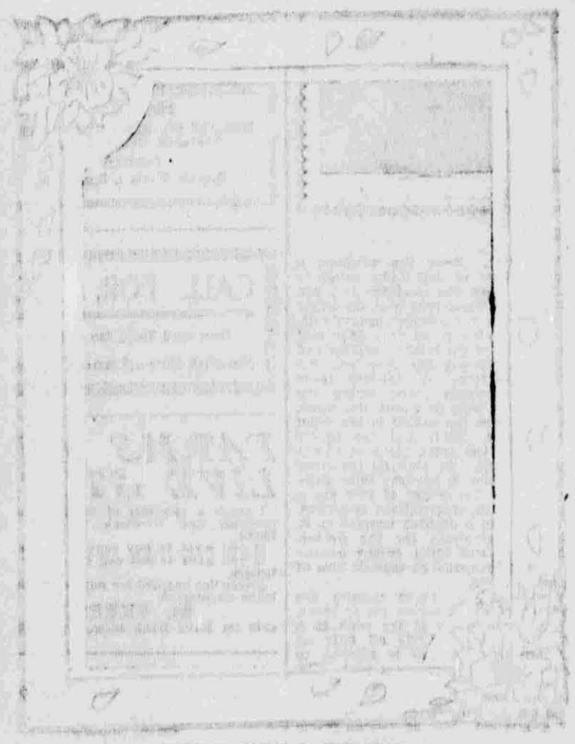
# The Reclamation of Empires, or Farming Without Irrigation

(BY JOHN A. WIDSTOE)

IN Utah, when all the waste waters shall be stored in splendid reservoirs, to be used at the right time, in the proper season, and when every farmer shall be noted in the most economical methods of applying water, it is very unlikely that more than one-tenth of the area now set aside by law for irrigation will be cultivated by irrigation. In the remaining 9/10 of the area, farmers will have to be contented with [illegible] or so per cent of their planned by the master of the world. [illegible]



DOCTOR JOHN A. WIDSTOE,
Director of Department of Agriculture of the B. Y. University, Provo.

very much in the condition of Utah. Their water supply is not sufficient under the most favorable conditions to irrigate more than a small fraction of the available land.

We speak of the reclamation of a western empire by irrigation. If that be true, then 18 empires may be reclaimed. If all the non-irrigable lands can be made to produce profitable crops without irrigation. So vast are the areas involved that the subject of their reclamation is worthy the attention of the ablest lovers of the splendid west.

More than 62 million acres of land are found in Utah. Today about 630,000 acres are irrigated; in the future, very near it is hoped, perhaps 2,000,000 or 3,000,000 acres will be irrigated. Of the remaining 50,000,000, probably 35,000,000 are mountainous. Can the 35,000,000 be farmed profitably without irrigation? It is worth a trial.

### Brigham Young and the Desert.

The far-sighted pioneer, Brigham Young, declared repeatedly that a large portion of the sagebrush deserts would in time be made to yield at least wheat without irrigation. Apostle Merrill, who is himself a pioneer of the old type, looking towards a glorious material future for the great west, relates that President Young predicted that wheat would in time cover many of the non-irrigated hillsides and valleys of Utah, and specifically mentioned the west side of Cache valley.

Though Brigham Young and many other thinkers partially understood the possibilities of farming without irrigation, yet the people did not at first take kindly to the proposition. There was yet water to be taken up for irrigation purposes, and then [illegible] seemed improbable that the [illegible] desert could be made to produce useful plants without irrigation. In fact so strong was the prejudice that one [illegible] is related of a man who was convicted of perjury because he affirmed that wheat could be grown without irrigation on a [illegible] land where now yields from [illegible] to as much as [illegible] of wheat per acre [illegible] wheat.

### [illegible]

The growth of the pioneers from the [illegible] of the [illegible], and [illegible] trial to produce crops without irrigation in this state. Among many failures, there were a few successes. In the light of our present knowledge it is evident that the failures were due to backward methods and not to faulty principle or soil.

[illegible] River city, nearly 40 years ago farming without irrigation was demonstrated to be a financial success. About the same time Father Christopher Layton and his colleagues showed that arid farming was feasible on the sand ridges between Ogden and Kaysville. In Cache valley, George L. Farrell relates that he made his first [illegible] on the west hills [illegible] years did not come to him until several years later. On the authority of John Q. Adams of Lewiston, one of the most successful dry farmers in the state, we know it that Hans Anderson was probably the first man to undertake arid land farming on a large scale, on the west side of Cache valley. This was in 1876. Michael Poulsen and Charles Maughan, followed Mr. Anderson in 1877. From that time the whole west side has probably been cultivated into a splendid wheat field.

In the later seventies, also, arid farming was introduced into Tooele county. Gradually, during the last 30 years, a large portion of the uninhabited land between the Idaho line and Salt Lake City has been made to yield profitable crops of lucern, lucern seed, [illegible] other grains without irrigation.

South of Salt Lake county, however, it has generally been assumed that the precipitation was too low for arid farming. In fact an intense prejudice has existed until recently to many of the southern districts against the possibility of arid farming.

### The Awakening of 1900-1901.

In 1900 and 1901, the subject of reclaiming the desert without irrigation was agitated throughout the state by the present writer, and his colleague, Prof. L. A. Merrill. This agitation resulted in the establishment of six experimental farms by the state for demonstrating the feasibility of arid farming in various parts of the state, and for discovering the correct methods for producing dry land crops successfully.

As a result of this work, there has been a wide extension of arid farming throughout the state. So successful has the work been that the general government has taken up the matter and is investigating it in all the western states. It is generally admitted that the possibilities of arid farming are not inferior to those of irrigation. The two methods of farming in the arid [illegible] supplement each other.

### The Garden of Lewan Hill.

One of the first places south of Salt Lake City to be reclaimed was the hill between Nephi and Levan. Some seven years ago Stephen Dogwell and Henry Gerrard broke up about 80 acres on which several crops of wheat were produced. A few others followed these pioneers, but the credit of going at the redemption of Levan Hill in a thoroughly earnest and business-like manner undoubtedly belongs to James H. Grace and brother of Nephi. They began their work two years ago, and this year had 70 acres under cultivation. The example of the Grace Bros. and the establishment of an experimental farm on the hill have finally led to the utilization of nearly all the land on the hill. Much credit should be given in this connection to the intelligent support, given both by precept and example, of President J. W. Paxman of Nephi, who, last year, had 350 acres of dry land under cultivation.

On Levan hill and in the immediate neighborhood, 2,000 acres grew wheat last summer. Some of this was volunteer grain, and another portion had not been properly cared for. However, the average yield was 15 bushels per acre. The Grace brothers had 8 acres that averaged 40 bushels per acre; 24 acres yielded 18 bushels per acre; [illegible] of the Grace brothers [illegible] per acre; [illegible] per acre; [illegible] per acre;