

The
Christmas
News

Reclamation of the Sage Brush Wastes

By Prof. L. A. Merrill, Agronomist Utah Experiment Station, in Charge Arid Farming.

Dec. 18
1909



THERE are a great many people who think that dry farming is a new agricultural practice. This is not true. The farmers of Utah have been raising crops on their dry lands, with a rainfall of less than 15 inches, for more than half a century now. More than that, dry farming has been practiced since the dawn of civilization in Egypt and in India.

The beginning of dry farming in this state occurred through an accident. Along in 1865 a little company of immigrants, most of whom hailed from the Scandinavian countries, settled in the Bear River valley, and diverted the waters from the Malad river for irrigation purposes. The waters of this stream are heavy with alkali, and it was only a matter of a few years until the lands of the settlers became so largely impregnated with the noxious salts, that crops were unable to grow upon them. In desperation the settlers put the plow into the sagebrush ground and with a hopeless hope planted seed in the soil that was not to be irrigated. They succeeded in their work, and since that time dry farming methods have been in vogue in this state.

DAVIS COUNTY PIONEER.

Father Christopher Layton, a pioneer of Davis county, more than 40 years ago showed that the ridge between Salt Lake City and Ogden would produce wheat without the application of water. Mr. Joshua Salisbury of Wellsville, George L. Farrell of Smithfield, and many other prominent farmers of northern Utah, early saw the great opportunity this method of farming afforded, and gained their livelihood from the sage brush lands above the irrigation canals. In the early nineties, dry farming flourished in the northern counties of this state, but the people of the central and southern part looked upon it as a practice which could never extend below Salt Lake City. It has only been within the past few years that a few venturesome farmers attempted dry farming in the central and southern part of the state.

STATE INTERESTED.

Some seven years ago the state legislature came to the aid of this enterprise, and established six experimental farms, all south of Salt Lake City, and at widely varying points. The experiments on these farms were carefully planned, and the results obtained were so wonderful that it took a vigorous hold on the public imagination. Today there are few people in the state who do not honestly believe that dry farming has come to be one of the permanent institutions of Utah, and that the method, so long in vogue, of irrigating wheat and other cereals, is soon to pass into history.

SMOOTH HOMESTEAD LAW.

The year 1909 has seen a wonderful progress in dry farming. The passage of the Smooth homestead law, whereby the settler is enabled to secure 320 acres of land from the government without being required to live upon it, but obtained under much the same provision as the old homestead act, has given a wonderful impetus to this industry. Thousands of acres of land have been secured under this act, and many thousands of acres of sage brush land have been cleared, plowed, and prepared for crops.

PROMPTLY SNAPPED UP.

Up in the northern end of the state the Hon. Joseph Howell, David Eccles, and other prominent citizens, secured several hundred thousand acres of dry land in north-western Boxelder county, from the Southern Pacific railroad, and these lands have been offered to the public. A number of public sales have been held, and the eagerness with which these lands have been purchased, has been a source of astonishment even to the most optimistic dry farmer. Sage brush lands have exchanged hands in some instances,

BOUNDLESS POSSIBILITIES OF ARID SAGE BRUSH LANDS.

THE passage of the Smooth homestead law, whereby the settler is enabled to secure 320 acres of land from the United States government without being required to live upon it, but obtained under much the same provision as the old homestead act, has given a wonderful impetus to the pursuit of arid farming in the State of Utah this year.

Through the aid rendered by the State Legislature in the establishing of six experimental farms in Utah the agricultural investor has become decidedly interested in the problem of raising crops on what heretofore has been classed as practically worthless desert lands. Dry farming has now passed the experimental stage and has attained the dignity of one of the permanently established industries of the state which bids fair to surpass all others when the initial outlay of cash and the revenue accruing are taken into consideration.

Dry farming is not new in agricultural practice, for as early as 1865 there were Scandinavian dry farmers operating in Utah successfully, while the cultivation of arid lands has been practiced for centuries in Egypt and India.

This season past has seen crops of 30 bushels of wheat to the acre harvested from thousands of acres in Utah. At the prevailing price of the staff of life this means practically boundless wealth awaiting the enterprise and industry of man with the nerve to combat the waste places of the Beehive State.

SOME TYPICAL CROPS.

A Mr. Christensen, formerly county treasurer of Juab county, purchased a dry farm near Nephi, a little more than a year ago. The field was put in an excellent state of cultivation, and the first year's crop brought him 30 bushels to the acre which readily sold at \$1.00 per bushel. The Grace Brothers were very successful this year, as was also Mr. James Paxman, and many other dry farmers on the Levan Ridge.

It is at this point that the Utah Arid Farm company has its splendid farm of over 8,000 acres. During this past year they had nearly 2,000 acres in wheat, and it is said that the returns were very satisfactory. The wheat was clean and plump and found a ready sale at \$1.00 per bushel.

There is a great movement in dry farming down at Enterprise, and a great many Salt Lake people are interested in the land there. The season has been a very dry one, there not being a trace of moisture during May and June, but the record for August shows 2.55 inches and for September 2.76 inches, so that it is apparent that the crop for next year has a most excellent start.

UNDEVELOPED SAN JUAN.

