

1924

Annual Report
of
County Agricultural Agent
L. M. Goodwin
for
Caroline County

A N N U A L R E P O R T

of

L. M. Goodwin

County Agent

for

Caroline County

Maryland

For the year 1924

Extension Service, University of Maryland and
U. S. Department of Agriculture Cooperating.

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I. STATUS OF COUNTY EXTENSION ORGANIZATION.

A. Development.

The past year has marked a substantial gain in the development of the County Extension organization from the standpoint of the general standing with the farmers of the county and the cooperation secured from them in forwarding constructive programs of agricultural development and advancement. While there is ample opportunity for future advancement in forwarding Extension activities within the county there is reason to feel that the work accomplished in the past has been sufficiently sound to bring the service and what it is trying to accomplish more clearly before the eyes of the people. The service is being extended to a larger number of people as the months go by. There are more requests for assistance than formerly. When the annual county budget was presented at the opening of the new fiscal year the substantial increase requested was allowed without question. Both the farmers and farm women turned out readily to go before the County Officials in support of the request. The attitude of the County Officials has been more sympathetic and their cooperation has been excellent. The County Agent has endeavored to keep the activities of the Extension Service before the people through the medium of publicity in the county newspapers. The cooperation from the county papers in accomplishing this aim has been all that could be desired.

B. Factors Considered and Methods used in Developing Program of Work.

Where ever and when ever the opportunity has presented itself to accomplish a sound piece of constructive work through cooperating with existing organization the opportunity has been seized and developed in as far as it was possible. The American Farm Bureau Federation is the principal county organization at present and there exists a very close relationship and spirit of cooperation between the Extension Service and this organization. Through the locals of the Bureau the program of work has been made possible. The locals appointed committees of members to meet with the County Agent for the purpose of analyzing the needs of the community and outlining a program of work, conservative in its scope. to remedy at least a part of these needs or to put on demonstrations within the community for this purpose. Project local leaders and demonstrators were selected by the committee and approved by the membership. With few exceptions the leaders and demonstrators have taken hold of the work and carried out their part of the program in a satisfactory manner.


The following is a summarized form of the various programs of work outlined this year together with a report of the achievements.


CAROLINE COUNTY

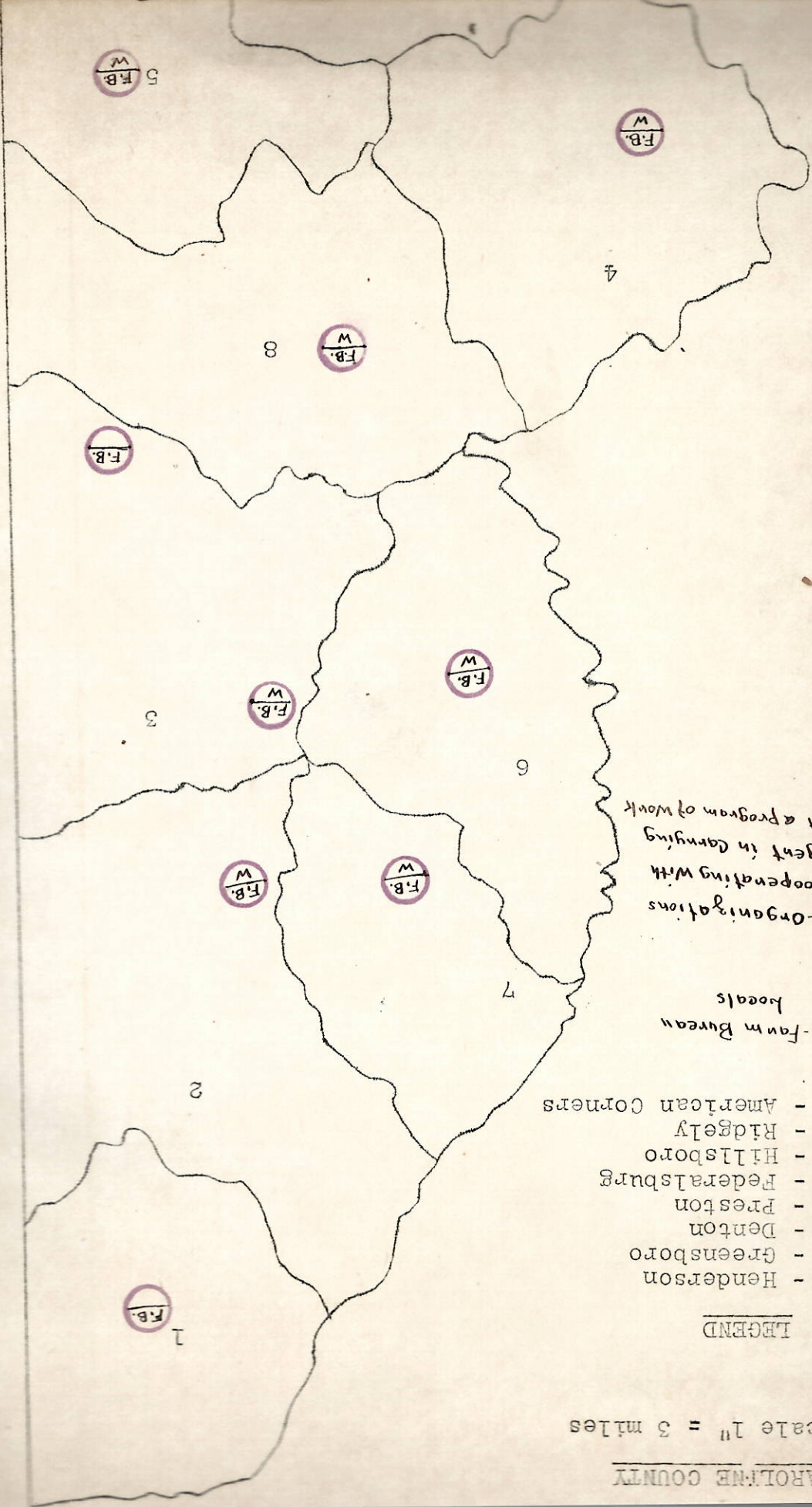
Scale 1" = 3 miles

LEGEND

- 1 - Henderson
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 - Farm Bureau locals

