

VIRGINIA

PLANT PATHOLOGY

Project 17

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Following up the demonstration given in Rockingham County last year, a central treating plant, owned and operated by members of the Bridgewater Farmer's Club was established at Bridgewater, Virginia, at a cost of about \$300.00. At this plant a total of 639 bushels of grain was treated, including 599 bushels of wheat and 40 bushels of barley. The list below shows the number of farmers for whom grain was treated as well as the quantity and kind of grain treated.

NAME	NO. BU. TREATED	POST OFFICE	COUNTY
Thomas Herring	11	Bridgewater	Rockingham
D. C. Craun	15		
O. H. Jordan	10		
J. C. Hill	5		
Abe Craun	12		
Othe Gacher	25		
Sam Long	17		
H. B. Wise			

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BARLEY

NAME	No. Du. Treated.	ADDRESS	COUNTY
Gabriel Long	5		
J. F. Miller & Homer Sashak	20		
Jacob F. Glick	3		
J. O. Vance	20		
J. H. Snyder	6		
C. O. Huffman	12		
H. D. Diver	10		
Ernest Diver	6		
S. F. Wise	17		
D. S. Thomas	22		
Hiram Wise	19		
Bemie Miller	6		
A. H. Miller	25		
Glaude Miller	22		
Silas B. Miller	15		
Sam Miller	16		
M. W. Miller	22		
Joe. Miller	12		
H. L. Miller	12		
C. B. Garber & Oscar Miller	12		
G. H. D. Miller	6		
G. A. Evers	8		
Wm. Evers	12		
Sol. Miller	6		
Elmer Miller	6		
Peter Miller	6		
G. W. Saver	10		
A. H. Aray	10		
Bhinger	8	Griders	
J. D. Glick	6	Dayton	
J. H. Miller	8		
C. S. Urman	10	Grottees	
J. R. Firebaugh	10	Harrisburg	
Dr. Dyerlie	7		
W. S. Miller	8		
H. J. Sanger	11		
Billworth Walker	25	Igwood	
J. H. Shank	12	Mt. Crawford	
J. H. Early	8	Nashville	
Joe Ward	18	Mt. Crawford	
Sam Fuitt	6	Mt. Solon	Augusta

BARLEY

G. H. Miller	8	Bridgewater	Rockingham
Joe. Miller	4		
S. F. Wise	14		
Whittig	12	Griders	
W. S. Miller	8	Harrisburg	
H. W. Miller		Bridgewater	

No demonstration was given in Roanoke County last year, but the very hearty cooperation of Mr. E. B. Bus, of the Association of Commerce Roanoke, Virginia, made it possible to put in a treating station near Roanoke. This plant was financed by the Asso. of Commerce and was operated under the direct supervision of Mr. Bus. It is expected that next year the farmers of Roanoke County will take the treating station over and run it cooperatively. During the past season this plant turned out sixty-seven bushels of treated wheat. No barley was treated. The accompanying list given the names of the patrons and the quantity of wheat treated.

NAME	NO. BU.	POST OFFICE	COUNTY
W. L. Andrews	15	Roanoke	Roanoke
W. M. Layman	4		
J. A. Turner	6	Hollins	
S. A. McKinney	4		
J. A. Clarkson	4		
W. W. Boxley	22	Salem	
J. M. Gish	6	Roanoke	
Hill			

A third central treating plant was put in at Blacksburg, Virginia at which time grain was treated for the Experiment Station and those farmers in the vicinity of Blacksburg who were willing to try the thing out. Out of a total of sixty-five inquiries sent out, only five farmers were interested to the extent of having wheat treated. No barley was treated. In all, 45 bushels were treated, 26 of this for the Experiment Station. The grain at this station is as follows:

treated

NAME	NO. BU.	POST OFFICE	COUNTY
Agronomy Department	:	:	:
Sub - Stations.	26	Blackburg	Montgomery
C. W. Davis	4	:	:
Robt. Allen	4	:	:
W. B. Grissom	4	:	:
William Munkett	4	:	:
J. M. Kinser	:	:	:

Demonstration treatments were made in Washington and Rockingham Counties. In Washington County ten bushels were treated and in Rockbridge County, 47 bushels were treated. All the grain treated was sown alongside untreated seed for demonstration purposes during the growing season. In Washington County, there ^{were} will be demonstration fields on three farms at different points in the county. In Rockbridge County there ^{were} will be nine demonstration fields. We expect next year to hold field meetings at most of these farms in organizing and raising funds for central treating plants. A record of the grain treatment is given below:

NAME	ADDRESS	NO. BU.	COUNTY
J. P. Mason	Meadow View	4	Washington
T. D. Thomas	Abingdon	2	
T. P. Trigg		4	
Chas. Lindsay	R 2, Rockbridge Bath	3	Rockbridge
E. L. Kirkpatrick	Lexington, R 1	6	
Henry Kirkpatrick	"	6	
J. K. Tenford	"	6	
Lloyd Cook	R 2, Rockbridge Bath	6	
Daniel Welsh	Lexington, R 1	6	
F. B. Rees	Aqua	4	
Jno. K. Patterson	Brownsburg		
A. M. Cupp	Lexington		

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On account of the fact that the period of growth during which an accurate survey of diseases of plants may be made is short and so much time is required in travel between fields the number of fields visited by one observer in a single season is necessarily small. During the past season, however, 50 wheat fields containing a total of 663 acres were inspected. The amount of damage from various diseases was in some cases considerable but in no case was it found extremely severe.

