

PROJECT NO. 10

CO-OPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF VIRGINIA.

PLAN OF WORK FOR AGRICULTURAL ENGINEERING.

MARCH 1, 1926⁸ to FEBRUARY 28, 1927⁹.

OBJECT: To make the farms of the State mor productive, efficient and prosperous and the farm homes more attractive and more fit places in which to live.

To offer technical information and assistance to any taxpayers of the State who are interested in the development, and the increase in the efficient use of, the agricultural resources of the State.

To promote a better understanding of the value of the science of engineering as applied to agriculture.

PHASES

EMPHASIZED: The phases of this project to be emphasized during 1926 are:

1. ~~Farm Water Supply and Sanitation.~~ *Planning*
2. Terracing,
3. Farm Structures and Farmstead Planning.
4. ~~Land Clearing.~~ *Farm Water Supply & Sanitation*
5. Rural Electrification.
6. ~~Gas Engines and Tractors.~~

Other projects in Agricultural Engineering and miscellaneous subjects will be handled mostly through correspondence. Only in the most urgent cases will field assistance be given on anything but the projects to be emphasized.

SERVICE: The work will be carried on by means of:

- A. Publicity and propoganda;
- B. Meetings and short courses;
- C. Field projects and demonstrations.

- A -

PUBLICITY AND PROPOGANDA: Publicity and propoganda will be obtained through the publication of articles which are based on the result of the project work. The County Agent will, in their publications, be asked to give the results of the project considerable prominence. Other means of publicity will also be

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used, such as the distribution of bulletins, mailing of circular letters, exhibits at fairs, etc.

- B -

MEETINGS AND
SHORT COURSES:

The meetings and short courses will be given when scheduled and will consist of chalk talks and illustrated lectures, moving pictures and laboratory work.

- C -

FIELD PROJECTS
AND
DEMONSTRATIONS:

The field projects will consist of technical information and services offered to individuals, communities and organizations in the state in matters relating to the following sub-projects:

1. Farm water supply and sanitation;
2. Terracing;
3. Farm Structures and Farmstead Planning;
4. Land Clearing;
5. Rural Electrification;
6. Gas Engines and Tractors.

Demonstrations will consist of visits and meetings at projects under construction or at finished projects, in order to instruct on methods or to show results obtained.

Individuals, County Agents, or community organizations make application to the department for the services of the specialists. The individual project is visited, in company with the County Agent, if possible. Surveys and other notes are made and a detailed report and suggestions furnished.

MEASURE OF
RESULTS:

The projects to be emphasized are self advertising, such as drained fields, terraced hillsides, running water in the home and new buildings and improved farmsteads. Cost records and records of conditions before and after will be kept in order to show the superiority of the practices recommended.

Copies of data of all projects in organized counties will be filed in the County Agent's office. Questions will be inserted in the blank supplementary report sent from the Assistant Director's office which will require a checking and reporting of the condition of the project in each county.

In counties without agents, the work will be checked by follow-up letters. Results thus obtained will be summarized and included in annual report.

Office records will be kept of the volume of correspondence, numbers of blue prints, bulletins, circulars and other material sent out. Results will be measured by number of farmers reached and influenced to use the better methods recommended.

PERSONNEL: The personnel ^{to be} maintained for the period mentioned in this plan of work will be as follows:

1. ^{Agricultural} Extension Engineer in charge, - ^{full time} half time; ^{3/4 time}
2. ~~Extension Architect~~ - half time.
3. Assistant Extension Engineer - full time.
3. ~~Secretary~~. ^{Student asst. draftsman} ^{1/2 time}
4. ~~Secretary~~

CALENDAR: The nature of the services rendered by this department preclude the possibility of following any fixed program for the entire year in advance. In wet years, drainage and soil erosion prevention are in great demand. The water supply and sanitation and farm building plans and farmstead planning work come in more nearly the year through and are very well distributed.

Field projects and demonstration work will occupy about nine months of the year, while meetings, short courses and fairs, etc. will occupy the other three months.

Tentatively, the water supply and sanitation project will be handled in March, April and May; Land Clearing in June, July, and August; Rural Electrification and Farm Structures throughout the year; Terracing, in October and November; Gas Engine and Tractors, in July, August, December, January and February.

MAP: From the nature of the service offered, it is not practical to include a map showing the location of the demonstrations, etc. A map will be prepared at the end of the year and included in the annual report.

Respectfully submitted,

Agricultural Engineer in Charge.

Outline of sub-projects to be emphasized during the year is appended to this plan of work.

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Sub Project II.

Terracing Demonstrations.

OBJECT: (1) To demonstrate the method of preventing soil erosion by the use of the broad base, or Mangum, terrace.