 - Organizations cooperating with Agent in carrying out a program of work



Program of Work for Caroline Co. (1924)

Subject	Problem	Remedies	Goals	Leaders/Demonstrators
Dairy	Market Tuberculosis	Market Whole Milk Eradication Area Clear up	Establish cooling Station at Federalburg	Lee Jefferson B. Meredith C. Nagel
Low Production cows	Low Production cows	Pure Bred Bull Assoc. Society Clubs Cooperative Testing Association	2 Coop. Bull Association (Ridgely, Preston) Society Clubs Ridgely, Greensboro, Preston) Coop. Association	F. Stevenson, Ridgely E. H. Thieroff, Preston W. R. Doolittle A. C. Lawrence W. H. Gilbert
Lime S Sack	MooM Fmice	Cooperative Shipping	Entire County's Cooperative	S. G. Bye, Farm Bu
Wheat	Wheat Wheat - Nox Wheat - Nox	Use selected seed of A state and variety Wheat in storage	Annual distribution of at least 20 bu, Mammouth Red selected seed for demonstrations	No one arranged for Fall 1924
CORN	Wheat - Nox Wheat - Nox Wheat - Nox	Selection	Demonstrations	L. E. Mendeliter, Amer Lott Fisker, Federalburg E. H. Thieroff, Preston Phyllis Noxens, Denton L. Stearnson, Greens E. Hindeman, Denton J. Blough, Denton J. Alford, Denton W. Mahan, Denton
Wheat - Nox	Wheat - Nox	None, strain of seed disturbance variety	Mare Fire grown by Purseyed that a source of seed in	

Subject	Problem	Remedies	Goals	Leaders and Demos
Poultry AND Eggs	Low Production Marketing High cost feeds	Culling Market through Atlantic Coast Poultry Pro. Assoc. Economical feeding	2 Result culling Demonstration Method Encourage Hennekyman to market through Assoc & Egg circles Farm Co. Assoc. of members of A.C.P.P.A. 2 feeding Demon.	A.M. Johnson, Ridges, C. Oksen, DeNton. Method Demon. to arranged for. Geo. W. Schaeffer H.S. Piggett Egplantine Farm
Cantaloupes	Marketing green Syrup Disease AND Insects Coop. Assoc. back standard varieties	State Law AND Inspection. Dusting AND Spraying Standard varieties	State Law AND Inspection 2 Result Demon. 2 Method Demon. Ridgesy Assoc. select Early and late variety	Victor Dean, Federalist J. Mitchell, Ridgesy H. Holsinger, Ridgesy E. H. E. Thieroff. Floss C. Nagel, Federalist Paul Holsinger, Ridgesy
Tomatoes	Low yield	Better plants	4 plant bed Demos of 1/4 acre each.	J.T. Thieroff Victor Dean W.H. Gilbert one to be arranged for
Forestry	Waste Land	Plantings	1 planting Locust 1 planting Loblolly Pine	ChA. Stevenson W.E. Seedyers.
Orchard	Control Disease in Farm Orchards	Spray Ring	1 Spray Ring	H. Holsinger

II. SOILS

A. Commercial Fertilizer.

At the season of the year when both the spring and fall fertilizer orders were made up in the various Farm Bureau Locals of the county the County Agent was present and illustrated by figures the economy of home mixing many of the analysis used. It was found that by buying ingredients and home mixing a saving ranging from five to seven dollars a ton could be affected. Also, in the case of those who used medium low analysis fertilizer there was an increased saving in freight. The economy in the use of high analysis fertilizer was also brought out by comparing the cost per unit of plant food in both the high and low analysis fertilizer. As an outgrowth of the campaign for home mixing there was sufficient material ordered through the cooperative pool to make 390 tons of home mixed fertilizer. The farmers were also furnished with explicit instructions relative to the proper amount and proportions to use in mixing. There is also a growing tendency on the part of the county farmers to come to a realization of the economy of using high grade fertilizer.

Although no special drive has been made along the line of getting the farmers to use cover or green manure crops the County Agent has whenever the opportunity presented itself urged the use of cover and green manure crops for plowing down. An appreciable portion of the farmers have come to a realization of the value and importance of such methods and many of them practice this method of soil building. The principal cover and green manure crops used are, rye and vetch, rye alone, wheat, crimson clover, soy beans and cow peas.