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Tobacco growers in Virginia and other states have suffered severe losses from wildfire and angular-spot during the past years, especially in 1920, and a great demand for information on control measures for these diseases has developed. Fortunately the experimental work of the Department of Plant Pathology of the Virginia Agricultural Experiment Station had reached the point in the fall of 1920 where it became possible to issue recommendations which field tests had indicated to be of practical value in the control of these diseases. These include the treatment of tobacco seed and the practice of certain sanitary measures in the plant bed and field. A campaign of demonstration and publicity work was consequently undertaken by the Extension Division in the fall of 1920. This included field demonstrations of seed treatment and talks at farmers meetings, the publication of a circular and postcard giving control measures for these diseases, articles for the press, and correspondence.

Special articles dealing with these diseases were prepared for the use of the production and Marketing Division of the Lynchburg Chamber of Commerce, and the Agricultural Department of the Norfolk and Western Railroad, also for the use of county agents in local newspapers. These various agencies including also a number of banks and others interested

In the development of the tobacco industry, gave valuable assistance in securing wide publicity for the work.

The article dealing with relative and angular spot in the Extension Bulletin on Bright Tobacco was reprinted in full in the issue of tobacco for December 9, 1930. It was also reproduced by the Virginia State Department of Agriculture as Tobacco Leaflet No. 6, and was reprinted in a condensed form by the New England Tobacco Growers' Association for distribution as a special bulletin to the members of that Association.

In addition to a great many letters of inquiry received from farmers, seedsmen, fertilizer manufacturers and dealers, tobacco warehouses, and others within the State, requests for information on the control of these diseases were received from a number of individuals and commercial firms in other States. These included County Agents, workers in Experiment Stations, fertilizer manufacturers, manufacturers and exporters of tobacco products, agricultural journals and tobacco growers. Inquiries have come from the following states: Kentucky, Tennessee, North Carolina, Georgia, Maryland, New York, Connecticut, Massachusetts, Wisconsin, and Washington, D. C.

Demonstrations were conducted in sixteen counties with a total attendance of about 1800 farmers. At these demonstrations nearly 1300 lots of seed were treated and judging from the quantity of seed in some of these lots, it is probable that they will be used by several growers.

The task of treating the seed sent in to the Department was practically continuous from the first. Hardly a day passed without several packages of seed being received for treatment, the total number being a little more than 1100 lots. These came not only from the counties where demonstrations were given but also from many other points throughout the

tobacco section of the State. In addition to this number of individual lots, some of which were large enough to supply several farms, ~~and~~ treated a considerable quantity of seed furnished and also distributed free to one of the substations in the State.

In all, seed for about 2000 farmers, including more than 2300 lots was treated. In view of the fact that quite a few lots of seed were to be divided among several people it is probable that not less than 2500 farmers planted ~~and~~ treated seed this year.

Instructions as to the precautions to be observed in securing sanitation in the plant bed and field were furnished each person for whom seed was treated and ~~the~~ emphasis was given the fact that the success of the campaign depended upon how carefully these precautions were observed. Later investigations have shown that our instructions were followed carefully in a majority of cases.

In order to determine the effectiveness of the treatment and the practicability of this method of introducing disease control measures, considerable time has been given to the inspection of tobacco plant beds and fields. On account of the severe drouth in a large part of the tobacco producing section of the State the past season is not taken as a test of the merits of the treatment, but sufficient evidence has been gathered from plant beds and fields to warrant a continuance of the practice and requests for seed treatment are already coming from certain sections.

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The work of demonstrating the control of corn root rot, a disease which destroys at least 5% of the corn crop of the State each year, was begun about March 1, 1921, and as only a limited amount of time remained

in which to do this work it was decided to limit our activities to Montgomery County.

An Improved Rag Doll Germinator, electrically heated, was installed in the laboratory of the Department of Plant Pathology and arrangements made through the County Agent and the agricultural instructor in the Smith-Hugh High School, to have corn brought in to be tested. Our plan was to test only enough for each farmer to plant a demonstration plat, this to be located in a representative part of the field.

Only six farmers were induced to have their seed corn tested. The necessity for work in the eradication or control of this disease was very evident from the results obtained from the germination test. It was found that on the average a little more than two-thirds of the corn ^{that} was being used for seed was infected with the rot-producing organisms.

The agricultural instructor in the Smith-Hughes High School arranged to have several of his club boys have their corn tested and they were given a course in selecting and testing. Eight boys had corn tested and several others were taught how to select and test corn and why this should be done. A number of these boys are planning to field select their corn from the plats planted with tested corn. Records of yield will be taken for use in introducing this work in other Counties.

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✓ On account of the severe losses sustained by the cabbage growers of Southwest Virginia during recent years from a number of diseases, we began working on cabbage disease control in that section this year.

Printed instructions for a seed treatment, which controls two of the

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The work on all the above projects has been in cooperation with the County Agents, excepting a few instances where calls for tobacco seed treatment have come from counties which have no Agricultural Agent.

In addition to the work done on the four projects mentioned, considerable time has been spent in diagnosing diseased plant specimens sent in by correspondents and giving recommendations for the control of the disease in question. Some time was also given to writing articles for newspapers and in the preparation of part of the material for a bulletin on "Insects and Diseases of Orchard and Garden and Their Control."

SUMMARY

No. Meetings Attended	5
Total Attendance	450
No. Demonstrations Held	51
Total Attendance	1800
No. Letters Written	155
No. Publications	1
No. Counties Visited	26
No. Miles Traveled	9800