

Current Farm Policy Studies

UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE
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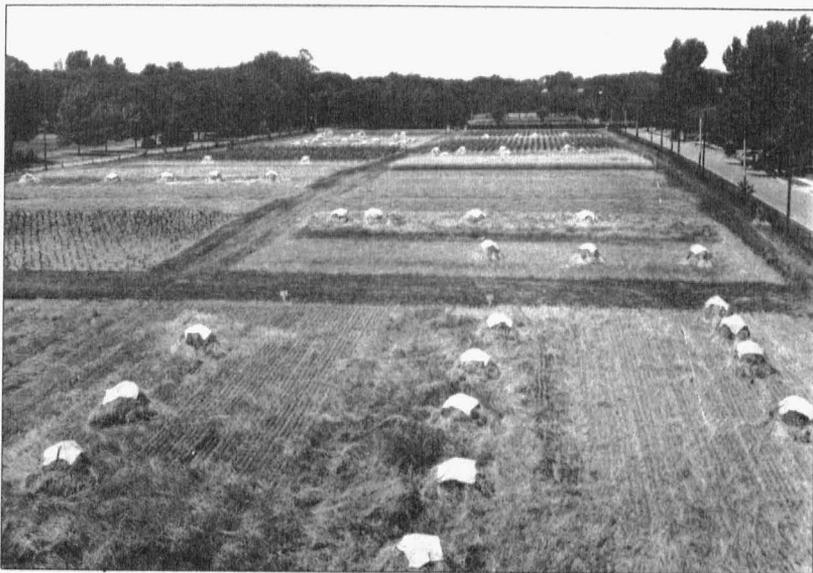
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The Post-War Agricultural Experiment Station

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Established in 1888, Sanborn Field was the first experimental field established west of the Mississippi River and the third such field in the United States.

This is the age of science. We are repeatedly reminded over the radio and in our daily newspapers of the enormous contributions of science to industry, to medicine, to war and to almost every phase of human life today. It would be strange indeed if science had not made similar contributions to agriculture.

The agricultural experiment stations of this country were established some fifty-five years ago on the assumption that *science can serve agriculture*. In common with all scientific institutions in the past fifty years these experiment stations have proven that this thesis is correct. They have made a remarkable contribution to agricultural enterprise. Almost beyond our dreams of fifty years ago they have been successful in solving farm problems. Before the establishment of experiment stations the farmer was helpless. He could not by himself solve these problems. In most cases only long and patient research by trained investigators made a solution possible.

Today we more fully understand the soil, its possibilities and limitations. We have improved domestic plants and animals. We are conquering plant and animal diseases. We have in many ways solved the problems of producing milk, meat, wool, eggs, vegetable fibers and even the energies involved in labor. With such a record we know that the same methods will solve the problems of a post-war agriculture.

The Real Objective

What is the real objective of the agricultural experiment station? Fundamentally it is to promote the *well being* of farm people.

We need first to establish the fact, especially in the minds of persons who are not farmers, that farming is an exacting and difficult business. It is uncertain. It has been called a gamble. The farmer plows, he cultivates, he plants but he does not always reap. He is dependent first on the weather. Floods, rain, hail, or drouth may make all his labor in vain. If he escapes the destruction of weather his crops may still be destroyed by grasshoppers, army worms, chinch bugs, or codling moth, or his animals may become unprofitable because of the ravages of internal parasites, tuberculosis, Bang's disease, screw worm, pullorum disease or a dozen other devastating animal diseases.

If the farmer escapes the hazards of weather, of insects and diseases he still may be caught by an economic situation that has ruined many a farmer in the past. He may have a successful season, he may be an efficient producer, he may with the help of the experiment station protect his crops and animals from losses through disease. But he may lose his labor and investment through a too rapid change in price level. When the cattle feeder buys his feed and cattle at a normal price he may find the price so low when his cattle are ready to market that his enterprise may result in a total loss. The farmer's income is therefore on the average lower than the skill and labor involved would under normal conditions fully justify.

