

AGRICULTURAL ENGINEERING
Sub-Project III.

Farm Water Supply & Sanitation

- OBJECT: 1. To demonstrate the most practical methods of securing running water and other conveniences in the farm home.
2. To improve the sanitary conditions around the home and thereby help the health of the whole family.

As the ultimate object of the extension work is to improve the farm home life, this project should be the most important in extension work.

- PROCEDURE: 1. Promote the project in the county by county wide campaigns which will give every farm owner an opportunity to know how, and at what cost, running water can be put in his home.
2. Teaching farmers the fundamentals of different types of water systems.
3. Enlisting the enthusiastic support of local leaders.
4. Instructing local plumbers as to class of work generally put in in such campaigns and ask them to cooperate with the farmers.
5. Make this a definite and thorough piece of work so that it will continue under its own momentum.

LOCALITY: This project should be carried to practically every Virginia County. There is immediate need for it in about 90% of the farm homes. Campaigns will be held in the following counties this year:

Pittsylvania
Rockingham
Amherst
Montgomery
Albemarle
Stafford
Spotsylvania
Buckingham

- PLAN OF WORK:
- A. County and Home Demonstration Agents' Duties.
1. To make a survey of the county to determine the number of farms having running water in the farm home.
2. To list hardware dealers, plumbers, well drillers, and other local agencies through which pumping equipment is handled.
3. To list all county preachers, school principals, bankers, county stores, newspapers, and any other agencies through which the farmers may become informed concerning the campaign.
4. To give purpose and date of campaign in all talks and interviews.

5. To list requests for assistance on water problems received as result of publicity.
6. To conduct the follow up work and get the record of results.
- B. Specialists' Duties:
 1. Supply all educational and publicity material to agencies willing to give cooperation.
 - (a) Write weekly articles for newspapers.
 - (b) Make placards for stores, banks.
 - (c) Write agent's letters to farmers on their revised list.
 - (d) Write notices to all preachers, plumbers, dealers, school principals.
 - (e) Write District Extension Agent and School Superintendent, County Supervisors, Advisory Council.
 - (f) Get notices in all county post offices.
 - (g) Write Virginia State Chamber of Commerce (Mr. Nelson, Director of Publicity), Plumbers Association, National Association of Farm Equipment Manufacturers, Water Supply Department.
 - (h) Get stamp for agents' letters in county, stickers for letters. Big canvas for back of car.
 - (i) Get up mimeographed card for agents' to keep requests on.
 2. Visit all farm homes, from which an inquiry has been received, for the purpose of making complete survey of proposed water system.
 3. Furnish each farmer having survey made with data taken and a bill of material for installation.

RESULTS:

Campaign results will be measured by:

1. Number of water systems installed during 12 months following date of survey.
2. Number of water systems improved during 12 months following date of survey.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF VIRGINIA

Vs. Agri. and Mech. Col.
and Poly. Inst. and the
U. S. Dept. of Agri.
Cooperating

EXTENSION SERVICE

THE FARM HOME WATER SUPPLY CAMPAIGN
FOR
ROCKINGHAM COUNTY

Many farm homes in Rockingham county do not have running water. Without this convenience they lack one of the greatest home comforts.

The farm and home agents have made arrangements with the Agricultural Engineering Department, Extension Division, V. P. I., for the services of an engineer for the period May 6th - May 18th. The engineer will visit each farmer who requests his service and make a survey of the conditions. From a study of those conditions the most suitable and practical water system will be recommended and a bill of material for each job supplied. There will be no charge for this service and any one who contemplates the installation of a water system, or expects to have his present system changed within the next two years, should take advantage of this opportunity.

Please fill out the inclosed card which requires no postage and mail either to Miss Mary Fred Claytor, Home Demonstration Agent, or S. M. Cox, County Agent, Harrisonburg, Virginia. This card must be returned before May 6th.