B. Lime

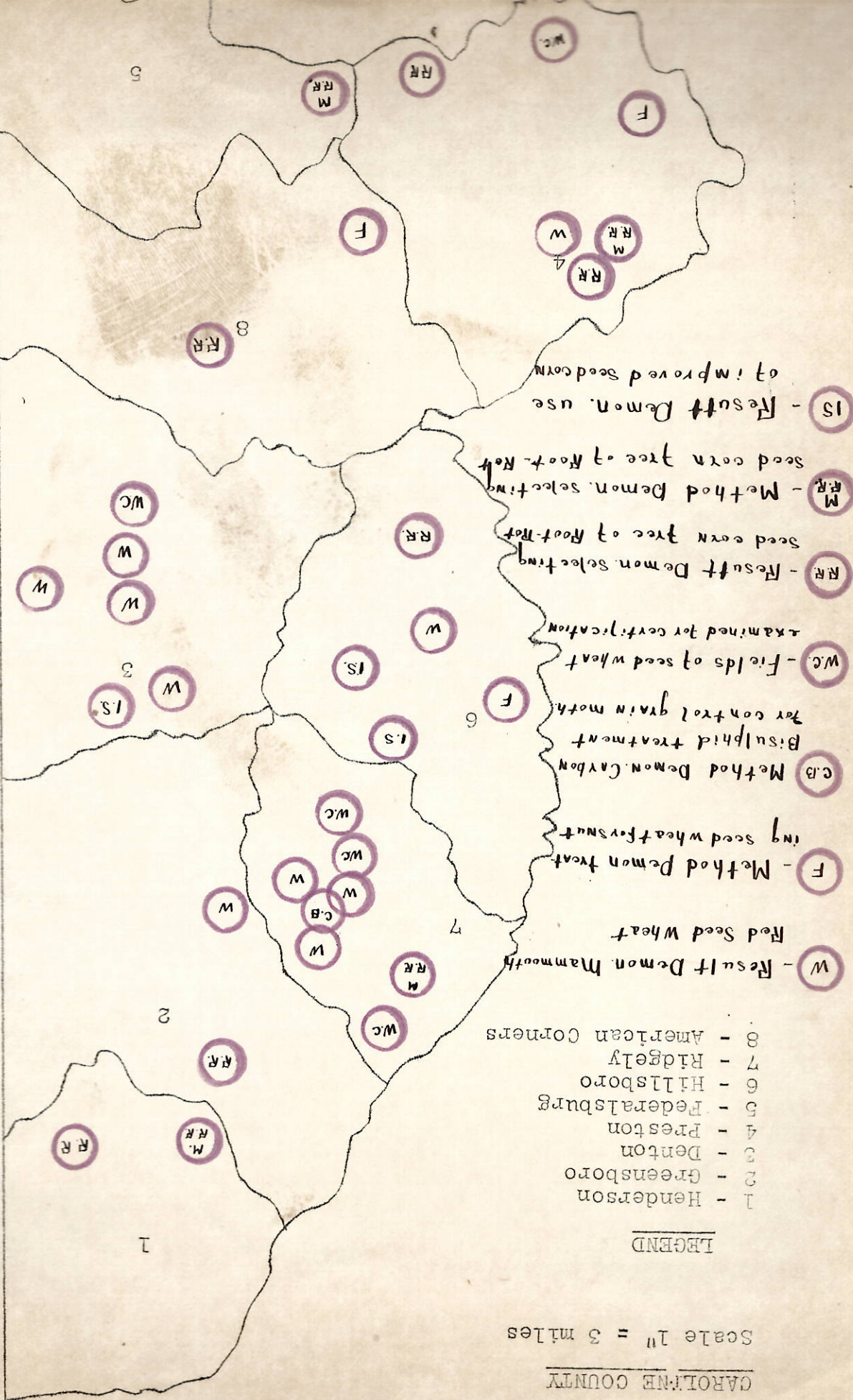
The County Agent has made tests for twelve farmers to determine the lime requirements of their soil and recommendations have been made which were followed in all cases. There is not as much lime being used at present as there has been in the past due no doubt to the high freight rate.

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W - Result Demon. Mammoth Red Seed wheat

F - Method Demon treating seed wheat for smut

C.B. - Method Demon. Carbon Bisulphid treatment for control grain moth

WC - Fields of seed wheat examined for certification

RR - Result Demon selecting seed corn free of Root-Rot

M - Method Demon selecting seed corn free of Root-Rot

IS - Result Demon. use of improved seed corn

III. FIELD CROPS

A. Corn

In cooperation with Dr. R. H. Jehle six corn root-rot result demonstrations were put on in Caroline County. The corn for the demonstration was selected by Dr. Jehle and the County Agent had placed in three grades. Grade number one, from an examination of the cob showed no signs of root-rot. Number two, showed slight signs of having been affected and number three, was the grade given corn showing strong evidence of the disease. The corn was planted separately on ground as nearly equal in fertility as possible. The last factor was most difficult to regulate as it later proved that where in tow cases a considerable variation in the adoptability of all parts of the same field to the wet season. At the time when two of the selections were made the neighboring farmers were invited in to see the selection demonstrations. There was a fair turn-out in both cases and considerable interest was manifested.

The following table shows the results of the six demonstrations.

CORN ROOT-ROT DEMONSTRATION 1924.

Demonstrator	Yield No.1 in bu. per acre.	Yield No.2 in bu. per acre.	Yield No.3 in bu. per acre.	Gain No.1 over gain No.2 in bu. per A.
D. Werner	61.4		50.8	10.6
J. Stevenson	65		57.5	7.5
R. H. Sylvester	50	55	*	
L. Meredith	42		42	0.0
A. Fuchs	71.5		70.5	1.0
E. H. E. Thieroff	25.28		25.04	.24
				3.87

Average gain No. 1 over No. 3
 * The ground on which No.3 was planted inferior in fertility to No. 1 so record was not taken.

The demonstration will be continued next year and the selection for seed will be made from the corn harvested from No. 1 plots. It is the object to select for both type and resistance to root-rot until a desirable grade of seed corn is secured.

The County Agent located a source of pure seed corn early last spring that is adapted to Caroline County conditions. The growers were assisted in getting enough of this seed to plant their full acreage. It was a good type yellow dent corn of a medium sized stalk and ear type. The object was to establish a source of good seed in Caroline County.



