

REPORT OF THE COUNTY AGRICULTURIST FOR 1915

(Continued from last week.)

DEMONSTRATION FARMS ON THE "HIGH DESERT," SEASON OF 1915

That portion of Crook county commonly known as the high desert lies in the south central section of the county. The elevation varies from 3800 to 4400 feet, and the lower level valleys have been visited by frosts practically every month in the year in past years. A large proportion of this section is homestead lands and with few exceptions, the homesteaders have been unable to grow anything excepting rye, and in 1914 this crop was cut short by frost. No demonstration work was attempted in this section in 1914 because of lateness of arrival of Agriculturist in the county. In February 1915, the Bend Commercial Club became interested in experimental or demonstration work for the "high desert," and before a conference with the agriculturist, had started plans for the expenditure of approximately \$1700 in equipping a demonstration farm in this section. In conference with the committee from this commercial club, on February 15, we suggested the plan which was finally adopted. This plan was as follows: "Three interested farmers, or homesteaders on the high desert, near Millican, Hampton and Rivers, respectively, were to be interested in a crop demonstration project. They furnished the land and necessary labor, the Bend Commercial Club to furnish the necessary seed and the entire project to be under the supervision of the County Agriculturist. On February 25 and 26, we visited these localities and the following persons agreed to the terms proposed: A. T. Frame, 40 acres at Hampton; P. B. Johnson, 20 acres at Millican; J. B. Rivers, 10 acres at Rivers.

The seed was obtained and the following number of acres of crops were planted at Hampton, Millican and Rivers, respectively: wheat 14, 8½ and 5; oats 10, 4 and 2; speltz 5, 2 and 1; barley 5, 2 and 1; spring rye 4, 2; alfalfa 1, 1 and ½; field peas, one half, one half and one half; sweet clover one, one and one quarter. The following varieties were used: Early Baart wheat, Sixty Day oats, Hannchen barley, Baltic and Grimm alfalfas, Carlton field peas and White Blooming sweet clover and total cost of seed was \$47.75.

All of the land for these demonstrations was well prepared, instructions as to planting were followed explicitly. All of the crops started nicely but the first disappointment appeared at Rivers where both rabbits and ground squirrels ate the crops as fast as they grew, and all were soon destroyed. The next surprise and disappointment came late in May when high winds blew the loose sandy soil, destroying a large proportion of practically all crops at Millican and the oats and barley at Hampton. The wheat was frosted at both farms on July 17th and growth practically stopped at this time, excepting in drill rows which were packed by the wheels of the drill in the field at Hampton. The oats were also almost completely killed by this frost and the barley was materially injured by it. The speltz was not affected by this frost. The spring rye continued growth, alfalfa and sweet clover succumbed to the drought and wind as also did the field peas at Hampton. About August 1st, rabbits appeared in large numbers in both sections and crops remaining were destroyed by them, excepting the field peas at Millican, which were in a garden plot surrounded by rabbit fence. Mr. Frame at Hampton seeing his crops were being destroyed by this pest, turned his stock into the field and obtained some pasturage. The field peas at Millican made a fair growth and produced 40 pounds of seed, and this crop was weakened and almost destroyed by blowing soil.

Although these demonstration farms produced no results of nominal value, the growth of the crops lead us to conclude as follows: Speltz will grow as well or better than will rye; spring rye will not give results equal to fall rye; field peas will at least grow in this section; a pressed drill or a press attachment to the grain drill will prove of value on these soils; All cultivated lands in this section will blow badly; in order to grow crops it will be necessary either to destroy the rabbits or fence against them and to destroy the ground squirrels; we are not satisfied with the results obtained with any of the crops planted, excepting the spring rye which we believe has been demonstrated to be not equal to fall rye for this section. In this report it will be well to include several smaller crop demonstrations conducted in co-operation with Mr. A. S. Fogg, at Hampton. A small amount of Baltic alfalfa, White Blooming sweet clover, Early Baart wheat, Hannchen barley, Swanneck barley, Sixty day oats and speltz was furnished by the Agriculturist, and Mr. Fogg planted and cared for these crops under our instructions. With the alfalfa and sweet clover within a rabbit fence, he obtained the following results: Alfalfa and sweet clover grew to a height of 18 inches with an even stand and growth; the speltz made a very good growth and attained a height of one foot when attacked by rabbits about August 1; the Early Baart wheat grew and headed well but did not mature; the same was true of the barleys and oats. Both Mr. Fogg and ourselves concluded that all of these crops would mature if planted earlier. They were planted May 15th to June 1st. Another demonstration of value in co-operation with Mr. Fogg, was that of the use of a common hay rake on the summer fallow. Two acres were raked after each rain; all other summer fallow was cultivated with a spiked tooth harrow. Throughout the season, even in September, the conditions of the raked plot was far superior to that of the plot that was harrowed. The depth to moisture in the respective plots was 3 to 7 inches. The plot cultivated with the hay rake was covered with an earth mulch of soft flat clods varying from the size of a dime to the size of a dollar, while the plot cultivated with the harrow was covered with a fine dirt mulch.

In August of this year the Crook County Court appropriated \$100 for the purchase of rabbit wire for fencing demonstration plots on the high desert and for purchase of seeds for demonstration purposes in this section. The demonstrators for 1915 and 1916 are P. B. Johnson of Millican, A. S. Fogg of Hampton and John McKay of Rivers. The fencing has been purchased for these farms and Kharkof wheat and Red Winter speltz have been planted on these farms. The demonstration plots will consist of only five acres at each place and organizations in each of the communities are interested in the work and results.