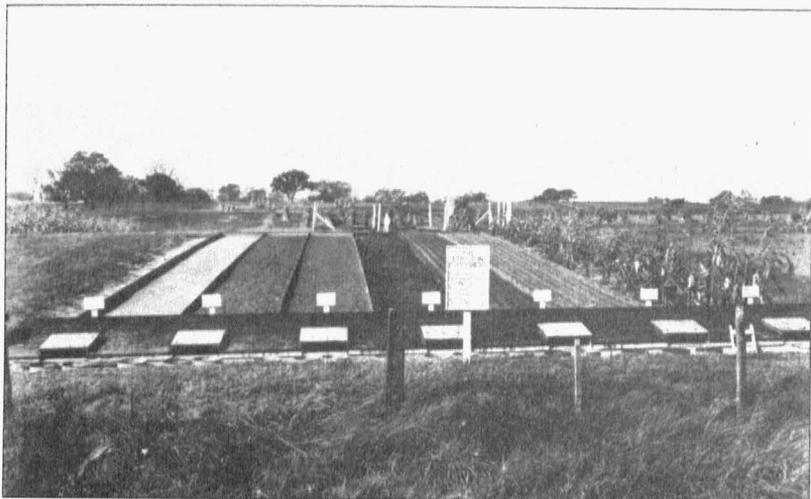
Research Increases Farm Income

In accomplishing the *well being* of farm people the experiment stations seem to have arrived at the conclusion that the first step is to increase the farmer's income. In this purpose they have undoubtedly

been correct. Every experiment station in the United States has devoted a major part of its effort to this end. Efficient production of farm commodities has been their goal. Efficient farm management has been their objective.

How has the experiment station accomplished this purpose? Clearly it cannot control the weather or the economic system. It can, however, so modify the effects of weather as to prevent some of the losses. For example the farmer can stop the enormous losses from soil erosion by methods developed jointly by farmer experience and the exacting procedures of long-time research by the experiment stations.

The general economic situation which greatly influences farm prices cannot be changed by the experiment station, but through outlook conferences the farmer can be advised as to seasonal changes and probable trends.



The Missouri Agricultural Experiment Station was the pioneer in the measurement of soil erosion losses with these experimental plots established in 1917.

There remain then all those problems relating to the production of plants and animals which are under the control of the farmer himself. In the solution of these problems the Missouri Experiment Station has taken a leading part. This station made possible the production of and transportation of well bred cattle from North to South by its cooperative work on Texas Fever. It was one of the very first stations to extend hog cholera control through vaccination. These two projects alone have added millions to the income of Missouri farmers.

The limits of this brief circular do not permit any adequate record of the many contributions of the Missouri Experiment Station to the

farmer's income but it is to be remembered that this station has won a world-wide reputation for its work on soil erosion, pasture farming, animal growth, nutrition, animal diseases, codling moth investigations, farm management, horticulture, dairy farming, poultry raising and rural community development.

For a Permanent Agriculture

But helping the farmer to increase his income is after all only the first step. We want not only a *prosperous* but we want a *permanent* agriculture. We want a contented and efficient rural population. We must therefore in some manner provide for farmers an equal educational opportunity and a satisfying community life. This responsibility is as much a part of the experiment station effort as is the objective of a more prosperous agriculture.

It is not the purpose of the station to encourage the cultivation of non-agricultural land. There is a lower limit to the fertility of the soil which may be successfully cultivated. It is the welfare of the farmer and his family which motivates all the work of the experiment station, the farmer will not be encouraged to "make two blades of grass grow where one grew before", unless such effort contributes to the well being of the farmer and his family. Such increased production may cost too much in human toil and happiness.

The total farm production in the United States has been and is surprisingly large but the individual farmer's net income at least for too many farmers has been too low to provide a standard of living which our American ideals require.

Why is this? Has the farmer himself been mainly responsible for his low net income or has the economic policy of the nation as a whole worked against the farmer? We know that the cost of distribution in this country is very high. It costs altogether too much to place farm products in the hands of the consumer. The apples of Washington and Oregon are sold in every large city of the United States. This involves an enormous transportation cost, and leaves the producer a very small portion of the sum finally paid by the consumer. This is one handicap to the producer which may be partially removed by the impelling need for transportation during and after the war.

There are, of course, other economic policies which are not favorable to the farmer but it is not possible in this brief paper to even attempt a discussion of the overall economic factors which are involved in the low income of farm people. We are here concerned primarily with what the farmer himself can do to improve his economic status and how the experiment station can help him in this effort.