A similar service has been given in one or two other counties in the state and in one county more than one hundred surveys and estimates have been completed. We want the farmers of Rockingham to have the same opportunity to secure satisfactory running water systems in their homes.

yours for further service,

S. M. Cox,
County Agent.

Mary Fred Claytor,
Home Dem. Agent.

9682

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
State of Virginia

Virginia Agri. & Mech.
College and Poly. Inst.
& United States Dept. of
Agri., Cooperating.

EXTENSION DIVISION

Blacksburg, Virginia

Date _____

_____:

It was a pleasure to be of some service to you in connection with your water supply problem.

Enclosed you will find a sheet, copy of which we mailed today to the company indicated, showing the data we took. It is in the nature of a letter to be sent to some pump or plumbing company in Virginia which makes a speciality of selling and installing this type of farm equipment. The enclosed sheet is for you to use in getting quotations from your local dealer or plumber to compare with the prices being mailed to you.

If you find that you need additional information, please write us as often as is necessary to thoroughly understand the installation.

Hoping that you can get this job completed promptly and that you will call on us through your county agent when in need of other agricultural engineering assistance, I am

Yours very truly,

J. A. Waller, Jr.
Specialist in Agricultural Engineering

JAW:P
Enc.

No. 9625

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF VIRGINIA

Virginia A. & M. College & Polytechnic Inst. & the U.S.D.A. Cooperating
EXTENSION SERVICE

Dear Friend:

J. A. Waller, Jr., Agricultural Engineer,
Extension Division, V. P. I., is in the county to make sur-
veys, recommendations and estimates in connection with the
farm home water supply campaign.

We expect to be in your community about
_____. We cannot state definitely
the exact day that we will visit you, but try to be at home
on the above date, the day before and the day after. As there
are a large number of surveys to make, it will be impossible
to make a second visit.

Trusting that we can be of some real ser-
vice to you, we are

Very sincerely yours,

_____, Farm Agent

_____, Home Agent

EXTENSION DIVISION
VIRGINIA POLYTECHNIC INSTITUTE
BLACKSBURG, VIRGINIA
DEPARTMENT OF AGRICULTURAL ENGINEERING
Farm Home Water Supply Engineering Service

Date _____

Gentlemen:

Please quote Mr. _____ whose
address is _____ on a hydraulic ram installation to operate under the
conditions stated below.

1. Normal flow of spring in gallons per minute _____
2. Vertical fall in feet from spring to ram location _____
(This is total fall and includes depth of ram pit)
3. _____ feet of additional fall can be secured in _____ feet of distance.
4. Depth in feet of pit in which ram will be placed. _____
5. Distance in feet from spring to ram location _____
6. Vertical lift in feet from ram to tank _____
(This is total elevation from ram in pit to top of tank on tower)
7. Distance in feet from ram location to tank _____
8. Distance in feet from tank to house _____
9. Type and size of tank recommended _____
10. Type and height of tower recommended _____
11. Number of gallons of water needed per day _____
12. Installed job is (is not) wanted. Owner will _____

(For double acting rams the following is included)

13. Normal flow of branch (drive water) in gallons per minute _____
14. Vertical fall in feet from dam to ram site _____
(This is total fall and includes height of dam and depth of ram pit)
15. _____ feet of additional fall can be secured in _____ feet of distance.
16. Height of dam in feet _____
17. Distance in feet from dam to ram site _____

Please send this prospect sufficient literature, including a ram catalog, to thoroughly inform him
on the subject. Explain in detail the use of a standpipe.

Hoping that you will handle this request in your usual prompt manner, I am,

Yours very truly,

J. A. WALLER, JR.,
Specialist in Agricultural Engineering

EXTENSION DIVISION
VIRGINIA POLYTECHNIC INSTITUTE
BLACKSBURG, VIRGINIA
DEPARTMENT OF AGRICULTURAL ENGINEERING

Farm Home Water Supply Engineering Service

Date _____

Gentlemen:

Please quote Mr. _____ whose
address is _____ on a water pumping outfit which will operate satis-
factorily under the conditions stated below. The type of job recommended is a _____

(Jobs where vertical lift is less than 22 feet)