TEST OF EXTRA DISCO ALFALFA NO. 36 IN CROOK COUNTY.

(Crop Demonstration.)

In my reconnaissance of agricultural conditions in Crook county during the season of 1914, I discovered that farmers generally are not obtaining the results with alfalfa which they should obtain under soil and climatic conditions with which they have to deal.

After a study of the crop in the field and personal conversations with interested farmers it was found that one of the major factors influencing this condition was that of the alfalfa seed planted. Alfalfa seed obtained from local dealers and of Portland seed houses has generally given poor stands, poor yields and very weedy fields. Analysis of alfalfa seed from the above sources during the winter and spring of 1915 gave very unsatisfactory results.

In a search for the best Baltic and Grimm dry land alfalfa seed we were directed to the Dakota Improved Seed Co., of Mitchell, South Dakota, by the Agricultural College. Upon writing this company for prices and samples of these special varieties they included samples of their "Disco" and "Extra Disco" brands of pedigreed and common alfalfa. Analyses of these pedigreed seeds showed them to be superior to common alfalfa seed from local sources and, although the price, delivered in Crook county, ex-

ceeded local prices, from three to four cents, this seed was recommended to farmers planting alfalfa in 1915.

As a result of recommendation, 2705 pounds of the "Extra Disco No. 36" seed was purchased from this company by 34 farmers in Crook county. Results obtained from this seed were watched and data obtained by the Agriculturist by sending out report blanks to these farmers and by personal visits to the farmers and their fields.

Report blanks were sent to all these men. Only 16 filled out and returned these reports. Results as reported by 16 farmers were as follows: Two did not plant because of shortage of irrigation water, one lost his crop through freezing, one lost large per centage of crop from attacks by cut-worms, one obtained a poor stand, four declare it proven better than any alfalfa before grown by them and seven report the stand and growth obtained to be equal or better than other varieties but reserve ultimate decision until another year's growth has been obtained.

Personal visits to practically all fields planted to this seed were made during the growing season by the Agriculturist and in 22 out of 32 fields visited the "Disco" brand alfalfa was found to have given better stands and to have made better growth than common alfalfa from other dealers. One field proved of special value as a demonstration with this variety. This field belongs to Mr. John Rohde of Powell Butte. Entire field consists of 40 acres, 20 acres being planted to the "Disco No. 36" and 20 acres to common alfalfa seed from local sources. The entire field of 40 acres was plowed at same time and received same attention throughout, all of the alfalfa being planted with oats as a cover crop. Upon our visit to this field in August the "Disco" alfalfa was found to average 18 inches in height while the common alfalfa was found to average not over 10 inches in height and the stand of the respective varieties was plainly in favor of the Disco alfalfa.

A study of the crops obtained from this and other alfalfa seeds will be studied and notes kept throughout the season of 1916.

REPORT OF BALTIC AND GRIMM ALFALFAS IN CROOK COUNTY.

(Demonstrations.)

Results obtained with the Baltic and Grimm varieties of alfalfa on dry land at our experiment stations and when grown in small plots in this section, also when grown on the College demonstration farm at Metolles in 1913, have shown that they make satisfactory growth, and with the Baltic variety showing slightly better growth than the Grimm. No crops from these varieties had been harvested in Crook county prior to 1914 and we were unable to find any plots or fields in the county at this time that had been continued more than one year. In 1914, four pounds of seed of each of these varieties was obtained from the agricultural college for demonstrations but seed arrived too late for planting that season. In the spring of 1915 this college seed was distributed among five demonstrators, also at least five farmers were interested in the purchase of seed of one or both of these varieties direct from seed houses, and the co-operation of the Redmond Bank of Commerce was obtained in the purchasing of 50 pounds each of the Baltic and Grimm varieties. The object of this co-operation was to secure the seed at lower prices for the farmer by purchasing in large quantities. A reproduction of 25 per cent in price was thus obtained and the County Agriculturist undertook the sale of this seed by recommendation to the farmers in co-operation with the bank. Twenty three pounds of the Grimm variety and 35 pounds of the Baltic variety were purchased from this source by farmers. Blanks

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for reports were sent to growers of these varieties, only two responding. Mr. W. F. Mason, near Prineville, did not receive as good results from these varieties as from the Turkestan varieties. A. S. Fogg, near Hampton, obtained a good growth of both varieties, cutting for hay on August 21 when crop stood 18 inches high. Immediately after this cutting, however, the rabbits entered the field, and at last reports, had not only eaten the crowns but were digging out the roots of the plants. In personal visits to these crops during the growing season, we found the growth very good and the crop satisfactory where a stand was obtained. This crop cannot be judged from the first season's growth and all plots which have grown will be continued as demonstrations next season, when reports on yields may prove their worth to the dry land farmer.

Five pounds of each of these varieties was planted on irrigated land for trial this season. The growth for season of 1915 has been superior to other varieties planted. These fields will also be continued as demonstrations for 1916.

Next Week:—Comparative Test of Potato Varieties.

(Continued next week.)

SUCCESS WITH POISON.

(Redmond Spokesman.)

John McKay, a homesteader on the high desert, with 16 pounds of Emmer heads, poisoned by the government formula as prepared by R. A. Ward, the biological expert, reports the result as having been more than one thousand dead rabbits. He then prepared the mixture according to formula, as nearly as possible, and figures the dead rabbits from this batch at 600. The total cost of the two baits was less than \$2.00.

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