

ANIMAL HUSBANDRY

Through an agreement with the Bureau of Animal Industry of the United States Department of Agriculture, cooperative livestock projects of major importance were begun in the fall of 1932. This was made possible when the Georgia State College for Men agreed to make available for this work its herd of cattle and approximately 265 acres of land adjoining the Experiment Station tract.

On the Station and College lands three pastures are being developed for beef cattle and plans are being made for hog pastures. Additional land will be leased for producing feed stuffs.

There is a vast acreage of cut-over and marginal lands in the coastal plain region that should be bringing in some revenue from beef cattle production. To do this it is necessary to develop improved pastures at small expense and provide cheap feed crops to finish off the cattle.

The soil, climatic and cropping systems in the coastal plain are ideal for hog production. To make this enterprise profitable, however, a year-round grazing system should be developed and cheap supplemental feeds provided.

With this in view experiments of a very practical nature are being planned. There is a widespread demand for information of this kind, and it is believed the results will have an important influence in pointing the way toward successful livestock production and thus provide the means of utilizing large areas of marginal lands that are now producing little or no revenue.

Three herds of beef cattle are being provided for by the Station and the Bureau of Animal Industry as follows: a veal herd, a breeding herd, and a feeder herd. The hog work will consist of grazing on a succession of crops with supplemental feeding. A brief outline of the work follows:

VEAL HERD

Approximately fifty grade Jerseys and native cattle will be bred to a purebred Hereford bull during the late winter months so the calves will be dropped during the following early winter. The offspring

will be sold as veal calves in the spring. This herd will be carried on a permanent pasture as much as possible and wintered in the most practicable and economical way. Records are to be kept on the carrying capacity of the pasture, the feed consumed, the gains made by the cows, the kind of calf dropped and its gain, various grasses used in the pastures and their value, as well as other phases of the work that should be of value to the farmer.

It is thought that this experiment will produce results of very practical application, as it is believed there are splendid possibilities in veal calf production in the coastal plain area. Knowledge should be gained in the practicability of breeding up grade or scrub herds and the most useful breeds or types for that purpose.

BREEDING HERD

Approximately fifty grade and purebred Herefords will comprise this group. Feeder calves will be produced for the pasture experiments. The purebred heifers will be used for replacements. The bulls will be used for demonstration and progeny testing. In providing a pasture for the breeding herd, various grasses and clovers will be planted to determine the best plants or groups of plants with which to establish a pasture.

In connection with the veal calf herd and the breeding herd, studies will be made for the purpose of determining breeds and crosses of cattle suited to coastal plain conditions, system of breeding, feed requirements, management practices best adapted to veal calf and feeder cattle production, and a comparison of methods of wintering cattle.

FEEDER HERD

A herd consisting of fifty grade Hereford steers will be grazed on both lowland and upland permanent pastures. When taken off of the pastures this herd is to be fattened in velvet bean fields or in a feed lot. This project is in cooperation with both the Bureau of Animal Industry and the Bureau of Plant Industry of the United States Department of Agriculture. In the experimental pastures used for this purpose various pasture mixtures, as well as fertilizer treatments, are used and records are kept as to carrying capacity of the pasture mix-

tures. The results of this work are reported in this bulletin under the heading of "Forage Crops and Pasture Experiments."

In addition to the permanent pastures, temporary pastures are provided to obtain data on both winter and summer grazing of annual plants. The temporary winter pastures consist of oats, rye, Austrian winter peas, *Monantha* vetch and combinations of these. The temporary summer pastures consist of lespedeza, soybeans and Sudan grass.

SWINE PROJECT

This will include a test for determining a practical year-round system for grazing crops for hogs and such supplemental feeding as may be necessary. The value of the various crops used in the grazing system will be determined by the increase in pounds of pork produced. Records are to be kept on the hogs and on the crops in order to determine not only the pounds of gain but also the cost of gain of each brood sow and her litter or litters. Data is to be obtained as to the most practicable farrowing time, the best season to market hogs and the most economical and practicable method of handling and feeding the sow and litters through the year.

The coastal plain area is already an important section in swine production. This is to a large extent, due to the fact that a great variety of crops, such as peanuts, corn, sweet potatoes and soybeans, can be produced economically and grazed in the field. A schedule of grazing and of supplemental feeding, applicable to the sandy soils of the coastal plain, should prove useful to a large number of farmers.