

# Resume of Annual Report

## SUMMARY OF AGRICULTURAL ENGINEERING

1934

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### FARM STRUCTURES PROJECT:

Although the cost of building materials has risen and the farmer's financial condition was still poor the demand for farm building plans increased considerably during 1934. More than 3075 plans were requested and supplied to farmers of the state as compared to more than 2412 during 1933. It is conservatively estimated that the value of farm structures erected from plans furnished by the agricultural engineering department during the year is well over \$1,000,000.00. Figuring planning service at 10 per cent, the value of this plan work to Virginia farmers was over \$100,000. Some 40 new plans of farm buildings were prepared during the year.

The rural housing survey conducted last year and the interest stimulated by the Federal Housing Administration, etc., has resulted in a greatly increased demand for small farm house plans. Approximately 500 house plans were requested and supplied. The demand for these plans is increasing rapidly which indicates a greater interest in new and remodeled homes.

Interest in sweet potato storage, both individual and community has been much greater the past year. A number of individual sweet potato storage houses were constructed and several large community storage houses built. There is also a growing interest in cold storage plants for apples and meat curing and storage houses. Several large apple cold storage plants were constructed from our plans. More than 1780 poultry house plans were requested and supplied. Many existing buildings were converted into poultry houses. A brick brooder that makes possible the utilization of home grown fuel and safe brooding of chicks at small cost was designed. Nearly 900 of these plans were mailed out upon request. Plans for community buildings for the following purposes were prepared. Farmers' markets, grange halls, community livestock market, club halls, milking parlors, grain storage and apple packing plants.

### FARM DEVELOPMENT PROJECT:

There are now 23 demonstration farms in different parts of the state included in the farm development project. This project is being conducted in cooperation with the Agricultural Economics and Agronomy Departments of V. P. I. and the Bureau of Agricultural Engineering of the U. S. Department of Agriculture. Area, contour, soil and farm management surveys are made of the farms after which plans and suggestions are worked out by the various cooperating specialists that will lead to an improvement in the farm income by strengthening those phases which

result in profit and eliminating those resulting in loss. Careful planning, cost reduction, proper use of farm equipment, better living conditions and the prevention of soil erosion are other features of the project.

While complete records are not yet available for all farms on this project, records on the first 15 farms selected show an average income of all farms of \$1304.00 for 1933 as compared to \$507.00 for 1932, or an average net gain in income of \$799.00. This project has now been adopted by the T. V. A. for their entire watershed. Assistant county agents are being placed in each county in the watershed and a minimum of 20 farms for each county is being selected for demonstrations. While soil erosion control will be stressed, other phases of the program will also be included.

#### PREVENTION OF SOIL EROSION:

Considerable assistance was rendered the Soil Erosion Service of the Department of Interior on the location and organization of the soil erosion demonstration area in Pittsylvania county. Assistance was given in the selection of the personnel for this service and for the E. C. W. camp. This department is represented on the advisory committee of this project.

During the year the method of handling extension work in terracing was changed. Instead of doing a lot of personal service in terracing, county terracing or soil improvement associations are being organized in a number of counties. These organizations of farmers purchase large tractors and terracers with which to do the terracing work at cost for farmers. The rural rehabilitation division of the V. E. R. A. is cooperating with this project by supplying funds for the employment of assistant county agents to handle the terracing work for the association. Associations in five counties have been organized with work actually started in several counties. Several thousand acres in each county have been signed up for terracing. By the end of the coming year it is expected that such work will be underway in at least twenty counties. An application has been made for Public Works funds to greatly expand this terracing work which will be followed up by a complete program of soil improvement in cooperation with the Agronomy Departments

Terracing demonstrations were held in 14 counties where 174 acres were terraced during the demonstration and 350 farmers instructed in this work. Instruction in terracing was also given club boys at five short courses during the year. Cooperative work was also done in erosion control with the Tennessee Valley Authority. The coming year promises to see more terracing done than ever before in the history of the state.

#### RURAL ELECTRIFICATION PROJECT:

Following up the Federal Housing Survey a rural electrification survey was made in 50 counties of the state under the C. W. A. This survey is now being completed in cooperation with the State Corporation Commission and an application

will be made for Public Works funds to construct rural lines in sections of the state where the interest and need is evident.

Educational work has been done in rural electrification during the year mainly through the agricultural engineers of the power companies. That this work is bearing fruit is indicated by the fact that one of the larger companies in the state won the Martin Award which is given annually to the company in the United States making the most out-standing progress in rural electrification. This company is following our advice on rural service work and has a staff of agricultural engineers trained at V. P. I.

The department has cooperated with the T. V. A., the Federal Power Commission and the President's Power Policy Committee in an advisory capacity and in the making of reports and recommendations. Since the National Administration has indicated that rural electrification will be one of their most important projects there is no doubt but that many miles of rural lines will be built to serve several thousand farmers during the coming year.

#### MISCELLANEOUS AND EMERGENCY ACTIVITIES:

Interest in stationary spray plants for orchards is increasing rapidly. A number of surveys have been made and advice given in cooperation with the Horticultural Department on the installation of spray plants, orchard irrigation, fruit storage and packing plants. Drainage surveys were made on seven farms and tile systems planned for 175 acres. Numerous letters have been answered on farm home equipment and 58 farm water supply surveys were made in 27 counties for the installation of running water systems in the farm home. Twenty-six (26) surveys were also made during the year for the development of farm water power electric plants. A number of installations were completed during the year. Engineering advice was given practically every agricultural department on their projects. This department cooperates closely with all agricultural departments.

Emergency projects have made heavy demands upon the department during the year. The department handled the engineering phases of the rural housing survey made by C. W. A. in ten counties. Six architects and draftsmen were employed for three months preparing plans for low-cost farm homes. Several of the plans prepared were included in Farmers' Bulletin No. 1738 entitled "Farm House Plans" published during the year by the U. S. D. A. As a continuation of the farm housing survey a rural electrification survey was made on C. W. A. funds of 50 counties. Considerable time was given by members of this department on the organization of the work of the Soil Erosion Area project in Pittsylvania county. The department cooperated with the T. V. A. in making an industrial and agricultural survey of the Virginia counties in the area, on the organization of the soil erosion program in the area, in the development of low-cost electric ranges and in the setting up of county demonstrations with the selection of 20 farms in each county.

Members of the department assisted in training surveyors for the compliance work under A. A. A. for the measurement of land taken out of cultivation. A report on rural electrification for the state was made for the Federal Power Commission and a Resident Electric Appliance Survey made of the town of Blacksburg for this commission. The department cooperated with the rural rehabilitation division of V. E. R. A. and one department member has served on the Land Use Committee of the A. A. A. The head of the department has served as a member of the State Planning Board on appointment of the governor.