Corn grown from seed free from Root-Rot Corn grown from seed showing Root-Rot
Both pictures from same field



A good crop of corn from selected seed



Wheat following
Soy Beans for hay

Wheat following
Corn



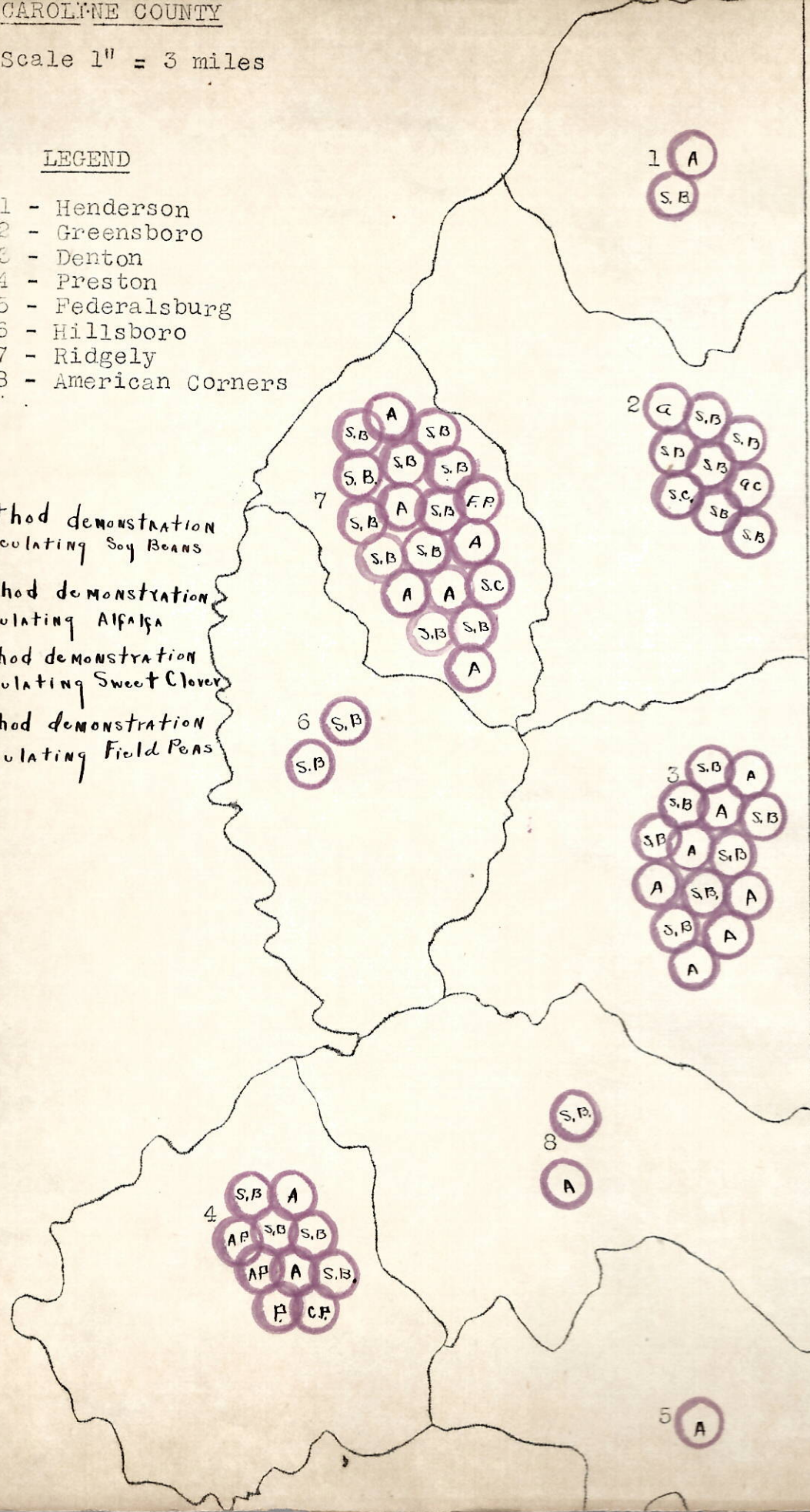
Inspecting for Certification

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- (S.B.) Method demonstration inoculating Soy Beans
- (A) Method demonstration inoculating Alfalfa
- (S.C.) Method demonstration inoculating Sweet Clover
- (F.P.) Method demonstration inoculating Field Peas





Corn growed from seed free from Root-Rot Corn growed from seed showing Root-Rot
Both pictures from same field



A good crop of corn from selected seed

The corn did very well and the growers are well pleased with the seed. A strong effort will be made to interest other growers in securing their seed from one of these three sources the coming season.

B. Wheat

Three years ago a small quantity of pure seed wheat of the variety known as Selected Mammoth Red was distributed in Caroline County through the efforts of former County Agent Thomas and the Superintendent of the Ridgely Sub-Station Mr. Albert White. The present County Agent has followed this wheat up observing its yield and various qualities since that time. Each grower receiving seed wheat accepted it with the understanding that he would give a like quantity to a neighbor the following year. This has been done in all cases where the seed was sufficiently desirable to make its further use desirable. From this small beginning the supply has grown until this past fall easily 2000 bushels of pure seed of the Mammoth Red variety was available and used for seed. Where the opportunity presented itself to get a comparison of yield between the pure seed and other varieties or seed of unknown origin it has been done. The pure seed gave an average increase of seven and three quarters bushels to the acre. For this reason the County Agent has felt justified in recommending its use. The more general use of a few standard varieties with a view to eventually standardizing the county wheat crop is the present objective.

C. Legumes and Forage Crops.

The County Agent has urged the use of a higher class roughage for the feeding of farm animals especially the dairy cow. Corn fodder has constituted the chief roughage in the past and of course is not sufficiently nutritious to stimulate economical production. In this county as elsewhere the legumes are the best available roughage for dairy cattle. In the various Farm Bureau the raising of high grade roughage has been brought up as a topic of discussion. Through this agency many county farmers have been induced to pay more attention to this important matter. More fields of alfalfa are making their appearance annually and the growing of soy beans for hay is increasing rapidly. Inoculating material from the State Biological Laboratory has been distributed through the County Agent during 1924 to nineteen farmers for alfalfa, 32 for soy beans, 3 for sweet clover, 2 for the clovers, 1 for cow peas and 4 cannery peas.

Soy beans for seed is rapidly replacing one year of wheat in the rotation on the Caroline County Farms. The farmers find this crop fits in well with their general rotation and pays better than wheat. The Virginia Soy Beans is the chief variety raised. In connection with soy beans harvesting for seed a demonstration was held on Mr. Frank Ziegler's farm

near Denton for the purpose of demonstration the operation of the soy bean harvesting machine that threshes out the seed from the standing plants. Neighboring County Agents were invited to be present with their county farmers who were interested.

