

REPORT OF DRAINAGE WORK

For 1917.

I have the honor to submit herewith a report of the work done in Land Drainage for the year 1917. I have only worked six months of the year, being absent the first part of the year on military duty. From September to January I was on leave of absence attending the Iowa State College, for the purpose of taking special work in Agricultural Engineering.

I started work the first of March. During my absence all requests for aid in drainage were referred to the Drainage Division of the Office of Public Roads and Rural Engineering, who handled the work through their office. They made surveys and prepared reports for the following farmers: M. Seward, Manteo, Va; E. M. Jordan, Norfolk, Va; B. A. Garnett, Uno, Virginia; A. K. Mann, Wise, Va; I. T. Flanary, Norton, Va.; R. F. Lantz, Edinburg, Va.; R. W. Thompson, Fincastle, Va.; and C. D. Hurt, Northampton, Va.;

The early part of March I made a trip to Washington for the purpose of going over the work that the Washington office had done during my absence. They turned over to me what work they had planned in this State for the summer so I took up the work immediately. While there I also had a conference with the head of Farm Mechanics and Farm Buildings Department, and arranged to cooperate with them in this phase of the work in 1918.

The first couple of weeks in March was necessarily occupied in organizing the work for the summer and getting in touch with the County Agents that wanted work done during the spring and summer months. Letters were sent out to all County Agents advising them of my return and of the nature of the drainage work to be undertaken.

On one of my trips to the Eastern Shore to advise farmers on drainage, I took a party of representative farmers from Accomac County to Eastville, Virginia, to show them the traction ditching machine at work and to hold a field demonstration for the

Construction of tile drainage system. This was a very valuable trip as I explained to them right in the field the important operations of installing a drainage system. The farmers were all very favorably impressed with the ditching machine, and all of them decided to put in drainage systems on their farms in Accomac County, provided they could get the machine to do their work. Dr. Holland, on whose farm the ditching machine was working at the time, stated to us that he was going to drain every acre of his land as the drainage he had already done had demonstrated to him conclusively the value of under drainage as an investment. This machine belongs to the Hampton farmers that were persuaded to buy a machine by the County Agent and myself. The machine was bought on a cooperative basis, and after tiling their own farms, they organized the Peninsula Tile Drainage Company and went into the contracting business. They have been very successful and have kept the machine busy practically all the time. In fact it has proven such a good investment that the owners have decided to buy another machine. These ditching machines are the biggest one factor in the advancement of drainage as they have solved the labor ditching problem.

I took Mr. R. W. Thompson, of Fincastle, Virginia, to Mt. Jackson to look over a second-hand ditching machine at that place, and advised him to buy, which he has done and is now using it to ditch his own farm. After ditching his own farm he will do contract work for farmers in the community and this will undoubtedly help the drainage work along in this section.

During the spring two new tile factories have been started and a third factory that had been making bricks has decided to make tile altogether. The tile situation in the State is very serious and it is almost impossible to buy tile at a reasonable price. These factories will go a long way to solve this shortage in drain tile.

Trips were made to Accomac, Shenandoah, Spotsylvania, Stafford, Prince Edward, Nottoway, Hanover, Prince William, James City, Botetourt, Lee, Russell and Northampton Counties for the purpose of making drainage surveys and advising farmers on their drainage

problems. The time spent in the office has been taken up in answering letters in regard to drainage, water works and other agricultural engineering subjects, working up drainage maps and writing two bulletins, "Farm Drainage in Virginia," and "Running Water in the Farm Home". The bulletin on Farm Drainage deals with the fundamental operation of tile drainage and the results of drainage in Virginia, which is shown by quotations from letters by farmers who have drained. The bulletin consists of thirty-seven pages and has twenty cuts and illustrations. There has long been a need for some such bulletin in the State. The bulletin on "Running Water in the Farm Home", was prepared for the home economic division. It is very brief and takes up a few suggestions on the most practical and economic way of getting water in the farm home.

In August I arranged a water works exhibit for the Farmers' Institute, showing the different methods of installing water in the farm home.

During the summer I was admitted as a member to the American Society of Agricultural Engineers. The object of the Society is to promote the art and science of engineering as applied to agriculture. My membership in this Society entitles me to all the transactions and publications of the Society, which are of vital importance to agriculture.

I attended the Annual Meeting of this Society in Chicago the 27, 28, and 29 of December, and got some very valuable information as well as meeting men from several States in different parts of the country, who are engaged in Agricultural Engineering Extension Work.

The following will give a short summary of the work accomplished during the year:

Number of miles traveled, - - - - -	8,635
Number of farmers helped in drainage work - - - - -	37
Number of surveys made - - - - -	10
Number of drainage maps made - - - - -	7
Number of acres surveyed - - - - -	245

Number of County Agents visited - - - - -	9
Number of Counties worked in - - - - -	13
Number of tile factories started - - - - -	2
Number of ditching machines bought - - - - -	1
Number of letters written - - - - -	360
Number of meetings attended - - - - -	4
Number of bulletins published - - - - -	2
Number of newspaper articles written - - - - -	2
Number of field demonstrations held - - - - -	1
Number of exhibits displayed - - - - -	1
Number of acres surveyed by Washington Office - - - - -	380
Total number of acres surveyed - - - - -	625

III. Progress Being Made with Each Problem. (Report of progress, not definite results.)

1. Land Drainage:

Surveys made on 14 farms comprising 663 acres. Two parties interested in starting tile plants in Virginia.

Cooperative farmers' ditching machine started.

Community drainage district started.

2. Terracing:

Work will not be started until fall of year.

3. Land Clearing:

18 land clearing demonstrations held in 8 counties with attendance of about 2,000 farmers.

4. Farm Buildings:

Bulletin on farm poultry house published.

1 general purpose barn plan drawn.

2 dairy barn plans drawn.

2 machine shop plans drawn.

1 county fair building plan drawn.

Several hundred plans sent out on request and a number of buildings erected from these plans.

5. Farm Machinery:

148 demonstrations given in 25 counties to show proper use of soil, fitting tools in connections with sowing of spring crops and of top dressing wheat.

6. Power Farming:

Two tractor demonstrations held with attendance of 3000 farmers at one and 10,000 at the other demonstration.

Week's tractor school held at Roanoke with attendance of 1000 farmers.

7. Domestic Engineering:

Requests for information of water supply answered and personal aid given

in several cases.

8. Miscellaneous Activities:

Many letters of inquiry on farm engineering problems answered.

7-D. Mills

Bush
Cummings
Whitehouse
S. Weller
Hud
De Borden

Traynor - survey 20 E

4 farmers

Danbaron farm " 20 E

Slavson
Jackson
Carter

Roy Party - " 25 E 2 map 5

Ed. Jones " 25 E map

Bracke

C.R. Phillips - 40 E map

Flaherty

F. G. Baldwin 10 a

Hawesini

W. G. Charles - " 20 E map

J. P. White

Kline

Comer

Clark

Hooker

Manuel

Jones

C.S. Smith

De Borden - Survey 40 E map

Baldwin

Vernon

P. Schaffner 25 E

Norton

C.P. Tracy Survey 20 E map

agents

Slavson

Chilton

F. Sprinkle

Cole

Moore

Comp. build
Mr. Bond

April 18 called a meeting July
to May 3