The great undeveloped dry farming section of the state is to be found in San Juan county. There are millions of acres of the choicest land in the state to be found there, and there is a splendid precipitation. During 1906 the precipitation at Verde was 25 inches, during 1907 it was 14.88 inches. The records for this season are not available at this time, but from the records we have, we are sure that the precipitation is higher there than at practically any other point in the state. The state experimental farm at Verde has yielded as high as 50 bushels per acre by dry farming methods. San Juan county is a great empire and in the not far distant future, this wonderful county will be the granary of Utah. There have been some enterprising young men

go into that section during the past year, and they are making considerable progress in reclaiming the sage brush land there.

TOOELE'S RECORD.

In Tooele county the industry has been very successful. The precipitation at Tooele is about the same as at Salt Lake, averaging each year in the neighborhood of 14 inches. The precipitation during 1908 was 13.59 inches, and up to Oct. 1st, this year, the precipitation is 10.37 inches, so that it is very apparent that the precipitation this year will be up to the average. The writer has taken several trips through that section during the past summer, and finds that each succeeding year sees more land brought under cultivation.

THE EXPERIMENTAL FARMS.

The first experimental farms to study problems connected with dry farming, it is said, were started by the state of Colorado in 1894. For lack of funds these stations were abandoned, and it is to the State of Utah that the honor belongs of having first established and successfully maintained a series of dry land experiment stations. Since the year 1895 the reclamation of the deserts without irrigation has been the subject of much discussion among the officers of the Utah experiment station. In 1901 a system of investigations was begun by Dr. Wildtsoe and the writer, and in 1903, Governor Wells recommended in his message to the legislature, that experimental dry farms be established. Six of these farms have been maintained, each farm consisting of 40 acres. The citizens of the state have taken considerable interest in the work, which has simplified the inauguration of experimental work, and the successful prosecution of the investigations. The farms are under the direction of the Utah experiment station.

PLANTED TO TURKEY RED WHEAT.

The farms at Tooele, Enterprise, Parowan, Rich-

field, and Monticello, have this year been mostly fallowed, and during the past fall have been planted to Turkey Red wheat. The farms have demonstrated the possibility of dry farming in their respective localities. It is believed by the officers of the experiment station that from now on more good will be accomplished by making these farms seed farms for the production of the finest varieties of seeds for distribution among the farmers in these various localities, and conduct the experimental work in connection with this subject at one station.

The United States department of agriculture has co-operated with the Utah experiment station in a series of investigations at the Nephi station. This station has, during the past year, been enlarged to 100 acres. The government details a man who spends the entire growing season on the farm. This man is under the direction of the officers of the Utah experiment station, as well as the department of agriculture. Mr. Stephen Boswell, a successful dry farmer of Nephi, is foreman.

MOISTURE CARRIED OVER.

The experimental farms have demonstrated that by proper methods, a certain percentage of moisture can be carried over from one season to another. They have demonstrated that the finest wheats are those grown on dry land; that summer fallow is an essential practice in this locality to successful dry farming; that the amount of seed used on the dry lands should not exceed 45 pounds to the acre; that fall plowing is absolutely necessary, and that the ground must be kept entirely free from weeds.

The publication of the results of these experiments has been the means of attracting hundreds of new settlers to Utah. All of the work has been accomplished with the exceedingly low appropriation of \$10,000 per annum.

HONOR ACCORDED UTAH.

At the last Dry Farming congress held at Billings, Montana, the honor was accorded Utah of being the pioneer in dry farming work. The excellent work done by the Utah experiment station in these investigations, has called the attention of the people throughout this whole country, to the possibilities of this great industry. In the not far distant future, this country will be as thickly populated as the countries of the Old World. Every one of its inhabitants will have to be fed and clothed, and the food and clothing will have to come from the soil. Our valuable irrigated lands are to be used for the production of more valuable crops. Fruit growing and dairying are two agricultural industries yet in their infancy in this state, and the cereals must be grown on our arid lands.

DEMONSTRATED SUCCESS.

Dry farming is no longer an experiment, but a demonstrated success, and those of us who love this state, and have a concern as to its future, will lend every encouragement to this new phase of Utah agriculture. While much has been accomplished, there still remains much for the skill and ingenuity of those who are working for a better agriculture, to attain. The most successful methods have not yet been devised, the most profitable implements of tillage have not yet been invented, the best drought resistant crops have not yet been discovered. In an admirable address on the subject of dry farming, delivered by President John A. Wildtsoe of the Agricultural college not long ago is found the following prognostication: "In Utah we have at least 10,000,000, and it may be 20,000,000 acres of land subject to reclamation without irrigation. Many of the neighboring states have more. The possibilities are stupendous. In the strength of youth we felt envious of the great ones of old; of Columbus looking with moistened eye upon the shadow of the greatest continent; of Balboa shouting greetings to the restive Pacific; of Father Escalante pondering upon the mystery of the world, alone, by the shores of the new-found Dead Sea, the Great Salt Lake. We need harbor no such envy, for we of the west offer today in the conquest of non-irrigated and non-irrigable desert as fine opportunities as the world has ever known to the makers and shapers of empires. We stand before an undiscovered land; through the restless, ascending currents of heated desert air the vision comes and goes. With striving eyes we seem to see the desert covered with blossoming fields, with churches and schools and homes, and, in the distance, with the vision is heard the laughter of happy children. "The desert will be conquered. May God give his aid, that the work may be well done."