The machine did good work on the variety of beans the Tar Heel used for the demonstration. Mr. Ziegler states that he finds that this machine does not work satisfactorily on the Virginia variety as the pods are inclined to open when the beans reach maturity and much seed is lost in this way before they can be harvested. For varieties such as the Wilson and Tar Heel that have pods that are not inclined to pop open Mr. Ziegler find the machine economical and satisfactory.

Three farmers in Caroline County who have stands of sweet clover old enough to pasture have found that this legume or grass used. The soil is not naturally adapted to blue grass and the pastures have to be secured annually or at the end of two years at the most. For this reason there are practically no permanent pastures in the county and the problem of getting a legume or grass that would furnish sufficient feed for the farm herd has been a real problem. From the showing made by sweet clover in the few instances where it has been tried the County Agent is convinced that this legume is by far the best adapted to local needs. An effort has been made and will continue to be made to bring it into more general use.



Soy Bean Harvester Demonstration

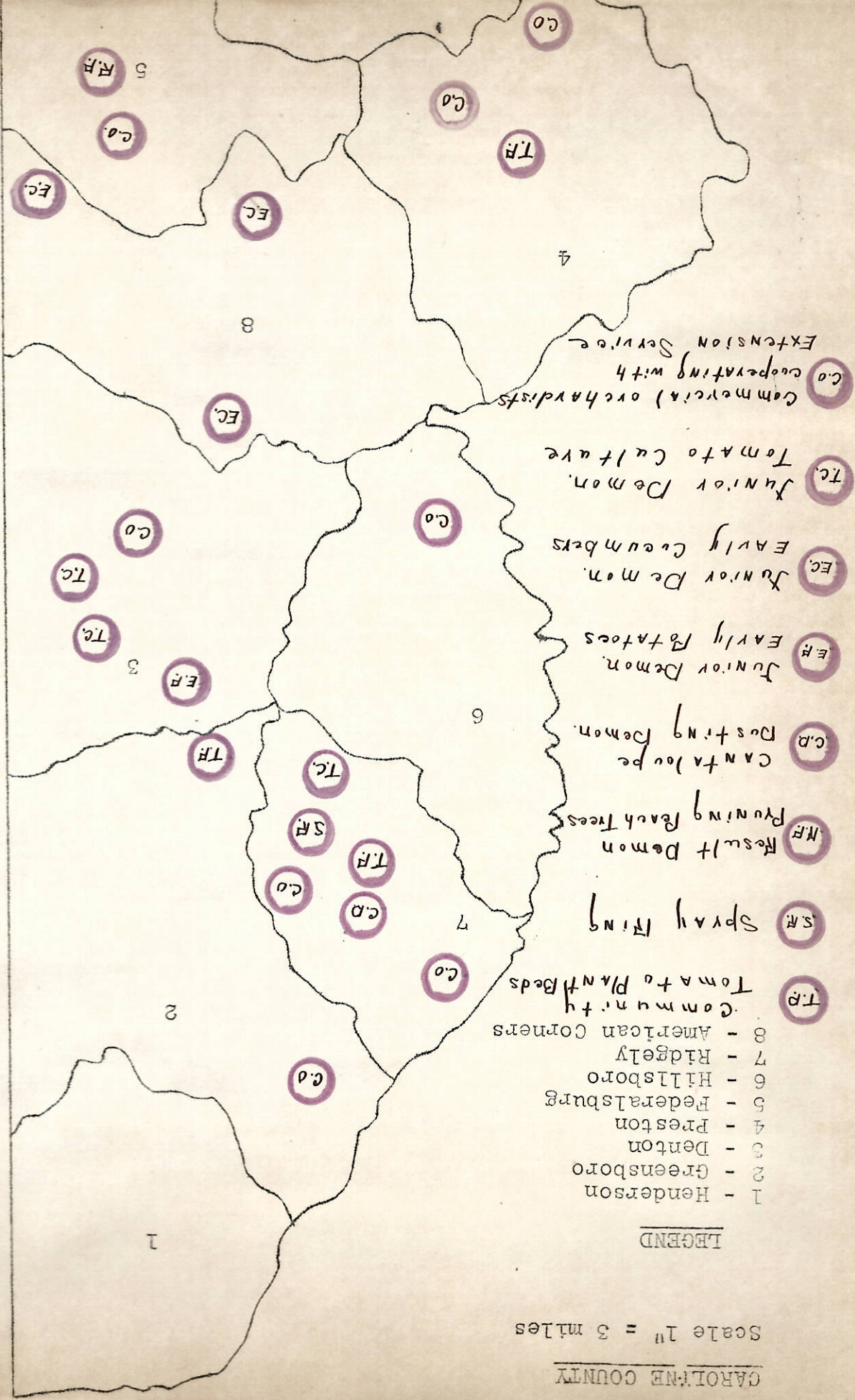
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- T.R. Community Corners
- T.R. Tomato Plant Beds
- S.R. Spray Ring
- R.D. Result Demon
- R.F. Pruning Bush Trees
- C.A. Cantaloupe
- C.D. Rusting Demon.
- J.D. Junior Demon.
- E.H. Early Potatoes
- J.D. Junior Demon.
- E.C. Early Cucumbers
- T.C. Junior Demon.
- T.C. Tomato Cultave
- C.O. Cooperating with
- C.O. Commercial orchardists
- E.S. Extension Service



IV. HORTICULTURE

A. Orchard

There are nine orchards in Caroline County of sufficient size to be listed as commercial orchards. Of the nine eight are apple orchards and the other is in peaches. There are also several small apple orchards from which quite a quantity of fruit is marketed. The County Agent has been in close touch with all the county commercial orchardists and most of the small growers throughout the past year. Through the assistance of S. B. Shaw, Extension Horticultural Specialist the County Agent has been enabled to render much valuable service to the county growers. They have been advised relative to spraying, pruning and orchard fertilization.

