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NEED FOR TRAINED MEN IN AGRICULTURE

Speaking recently before the Dallas Agricultural Club, Dean Charles E. Shepardson, of the College of Agriculture of Texas A. & M., stated that American agriculture must have capable, well-trained men if it is to continue to fill its vital role in our national economy. He pointed out that farming is no longer an occupation which can absorb unskilled men who have failed in other lines of endeavor; that it requires training and knowledge in more different scientific and professional fields than almost any other type of industry. The successful farmer must have a knowledge of soils and of how to conserve and improve them; of new crops or new forms of existing crops which are better adapted to varying local conditions; of the duty of water and of the water requirements of different crops; of the control of insects; of genetics and the principles of livestock breeding; of the principles of nutrition and proper feeding and the chemistry of feeds; and of range and pasture management.

There is, therefore, great need for well-trained owners and operators on American farms; but there is need also for personnel to continue research in various fields of agriculture and to teach farming people how to improve the efficiency and profitableness of their farms.

Dean Shepardson stressed that the call for people in these fields of agricultural research, teaching, and demonstration is greater today than ever before. The war made heavy demands on the resources of the land, and the meeting of these demands has seriously impaired the fertility of American farms. Simultaneously war has also reduced the supply of trained personnel in the field of agriculture who could repair the damage done to our farms during the war and could lead the way in developing a more efficient agriculture.

In order to supply the trained personnel, who, in turn, will aid in increasing the efficiency and man-hour output of American

THE BOND-A-MONTH PLAN

During June and July the Treasury Department is promoting the Bond-A-Month Plan. That Plan should be of especial interest to farmers, since it offers to them the same automatic bond-buying privileges that the Pay Roll Savings Plan continues to afford to millions of wage and salary earners.

Farmers have enjoyed a high level of income during the past six years; estimates of farm income for 1947 indicate another good year. E-bonds bought each month for the farmer's account by his bank represent the safest investment of the farmer's money and make possible an assured monthly income for his future.

Bankers are urged to support the Treasury Department's program by bringing to the attention of all their depositors the real advantages of the Bond-A-Month Plan. Banking leaders and banking associations have recognized the real merits of the Plan and have pledged their active support to the program. Advertising and publicity in all media will emphasize the part played by banks in making the program a success and will direct depositors to "ask at your bank...see your banker" for information about the Bond-A-Month Plan.

—SAVE THE EASY AUTOMATIC WAY—
WHERE YOU WORK—WHERE YOU BANK

farms, Dean Shepardson pointed out that there is urgent need of increasing undergraduate enrollment in agricultural colleges and stated that people engaged or interested in agriculture have a real responsibility to help draw young, properly-trained men into farming or the teaching of agriculture by acquainting them with the true opportunities that exist there. One obstacle which must be overcome, according to this speaker, is the present general attitude regarding the type of men needed in agricultural work. He stated that many people who are advising high school graduates encourage them to go into almost any vocation but agriculture, and that, as a result, only a very small percentage of the most intelligent and capable high school students enter the field of agriculture. Summarizing the results of a study at Texas A. & M. College, Dean Shepardson said that of the freshmen entering the College of Agriculture only 15 per cent were from the top 30 per cent of the class, while 46 per cent were from the bottom 30 per cent.

"If we are to secure and train the top scientists necessary to the solution of the problems confronting agriculture," Dean Shepardson said in closing, "it is our job to show the high school graduate the challenge and the opportunity there is for him to exercise his talents and ingenuity to the limit of his capacity in this field. We need to acquaint them [high school graduates] with the fact that agriculture has opportunities to offer. And, if there are those who still deplore the fact that our agricultural graduates do not go back to the back breaking, soul killing manual labor type of farming, let me say to them that the future success and prosperity of agriculture is dependent not on more men doing that kind of labor, but on more men with the vision and intelligence to develop means whereby we can reduce or eliminate the drudgery which is driving so many of our young people from the farm."