IMPORTANCE: Soil erosion occurs to some extent in every county of the state and in some counties it constitutes a very serious problem. Soil erosion results in a tremendous loss of fertility as well as the soil itself. If not checked in time, it will necessitate the ultimate abandonment of the land.

In twelve of the Southern Piedmont counties, erosion occurs extensively on about 10% of the farm land, or on 300,000 acres. The value of terracing improvements can be figured at from \$5.00 to \$50.00 per acre. Figuring conservatively at \$10.00 per acre, the value of the project could be estimated at \$3,000,000.00 in these twelve counties.

PROCEDURE: Promote terracing through demonstrations, meetings, bulletins and other publicity methods.

The Agricultural Engineering Department will:

1. Furnish county agents with educational publicity material for use in their local papers; supply bulletins and other material on terracing for distribution; furnish agents with complete instructions on methods of handling projects.
2. Send an engineer to the county to assist the agent in making surveys for, and laying off, terracing systems; construct one model terrace on each farm laid off; instruct interested persons in the use of the level in laying off terraces; give talks at meetings.

The County Agent will:

1. Promote the project in his county by distributing the publicity material etc. furnished by the department.
2. Select reliable farmers in different communities who have land in need of terracing, and who agree to following instructions.
3. Make all the necessary arrangements for holding the terracing demonstrations, such as having terrace drags ready, advertising the demonstrations, and arranging for at least three demonstrations, one each day.
4. Obtain a record of the results gotten in his county due to the work of this project.

RESULTS: Results will be measured by number of feet of terraces laid out and constructed; number of acres terraced; number of farmers attending demonstrations; spread of influence, etc.

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Sub-Project III.

FARM STRUCTURES AND FARMSTEAD PLANNING.

- OBJECT:**
- (1) To demonstrate the use and value of modern farm buildings.
 - (2) To demonstrate the value of proper arrangement of buildings, fields, etc. so as to conserve labor.
- IMPORTANCE:** The farmers of the state have over \$275,000,000.00 invested in farm buildings, or more than the combined value of implements and livestock. Thousands of dollars are spent annually by farmers for new buildings. In most cases, these buildings are constructed without plans and the farmer often finds, after he has finished the building, that it is not what he wanted. By using a good plan, he can usually save money and get a building suitable to his needs.
- PROCEDURE:** Promote better buildings through the distribution of standard building plans, bulletins, etc.
- The Agricultural Engineering Department will:
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- (1) Furnish the agent with educational publicity matter for use in local papers; supply bulletins on farm buildings, concrete construction, etc.
 - (2) Furnish the agent with blue prints, specifications and bills of material for any farm building needed by any of his farmers; prepare new plans when requests cannot be filled from the plans on hand.
 - (3) In cases of community buildings, such as packing houses, county fair buildings, etc. send an engineer to the county to lay off the grounds, buildings, etc.
 - (4) Answer all requests for information on the farmers' building construction problems, etc.
- The County Agent will:
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- (1) Promote the project in his county by distributing the publicity material, etc. furnished by the department.
 - (2) Select farmers who intend to build and send to the department for plans and other information relating to the proper construction of the structure in question.
 - (3) Obtain a record of the results gotten in his county due to the work of this project; cost of structures and change made in plans, if any.
- RESULTS:** Results will be measured by number of new buildings constructed, old buildings remodeled, value of new structures constructed, rearranged farmsteads, etc. and the spread of influence.

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Sub Project IV.

Land Clearing.

OBJECT: To demonstrate the use of explosives in clearing land (Distribution of Government explosive.)

IMPORTANCE: There are, in the aggregate, great areas of good cut-over land in Virginia farms, lying idle, not growing farm crops, timber, or anything else of value. Practically every farm has fields in cultivation which contain stumps, rocks, etc. Such land cannot be worked efficiently. The clearing of this cut-over land and the removal of stumps, rocks, etc. on the cultivated land is an important factor in the Agricultural Economics of many farms, yet probably no feature of farm life is so little understood or so blindly pursued.

The Agricultural Engineering Department will:

1. Send agents complete information as to the use of explosives in clearing land and the method of distributing the Government explosive.
2. Send a specialist to the county to give demonstrations in blasting stumps.
3. Furnish order blanks for explosive.
4. Order this explosive from the government and arrange for the distribution of it at cost to the farmers.

The County Agent Will:

1. Arrange for and advertise the demonstrations through the papers and by posters, etc.
2. Advise the farmers as to cost, amount of material needed for clearing land, how to order.

RESULTS Results will be measured by the number of stumps removed, acres cleared, value of land before and after, increased yield per acre, etc.