Spray service cards were sent out regularly to thirty-seven growers and three peach growers.

The past year has been most unfavorable for effective control of disease and insects but where the complete calendar was followed as recommended by the Extension Service worth while results were obtained. The percentage of good fruit in the county orchards was as high and in some cases higher than that in neighboring counties of the Eastern Shore.

In one case where the growers method of pruning peach trees did not conform to the method recommended by the Extension Specialist a demonstration was started this past spring. The grower in question believes in very light pruning that is, leaving all the new wood possible so as to insure a heavy set of blossoms, while the specialist advanced the opinion that by keeping the trees pruned in it would set a smaller number of fruit but of superior quality and would also increase the bearing life and strength of the tree. The grower gave the specialist a small block of trees to prune according to his idea so that a comparison of results might be gotten. The first year's results showed no conclusive comparison but it will be interesting to note further development.

The spray gun is in general use by our commercial orchardists with the power sprayer and in all orchards may be found trees bearing clean fruit and on the same tree there will be fruit that is diseased or injured by insects or part of the fruit and foliage will show evidence of having received an excessive amount of spray material. Mr. S. B. Shaw and the County Agent concluded that the spray gun was largely responsible for this condition. The gun is popular on account of the speed that can be made in getting over the orchard and where an attempt is made to attain speed it must necessarily be done at the expense of a light even coating of spray material that reaches all parts of the tree. The County Agent had an eight foot spray rod equipped with four angle nozzles



The Ridgely Spray Ring starts operation



Plenty of clean fruit and healthy foliage as a result of spraying



Observing the merits of spraying equipment the
Angle Nozzle vs. the Gun

made and a demonstration at a field meeting was held. The angle nozzles and the spray gun was tested out to find which did the most effective work. It was the general opinion of those present that the angle nozzle gave the most uniform distribution and was practically as fast as the gun. As a result of the field meeting and demonstration two growers have decided to use the angle nozzle spray rod the coming year.

Six farmers in the Ridgely community who had good sized home orchards were organized into a spray ring in March of 1924. They had formerly depended upon a near-by commercial orchardist to do their spraying or in the case of some no spraying had been done. The past arrangements had been unsatisfactory as they could not get their spraying done until after the commercial grower had finished his own orchard. This usually made the sprays too late to be most effective. They were organized according to the plan recommended by the State Extension Service. A new one hundred gallon, power sprayer was purchased and one of the members agreed to operate the sprayer. The Maryland Spray Calendar was followed. The arrangement worked to the satisfaction of all the members. The machine was large enough to spray the twelve-hundred trees in the Ring in less than two days, so they were able to apply the material at the proper time. The increased income to each member from the better fruit marketed will more than take care of the expense of purchasing the machine. There is ample need for more such organizations in the county and it is the desire of the County Agent to get additional Spray Rings in operation in the future.

B. Cantaloupes.

In the spring of 1924 a meeting of the Cantaloupe growers in the Ridgely Cooperative Shipping Association was called for the purpose of getting the members to standardize their varieties. At that time it was expected that the Packing Association organized the previous year would continue to function but due to poor yield and a decreased acreage caused by continued wet weather there were not enough cantaloupes to justify attempting to ship cooperatively in car lots. The County Agent felt that standardization of varieties would be an advantage to cooperative shipping and marketing. At the meeting the growers decided to adopt a uniform early and late variety. The varieties decided upon were the Gold Lined Eden Gem and the Polloch 10-25. One hundred and fifty pounds of seed was purchased direct from a grower in Colorado and distributed to the growers. The seed and the varieties gave excellent satisfaction. The plan will be continued another year when it is hoped conditions will be more favorable for a crop near enough normal to justify the cooperative packing and shipping.

There is and had been for some time a general complaint among the cantaloupe growers of Caroline county against the practice of pulling and marketing green fruit. It would seem from reports that there are only a small group of growers in this county and other counties of the Eastern Shore of Maryland who persist in this practice. But it has the effect of hurting the reputation of Eastern Shore of Maryland cantaloupes on our Eastern markets. With a view of correcting this condition the County Agent called a meeting of the County Agents and representative growers from the near-by counties. It was generally agreed at the meeting that a State Law fixing a Standard of maturity for melons in transit was the only remedy for the difficulty. With this in view a resolution was drawn up and adopted and forwarded to the State Legislature which was then in session to be made a law. But sufficient punch could not be gotten behind the bill and it met an early death in the agricultural committee and a few growers continue to ruin the market for the majority. There can be no doubt of the necessity of state regulation along this line if we ever hope to build up sufficient reputation for Eastern Shore of Maryland cantaloupes to make them sell at a profit to our growers on the Eastern markets.

Albert White, Supt. of the Ridgely Sub-Station, in cooperation with Dr. Jehle, State Pathologist, and the County Agent conducted a dusting demonstration on a farm adjoining the Ridgely Station. The idea of the demonstration was to observe the results obtained by using various strengths of copper sulphate dust and arsenates in the control of disease and insects of cantaloupes. Mr. White supervised the demonstration very close and reports the following results from the demonstration.

UNITED STATES DEPARTMENT OF AGRICULTURE
STATES RELATIONS SERVICE
WASHINGTON

Official Business

PENALTY FOR PRIVATE USE
TO AVOID PAYMENT OF
POSTAGE, \$300.



Cantaloupes
Dusted to control Blight



Check



Cantaloupes
Dusted to control Blight



Check

Cantaloupe Record--1924--
Dusting experiment-

Variety Eden Gem.