aid the livestock industry by increasing feed supplies and improving their quality. Agronomists and soil scientists, working with other interested groups, have increased the yields of hay crops grown in this area and have developed strains well adapted to climatic and soil conditions found here. A large portion of these crops is lost each year, however, before it reaches the farmer's barn because of unfavorable weather at harvest time. When hay is first cut, the moisture content varies from about 60 to 80 per cent, and this moisture must generally be reduced to around 20 per cent before the hay can be stored safely. It may be necessary for the hay to remain in the field from one to several days for the sun and air to reduce the moisture content the required amount. During this time rain may ruin or seriously damage the crop. Therefore, if farmers are to be assured an adequate supply of low-cost roughage to support their expanding livestock enterprises, it will be necessary to carry the work already done by the agricultural scientists a little farther and devise ways of reducing this loss.

Hay-drying equipment, developed in the last three or four years by the Tennessee Valley Authority, Ohio State University, Texas A. & M. College, and other research groups, promises to aid in solving this problem. Basically, this equipment consists of a series of air tunnels constructed along the floor of the barn loft or storage shed and a large fan which forces air through the tunnels and then up through the hay stacked above. The moisture content of the hay is reduced through absorption by the upward moving air, thus making it possible to store hay, either loose or baled, only a few hours after it is cut. By reducing the time that the hay must remain in the field for curing, it is possible to eliminate much of the risk of crop loss resulting from unfavorable weather at harvest time. Use of such equipment also aids in maintaining the nutritional value of the crop which is sometimes reduced by the bleaching action of the sun and by the loss of leaves due to shattering during the field curing process. Hay cured in this manner is more palatable, for mould from inadequate drying or toughness resulting from overexposure to the sun

MORE AND BETTER HAY THROUGH MECHANICAL DRYING

Use of mechanical drying equipment in curing hay and other feedstuffs promises to

will be eliminated. The fire hazard which frequently develops from farmers' attempts to store improperly cured hay is also reduced.

For several years farmers in this area have indicated their interest in this type of equipment through hundreds of requests to county agents, vocational teachers, and the A. & M. College of Texas for information regarding construction of hay or grain drying, or "finishing," equipment. In response to these requests, agricultural engineers at the A. & M. College began a series of studies in 1944 to develop practical equipment adapted for drying the hay, grain, and other farm products of the area. The studies were conducted in the coastal section of the State, and it was necessary to use heated air in the drying process because of the high relative humidity in that section.

A lateral-type air distribution system was used in these experiments, consisting of a main tunnel constructed along one side of a 30 by 60 foot loft or storage area and a series of small ducts or lateral tunnels extending out from the main tunnel at right angles. The main tunnel was 44 feet long, 4 feet high, and varied in width from 2 feet 6 inches at one end to 8 inches at the other. It was constructed of plywood, but rough lumber, lined with tar paper to make it air-tight, could be used. The lateral tunnels were about 1 foot square, and best results were obtained when they were constructed of welded steel wire mesh. A motor and fan, set at one end of the main tunnel, forced air through the laterals and up through the stored hay.

The cost of constructing a drying system varies with the size of the storage area and with the amount of construction and installation work the farmer is able to do himself. Estimates made in other sections of the country indicate that materials and equipment similar to those used in the Texas study would cost \$350 to \$500 without a burner attachment for heating the air. If a heater attachment is included in the system, the outlay will be raised significantly, due to the cost of the burner itself and of installing the burner and a series of automatic switches to guard against fire.

This new drying method provides a prac-

tical way for every farmer to insure himself an adequate supply of high-quality hay. The cost of installing and operating such equipment will be more than offset by reduction in the proportion of the crop lost to rain or other damage and by improvement in the quality of the feed. More detailed information regarding the construction of both hay and grain driers can be obtained on request from local county agents or from A. & M. College of Texas, College Station.

COMMODITY NOTES

The Poultry Situation

Recent forecasts by the United States Department of Agriculture suggest a moderate reduction in supply of poultry and eggs but a generally favorable price outlook for poultreymen for the remainder of this year. The number of chickens being raised is about five per cent less than last year, indicating well sustained prices for broilers and fryers and a reduction in laying flocks. Turkey production in 1947 will be at least 15 per cent below 1946. The output of poultts in the first four months of 1947 was about 20-25 per cent below last year. Turkey prices are not expected to decline much this fall and winter because of the reduced production and the government price-support program.