1. Source of supply _____
2. Well has been tested to flow _____ gallons per minute.
3. Vertical distance in feet from water level to pump location _____
4. Horizontal distance in feet from water level to pump location _____
5. Gallons of water required per minute _____
6. Size tank desired _____ gallons.
7. Maximum pressure in pounds in pressure tank _____
8. Elevation in feet of bottom of elevated storage tank above pump _____
9. Power recommended _____ voltage _____ phase _____ cycle
Automatic control _____
10. To prevent freezing, pump will be placed in _____
Tank will be placed in _____
11. Installed job is (is not) wanted. Owner will _____

(For deep well jobs the following is included)

12. Type and depth of well _____
13. Distance in feet to low water level _____
14. Inside diameter of casing in feet _____
15. Frostproof cover over job so discharge can be above ground will (will not) be used. If
not, figure on set length pump.
16. For this drilled well a pit will (will not) be used for set length.

(For windmill jobs the following is included)

17. Regarding obstructions within 500 feet radius _____
18. Height in feet of tower necessary to place wheel 15 feet above obstructions _____
19. Height in feet tank must be to give desired pressure _____
20. Type and size tank desired _____

Please send this prospect sufficient literature to thoroughly inform him on the subject.
Hoping that you will handle this request in your usual prompt manner, I am,

Yours very truly,

JAMES A. WALLER, JR.,
Specialist in Agricultural Engineering

Axton, Virginia
June 10, 1929

Mr. James A. Waller, Jr.
Blacksburg, Virginia

Dear Sir:

I can't begin to tell you how I appreciate your work. Since you and my county agent, Mr. Stone, were here I have installed a double action Rife hydraulic heavy duty No. 10 ram with a complete satisfaction. I am using water for all purposes and in a short time the tank is overflowing again with spring water with a capacity of 1000 gallons. The distance from the tank to the ram is 1000 and 33 feet with a 120 foot elevation.

Yours truly,

J. D. Heffinger
Axton, Va.

Chatham, Va.
Nov. 18, 1929

Mr. J. A. Waller
Blacksburg, Va.

Dear Jack:

In checking over the list of applicants for service in the "Home Water System" campaign, of which there were 73, I find that twenty three have complied with the recommendations made. Not all of these are water systems installed, but they were visited and given assistance either on some system which they already had or recommendations were made other than what they had in mind. I consider it just as great service to the individual to advise against a certain project if after checking it, (as it is to advise for the project) if the conditions are found to be inadequate for the success of the project, therefore I am reporting those.

I consider the campaign as one of the very best and most far reaching in its benefits, of any campaign I have ever attempted since I have been in the Extension work. Of course we do a great many things that possibly equal or exceed this in remuneration to the farmer but as for the satisfaction and contentment it brings I know of nothing that any where near approaches it.

In this connection I feel that I should put in a word in regard to the terracing school. This type of work is greatly needed in Pittsylvania county, and these schools in my estimation are playing a large part in getting the farmers to realize the importance of terracing.

In closing I want to say that I feel greatly indebted to you for the help you have given in all of my engineering problems, and I assure you it has been a real pleasure.

With all good wishes, I am

Yours very truly,

(Signed) - J. E. Stone, Co. Agent

Rockingham County Farm Home Water Supply Engineering Service

Farm and Home Demonstration Agents of the Extension Division, Virginia Polytechnic Institute, have secured the services of the **EXTENSION SPECIALIST IN AGRICULTURAL ENGINEERING** to make accurate surveys, proper recommendations, and approximate estimates as to the cost of a complete water system for any farmer in this county who applies to the agents for this service. This service is free and will be available

MAY 6th-18th

If you expect to install a new water system or improve your present one during the next year, have your survey made at this time. Get in touch with your farm or home agent now. No requests will be handled that are not received before this time.

S. M. COX, Farm Agent, Harrisonburg, Va.

MISS MARY F. CLAYTOR, Home Agent, Harrisonburg, Va.

Office in Court House