Date Picked; Prime; Culls; Prime; Culls; Prime; Culls; Prime; Culls; Prime C

	; Plot 1;		: Plot 2		: Plot 3		; Plot 4		; Check	
Aug. 25	54	4	27	2	26	3	15	5	16	3
Aug 28	18		12	2	21		11	1	6	
Aug 29	10		11		8		19		7	
Aug 30	49	6	68	5	65	2	36	4	58	4
Sept 1	63	5	62	4	87	4	54	2	30	2
Sept 2	47	4	70	2	65	2	64	4	98	9
Sept 3	30	1	35	1	42	4	48	4	57	2
Sept 4	76	2	67	2	130	4	151	4	156	22
Sept 5	70	11	53	10	73	10	67	11	60	27
Sept 8	90	13	175	25	44	10	175	30	25	75
Total number	497	56	580	53	561	39	640	66	513	148

Variety
Pock 10-25

Date Picked; Prime; Culls; Prime; Culls; Prime; Culls; Prime; Culls; Prime; Cul

	: Plot 1		: Plot 2		: Plot 3		: Plot 4		: Check	
Aug 25	8	14	19	2	20	2	20	3	30	2
Aug 28	70	88	70	5	88	5	77	10	67	10
Aug 29	42	5	43	4	35	4	30	3	57	2
Aug 30	19	4	32	3	29	4	31	2	20	7
Sept 2	29	2	39	2	31	2	35	2	64	10
Sept 3	19	1	28	2	19	4	49	4	52	2
Sept 4	75	4	75	7	40	7	68	6	60	20
Sept 5	54	4	37	10	59	10	60	13	40	22
Sept 6	40	12	50	12	40	15	70	15	20	40
Sept 8	45	4	26	2	24	2	36	2	22	2
Total number	401	48	419	49	385	55	476	60	432	110

Plot 1

Analysis:- Active Ingredients Monohydrated Copper Sulphate 22% (equivalent to not less than 7.3% Copper as metallic) Tri Calcium 14% (equivalent to 20% Commercial Calcium Arsenate or not less than 5.2% Arsenic metallic)

Active Ingredients:- Monohydrated Copper Sulphate 10% (equivalent to not less than 3.3% copper as metallic) Tri Calcium Arsenate 7% 2.6 % Arsenic as metallic.

Plot 3

Active Ingredients:- Monohydrated Copper Sulphate 22% Commercial Arsenate of Lead (96% pure) 20% (equivalent to not less than 3.6% arsenic as metallic).

Green Dust: Copper Sulphate 32%; Commercial Arsenate of Lead (96% pure) 10%.

According to the results plot 4 of both varieties produced the most prime fruit but unless a greater contrast could be secured over a period of years between the dusted plots and the check it would not pay to dust. But 1924 was not normal in that blight developed much later than normal. This condition would of course favor the check plot in that blight did not become a serious menace until practically the entire crop was harvested or had reached a stage of maturity that the disease did not materially affect the quality of yields. Also, there seems to be tendency for copper dust to delay maturity by holding the vines green. a season that was three weeks later than normal this would naturally delay maturity to such an extent that many melons would be left in the field after the shipping season was over, which was actually the case this year.

In the method demonstration conducted in dusting cantaloupes with a commercially proposed dust the contrast between dusted and undusted field was not as great as in the past. Therefore, it can be concluded from these observations that the season is an important factor affecting the results to be expected from the application of dusts or sprays in controlling diseases of cantaloupes.

C. Tomatoes.

REPORT OF CAROLINE COUNTY AT TOMATO CONFERENCE.

During April four meetings were held in the county in the interests of promoting more efficient production of tomatoes for canning. Mr Ballard and Mr Radebaugh were present at these meetings for the purpose of outlining plant beds and field culture methods.

There was a total attendance of 123 growers at the four meetings. A gratifying amount of interest was demonstrated by those present and all took part freely in the discussion following the talks.

Three community plant beds of about $\frac{1}{4}$ acre each were conducted the past year. One of the plant beds was especially outstanding. The man in charge fortunately selected as a site for the bed a location that was protected from the storms and cold winds that did so much damage to out other two beds. The plants from this bed exceeded in size and thrift any other plants observed in the county. The man in charge followed recommendations set forth by the Extension Service to the letter. The other two beds were put in with equal care but were severally damaged and their growth checked by storms and cold winds. These plants were still in the bed when the early blight made its appearance in Caroline County and as a result developed the disease. Both beds were dusted at brief intervals with approved copper sulphate dusts but the very frequent rains washed it off as fast as it could be applied.



Community Tomato Plant Bed conducted by
I. Brunbaugh, Greensboro, Maryland



Plant Bed conducted by a Caroline County Canner
for his growers

The plants from the first bed mentioned were in the field earlier than the average in the county and the cares where the growers took the trouble to protect them from the potato buds they went ahead nicely and gave a substantial increase in yield. The plants from the other two beds were very ordinary at the best and few were used in the field. Those that were used were so badly injured by early blight and potato bugs that many of the plants died or broke off and as a result the fields were spotted.

But even in view of the fact that two of the three plant beds were partially failures there is every evidence that the effort was not in vain. The spread of influence was most remarkable. Many of the growers who attended the meetings and many of those who did not attend but learned about their recommendation from their neighbor and the County Agent adopted improved plant bed methods. There was a marked increase in the demand for reliable seed, many growers mulched their plant beds this year for the first time. The practice of dusting was rapidly on the increase and many fields were saved from absolute destruction by disease and insects through the use of this same dust in the field.

Our county growers are in a large measure coming to a realization of the economic truth contained in the title of the Extension Bulletin "More Tomatoes From Fewer Acres!"

We have only a few tomato growers in Caroline County who are really successful over a series of years. This may seem strange in view of the fact that the crop has been grown in the county for the past 50 years and an area of 6000 acres or more is planted to this particular crop annually. It is about one of these outstanding growers and his methods I wish to report at this time.

He has a good average crop over a period of ten years. The first factor in his success is that he has carefully selected his own seed for the past twelve years.

He plans ahead and usually has a green manure crop to turn down. In recent years he has been using rye and making it serve the double purpose of early pasture and green manure crop. This past year this grower had an average yield of $12\frac{3}{4}$ tons to the acre on $5\frac{1}{2}$ acres.