Egg production during the first half of 1947, estimated at 99 million cases, is five per cent less than in the same period last year. Cold-storage holdings of shell eggs on May 1 were 1.7 million cases, one-fourth of last year's large holdings, and the smallest on record. Frozen egg holdings were down from last year's level of 155 million pounds by about 22.5 per cent. Supplies of eggs in the second half of this year are expected to be about 20 per cent less than in the first half and about 10 per cent below supplies in the last six months of 1946. Per capita egg consumption in the United States remains high, but the demand for eggs for the remainder of the year may weaken if consumer purchasing power declines and if meat prices decline seasonally.

Government Begins Purchases of Wheat

The Department of Agriculture has announced that purchases by the Commodity

Credit Corporation of new-crop wheat for export are being started. Purchases will be made at prices not in excess of prevailing market prices. Offers to sell are invited on a delivered seaport or lake-port price basis, with delivery to be made either at seaport or interior elevator, as may be mutually agreed upon. Purchases will be handled, as in the past, by the CCC grain offices at Kansas City, Minneapolis, and Portland, Oregon.

World Food Situation

Little, if any, change is forecast in the world food supply for 1947-48 by the United States Department of Agriculture, and it is expected that the demand for and price of food items produced by American farmers will continue at high levels, even though there may be moderate adjustments in the prices of some commodities. Strong efforts have been made to expand world food production, but present indications are that during the consumption year 1947-48 production will hardly more than equal that of 1946-47. Grain production in some areas may be increased, but such increase is not likely to do more than offset the smaller crops in prospect in other areas. This is unfortunate from the standpoint not only of the countries needing more grain imports but also of the strain which will be placed upon the transportation facilities of exporting countries. Some increase in production of sugar, potatoes, and fats and oils is expected, but supplies of these commodities will still be below prewar.

The most important factors thwarting attempts to increase food production are reported to have been labor shortages, floods, and severe weather, particularly extreme cold in Europe and droughts in Asia.

TECHNOLOGICAL DEVELOPMENTS

Nitrogen Fertilizers

Research at the Louisiana State University Experiment Station has shown that a cover crop of hairy vetch will supply the nitrogen generally furnished by commercial fertilizers containing nitrogen, phosphorous, and potassium. Moreover, a higher yield will be ob-

tained from the cotton crop which immediately follows the vetch. A test was made of the relative effect of the vetch cover crop plus an application of 0-8-8 fertilizer on one plot of land, as compared with an application of 6-8-8 fertilizer without cover crop on another. The former yielded 38 per cent more cotton than the latter. In reporting these results, Mr. I. W. Carson of the Louisiana Agricultural Extension Service pointed out that it is likely that a smaller increase would have been shown had smaller quantities of phosphorus and potassium been used.

The United States Department of Agriculture has developed a slow-acting nitrogen fertilizer that feeds crops over a long growing period which may be used if it is not feasible to secure required nitrogen through the use of cover crops. This new material is known as Uraform and as yet is being produced only on a laboratory scale. Uraform does not leach out of the soil easily and can be applied to row crops at planting time, thereby eliminating the need for additional application of fertilizer after the crops are up.

ANNOUNCEMENTS

The Eighth Annual Cotton Research Congress convenes in Dallas, July 16-18. There will be a program of addresses and group discussions on topics of timely interest to all who are interested in the cotton industry. Also the versatility of cotton will be demonstrated by elaborate exhibits of many of the almost innumerable products made from cotton and cottonseed.

Recent Publications

Texas Agricultural Experiment Station, Texas Agricultural and Mechanical College, College Station:

Hay and Grain Drying, 1946, Progress Report 1070, by J. W. Sorenson, Jr., and others.

Farm Land Market Activity in Three Texas Counties, 1946, Progress Report 1077, by William F. Hughes and Joe R. Motheral.

Copies of these bulletins may be secured by request to their respective publishers.