crust. After the wind subsided it appeared that a great amount of blowing sand had been caught and stopped. Neighbors' fields, early listed, have blown level, and at every light wind the areas start rolling. For the past month fields have been too dry to work satisfactorily, and listing has been done only when it seemed imperative to perform such work to retard soil blowing. A freeze of 20° April 14 killed most of the fruit crop, although some late apple and cherry blooms escaped. The wheat growing area of the county has had several light showers that served to maintain life in the wheat which had survived through February and early March. No doubt the high wind of the past two days has completed the ruin of many fields.

April maximum temperature, 82°; minimum, 20°; for the past week, 82° and 43°; wind velocity, 10.3 miles per hour; evaporation, for the month, 8.716 inches.

DALHART:

The dry weather continues. To-day, April 29, the wind is averaging approximately 24 miles per hour and is carrying more soil than at any previous time this year. The soil on the station is blowing more to-day than it has blown in all of the previous high winds this year. This is due chiefly to the fact that the field across the road south of the station is losing much of its surface soil. This soil is sweeping across the station and is doing an alarming damage. Reports are that this soil blowing covers most of this section. Young trees and shrubs are being punished severely, and it is very doubtful if many can survive. Wheat has gradually deteriorated during the month. An employee of the local railway Division Freight office informs the writer that their estimate, previous to this wind, was that they would handle less than 5 per cent of as much wheat as they handled in 1929, when they handled 29,000 cars. Their trackage covers approximately 500 miles in the Texas and Oklahoma Panhandle and as far as Pratt, Kans. Much of this territory cannot raise their normal seed requirements. This refers to the territory between Amarillo, Tex., and Liberal, Kans. This area did not raise sufficient feed for their farm livestock in 1932.

Maximum temperature, 82°; minimum, 29°; precipitation, none.

BIG SPRING:

This has been another week without rain, in fact it is almost another month without any. The rainfall for the first quarter of the year totals 1.08 inches. The normal for this same period is 4.09 inches. The wind movement has been unusually heavy during the week, and on some days there has been considerable soil movement. Station work has consisted of leveling lister beds, working fallows, watering young trees, cleaning up the grounds, and cutting dead wood out of the shrubs.

J.M.Jones, Chief, Animal Husbandry Division, Texas Station, was a visitor.

Maximum temperature, 92°; minimum, 42°; precipitation, none.

WOODWARD:

Between the 19th and 27th of April 2.39 inches of rainfall were received. This fell on 7 of the 9 days, and there was very little runoff. On the wheat plots there is the most extreme variation of condition. Wheat on fallow is in most excellent shape. That stubbled in is very spindling and weak. Considerable wheat died in spots on the more poorly prepared plots, and stooling is very slight. There is an almost unprecedented demand for seed of the grain sorghums. The greatest demand is for that of the milos rather than the kafirs, though there are also many calls for silage sorghums, especially Sunrise kafir. Farmers seem in a courageous, some in an almost genial mood, as though meeting the changed conditions were really an exhilarating adventure. But there is a far greater interest than there ever has been in results of experiments on the station. While farmers have not lost courage, they realize they must farm very carefully. Work of the week has consisted of planting date and variety tests of corn, cotton, soybeans, and sweet clover; planting nursery stock; and in cultivating to prevent blowing. To-day with soil just dry enough to cultivate there is a high wind raging, and dust fills the air to such an extent I expect the chickens have gone to roost.

Maximum temperature, 80°; minimum, 41°; precipitation, 1.67 inches.

PENDLETON: (For the period April 1 to 29, 1933.)

Cool weather and lack of rain have been very unfavorable to crops in April. In the area this station is designed to serve the wheat is not suffering for want of moisture, but in the drier areas rains are badly needed to insure even a fair crop. Spring seeding on the rotation plots was done during the week of March 13 to 18. All the crops have emerged with good stands. Winter wheat plots in the rotation, tillage, fertilizer, continuous cropping and crop residue plots were reseeded on March 22 and 23. These have emerged with good stands and are about as tall as the earlier spring sown wheat. In the Columbia river basin of Eastern Oregon, it was necessary to reseed about ninety per cent of the winter wheat. In Umatilla County a small area near the Blue Mountains, came through without much winter injury due to a four-inch snow blanket. A few fields of Turkey winter wheat were left in Sherman County, and some Albit and Mosida wheat in Umatilla County, the stands however are rather thin. A hybrid between White Odessa x Hard Federation (C.I. No. 10065) came through in very good condition. All the available seed of this hybrid was sown last fall, it possesses considerable resistance to bunt, is winter hardy and ripens about the same time as Federation, the yield for a four-year period is about five per cent less than Federation.

Maximum temperature, 79°; minimum, 23°; precipitation, 0.18 inch.