Its Entire Service to Agriculture

One very important fact farmers should bear in mind. The agricultural experiment station within the state is the only agency which is organized and administered in such manner as to bring the full strength of science to the service of agriculture. The station with the help of the extension service is in a position to know promptly what the farmers' problems are and to immediately attempt their solution.



Starting from a small packet of seed received by the Experiment Station in 1922, Korean lespedeza acreage in the state now has spread to more than eight million acres.

Recognizing all these contributions of the experiment station and admitting a noteworthy improvement in every phase of agricultural enterprise, still we have often been disappointed that all this has not brought greater happiness and contentment to farm people. Scientists are charged with having made knowledge and especially new knowledge their supreme objective, regardless of how it is to be applied. The social consequences of the applications of science have been too often ignored. The discoveries of science can be used for destructive as well as constructive action. To the everlasting credit of the workers in experiment stations it can be said that the results of their work have been constructive. The world is better today because of their work. The farmer is more nearly master of his environment because of the work of the experiment station.

All this knowledge and more will be required in post-war agriculture. All the experience and wisdom of efficient farmers will be urgently needed after the war if agriculture is to meet the demands placed upon it.

Turning to Post-War Problems

What will be these demands? It is certain that agriculture will be called upon to produce greater and greater quantities of food and fiber. While we shall need more and more of all staples which we have been producing we shall be called upon to supply certain crops not now generally grown. The stations are continuously at work perfecting methods of growing and handling these special crops. All this knowledge is made available to farmers.

The need for the active work of the experiment station will not end with the ending of the war. Every indication now points to the certainty of a world-wide demand for every product of the farm. The American farmer by reason of his efficiency, his use of farm machinery and his industry will play a major role in rehabilitating the exhausted peoples of the world. He can safely follow the advice of the station.

The station worker must for the time being devote less attention to long-time projects and give intensive attention to immediate demands for the solution of post-war problems, whatever they may be.

Agriculture was never so well served with the technical skill of station workers and the teaching skill of extension workers as at the present time. It must not be forgotten either that all these workers have been trained in the colleges of agriculture. There is now a county agent in practically every county of the United States. He is familiar with local conditions. His sole object is to aid the farmer in meeting the demands made upon him. There is also a home demonstration agent in a great majority of the counties and she is aiding the farmer's wife and the farmer's family to efficiently perform their part in the war and post-war effort. This great service organization for agriculture was not fully available after the World War of 1914-1918. Farmers are now in a better position to withstand the shock which will come with final peace.

To Maintain Productive Capacity

The really big problem for the efficient farmer now and after the war is how to produce all that is required of him and at the same time maintain the productive capacity of his soil. It is inevitable that at least temporarily he will have to abandon some of the long time soil conservation methods he has only recently so successfully begun.

It is certain that when the war is over the agricultural soils of the United States will have lost a considerable part of their available fertility. The present war has come just at the time when the na-

tion as a whole was showing real progress in developing a nation-wide program of soil conservation which was calculated to provide permanency to our agriculture. This program of conservation for the time being has been curtailed. At least for the present and for some time after the war we shall follow the old policy of exploitation. We shall lean heavily upon the stored fertility now in our soils. This policy is more or less forced upon us by the world's need for our farm products.

In solving this problem the experiment station will be indispensable. For more than fifty years the Missouri Experiment Station has experimented on the soil in the field under normal field conditions with every practicable method of soil improvement.

An Indispensable Service

On Sanborn Field established at Columbia in 1888, long-time investigations on the value of rotation, fertilizers and methods of cultivation have shown the way. These results apply to the present situation and are immediately available. The Missouri Station was the first to measure accurately the losses from soil erosion. The results of this investigation have shown that some slopes should never be plowed but should remain permanently in grass. We now know that it is entirely practical to have maximum production on our farms and yet protect our lands from serious loss by erosion.

The farmers of Missouri are fortunate in that the key men in the Missouri Experiment Station have been long in service and know Missouri agriculture and the conditions under which farm production and the maintenance of the farm home must be accomplished. They understand the farmers' problems in these respective fields. They are profoundly interested in the farmers' well being. Men of such long experience in solving the problems of Missouri agriculture are not apt to make serious mistakes.

The Missouri Experiment Station is not a temporary war project. It is a permanent institution. It represents the best kind of public service. It helps farmers to help themselves. By so doing, it is rendering a service to every man, woman and child in the state. It has proven its value. It will be a major influence in the reconstruction period.