25 Year Extension
Progress Statement Prepared
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Extension work in agricultural engineering was begun in May 1914, when
the Extension Division employed an engineering specialist to give farmers of
the state demonstrations in the proper methods of draining their wet lands.
This extension work proved very effective and the demand from farmers for in-
formation and assistance on other agricultural engineering problems grew so
urgent that it became necessary by 1917 to add other extension projects in
agricultural engineering. The effective extension work also developed a demand
for resident instruction training in agricultural engineering subjects. As a
result, a department of agricultural engineering was established at the college
in 1920, with the extension specialist heading up the department. This depart-
ment is now recognized as one of the leading departments in agricultural
engineering in the United States.

Land Drainage

Extension work in land drainage was started in 1914 the first year of
the establishing of the extension service. Over 20,000 acres of farm lands
throughout the state have been surveyed and mapped for tile drainage systems. A
conservative estimate of the annual increased production value of this tile
drained land is $20,00 per acre or $600,000.

Preliminary investigations and suggestions for the surface drainage of
some additional 50,000 acres of farm lands have also been made by the extension
service over a period of 25 years.

Terracing to Control Erosion

Extension work in erosion control by means of terracing was started by
the agricultural engineering specialist in 1917. This work has been handled
by means of short courses, field demonstrations, meetings and actual field
assistance in laying out terraces and organizing erosion control associations.

During the period since 1917, the extension agricultural engineering
project in terracing has resulted in over 300 farmers terracing approximately
72,000 acres for protection against erosion. Soil Conservation authorities
place an average increased value of land at $6.50 per acre as a result of
terracing, or about $611,000 increased value of the land terraced. The value of
this work in actually saving the soil, fertility and increased crop yields is
difficult to estimate.

Rural Electrification

The extension agricultural engineer initiated the rural electrification
movement in Virginia in 1924 with the organization of the Virginia Committee on
the Relation of Electricity to Agriculture. An extension educational program in
rural electrification has been under way continuously since that date. Twenty-
five years ago there were only a few large farms near cities receiving electric
service. In 1924 there were 300 miles of rural electric lines in the state serv-
ing less than 1500 rural customers, of which about 500 were farms. As of
December 1, 1928 Virginia had 10,500 miles of rural electric lines serving
approximately 70,000 rural customers, approximately 31,000 of which were farmers.
Over 16% of Virginia farms now have electric service and approximately 22% have the service available. Largely due to the state-wide extension educational program, Virginia farms have a higher k.w.h. consumption per farm than the average in any Eastern state.

Farm Structures

Extension work in farm structures was begun in 1918 with the establishment of a farm building plan service. In the period since then several hundred plans of farm structures have been designed and are available free of cost to farmers of the state. Over 40,000 plans of farm buildings of all types have been sent to farmers requesting them. In 1918 the estimated value of buildings on the farms of Virginia was approximately $211,000,000. This value of farm buildings has increased by over $100,000,000 since 1918. It is estimated that buildings to the value of at least $20,000,000 have been built from plans furnished by the extension service since 1918 when this service was inaugurated.

Land Clearing

The extension agricultural engineering service rendered valuable service to the farmers of the state by holding land clearing demonstrations whereby some 6000 farmers were instructed in proper methods of land clearing. During the years 1925-26-27, the department distributed over 1/2 million pounds of government surplus war explosives to 1655 farmers for land clearing purposes. These farmers paid $49,000 for these explosives and saved over $57,000 on the purchase price compared with the cost of the same amount of commercial explosives. These farmers removed stumps in 6788 acres of new land and 14,000 acres of cultivated land. Reports from these farms indicated that this land was increased in value approximately $528,000.

Farm Water Supply

Extension work in farm water supply was begun in 1920. Farm water supply surveys have been made since this on some 3000 farms. Thousands of letters have been answered giving advice on this subject and thousands of bulletins furnished farmers. Less than 5% of Virginia farms had running water in the home when this activity was started. Now some 20% have running water in their homes. A cash value cannot be placed on this service but it is an important item in the increased improvement in health, happiness and standard of living on the farm.

Miscellaneous

Thousands of farmers and club boys have been given instruction and advice on improved farm machinery through meetings, schools and by correspondence. Irrigation systems have been installed on several thousand acres of farm lands. Several hundred farms have been given assistance on installation of water power plants. Numerous orchardists have been given help on the design of stationary spray plants. Thousands of farmers have been given assistance on numerous miscellaneous engineering problems.