He never exceeds this acreage and fertilizes heavy. This past year he applied 10 tons of manure to the acre, this was ploughed down, 500 pounds of 5-7-5 fertilizer was applied broadcast to the acre. After the plants were set in the field 500 pounds more was applied in the row. The fertilizer put in the row was a home mixture consisting of 6 parts Rock and 1 part muriate of Potash.

The plants were dusted in the bed with copper sulphate dust and due to the ravages of potato bugs and the danger of blight he dusted the plants in the field twice.

A total of 4213 baskets were harvested for which he received on the open market an average of 54 cents a basket or a total of \$2,275.02 or \$413.63 per acre.



Club boys using garden rakes to break the soil crust following a heavy rain. These boys conducted one of the community tomato plant beds.



Pulling plants from community Tomato Plant Bed

The average application of fertilizer to the acre in this county is 500 pounds or less. The extra cost to this particular grower over the average producer is mainly represented by the cost for the additional fertilizer and the dust applied. This extra cost amounts to about \$10 an acre. For this he received 8 tons of tomatoes returned him \$259.20 not a bad return for a ten dollar investment. His improved methods and care cost him no more than the slip shod methods of the grower.

This man's success and the success of the other outstanding growers can be briefly summarized under about five main heads.

1. Carefully selected seed.
2. A reasonable acreage.
3. Good plants.
4. Control disease and insects.
5. Liberal fertilization.

During the past year whenever it has been called to the attention of the County Agent that a particular grower in a community has a reputation as a good tomato grower an attempt has been made to find out why this man is successful and invariably it has been found that the secret of his success can be summarized under the above five heads.

The County Agent has urged all the county growers, with whom he came in contact, to save their own seed if they had a satisfactory variety and if their own tomatoes were not good enough to save for seed they have been urged to secure seed from a neighbor who had a desirable variety. This recommendation has been followed to a gratifying extent. But there is still room for a vast amount of improvement along the lines of establishing a county supply or source of seed that will produce and at the same time is a good canning tomato. With this in view the County Agent has made arrangements for a variety test demonstration for the coming year. It is planned to test out four home selected varieties, one acre of each and to save the best for seed. The County Agent succeeded in having the seed from fifty baskets of select tomatoes saved this past year for distribution next season.

D. Asparagus.

This is a crop that has been little grown in Caroline County but is well adapted to our soil condition and ought to be profitable. With this in mind the County Agent took a small group of truckers to Cecil County in June 1924 to attend an Asparagus tour. A number of plantings of varying ages were inspected and the Cecil County growers told the visitors all they could about Asparagus culture in the short space of time. One of the growers visited had seed for sale of the Martha Washington Rust Proof variety. The Caroline county party purchased a quantity of seed on this trip and

all these who went in the tour and some of their neighbors who they told about the trip are raising roots for asparagus plantings. The County Agent hopes to develop asparagus growing in the county to a point that the acreage will be sufficiently large to justify a canning house being equipped to handle the crop after the shipping season reaches the point where it is unprofitable for the grower to ship to the city market, which is usually the case during the latter part of the asparagus cutting season.

E. String Beans.

The growing of string beans for canning assumed proportions of importance in this county in 1924 and more will be raised for this purpose in 1925. The County Agent has had a number of requests from county growers for information dealing with the culture of the crop. There seemed to be a little available information on string beans so in order to have available all the practical information possible for the growers the County Agent has visited some of the more experienced county growers (a few county growers have been growing the crop for canning houses outside the county for some years past) and has been able to secure much information on the subject which will be a valuable aid to those inexperienced in the culture of the string bean.



A field of string beans
in Caroline County



A good prospect for a fine lot
of Asparagus roots-seed planted
June 1st. 1924

V. FORESTRY.

Three demonstrations in woodlot thinnings were held in Caroline County on November 20 and 21, marking the climax of two weeks of publicity on farm forestry.

The first demonstration was held the morning of November 20th at ten o'clock, on the property of Scott Wadell, about two miles west of Preston, and one-fourth mile north of the main pike between Preston and Easton. A quarter acre plot of a fourteen-year old stand of loblolly pine, almost pure, was marked for a thinning. Thirteen men were in attendance, and a lively discussion as to the merits of marking of leaving certain trees characterized the demonstration. The keen interest maintained throughout the demonstration was most gratifying. As a result of this demonstration, eight men requested examination of their timber tracts.

The second demonstration was held on the morning of November 21st. at ten o'clock on the property of Raymond O. Cook, about two miles northwest of Federalsburg. The turn-out at this demonstration was disappointing, only three men being in attendance. A half acre tract of seventeen-year-old loblolly pine, almost pure, except for an occasional spruce pine, was selected for the demonstration. At Mr. Cook's request, only half of the tract was marked for thinning, so that the unmarked portion may serve to measure the increased growth made in the thinned stand.

The third demonstration was conducted on the property of Mr. Oscar Nichols, Federalsburg, in the afternoon of November 21st. The demonstration was held about one-and-a-half-miles south of American Corner, and involved timber tracts under varying conditions. No actual marking was done, but the needs of each of the several conditions met with were discussed in some detail, and the numerous questions brought up by the seven men in attendance indicated their sincere interest in the work. Mr. Nichols owns a small saw-mill and the management that he is giving his pine is most admirable. One request was received for a timber examination.

Three of the men requesting examinations of their timber as a result of the demonstration held in the Preston community were visited by the Forestry Specialist and the County Agent. It was found that plantings of Loblolly pine were advisable in all cases on the land at present occupied by a mixed and immature growth of hardwood sprouts. The men were interested and agreed to comply with the recommendations made. The remaining examinations will be made as soon as possible and there is no doubt but what most of the owners can be influenced to adopt improved practices in forestry.



A fine young stand of Loblolly
Pine used for thinning demonstration



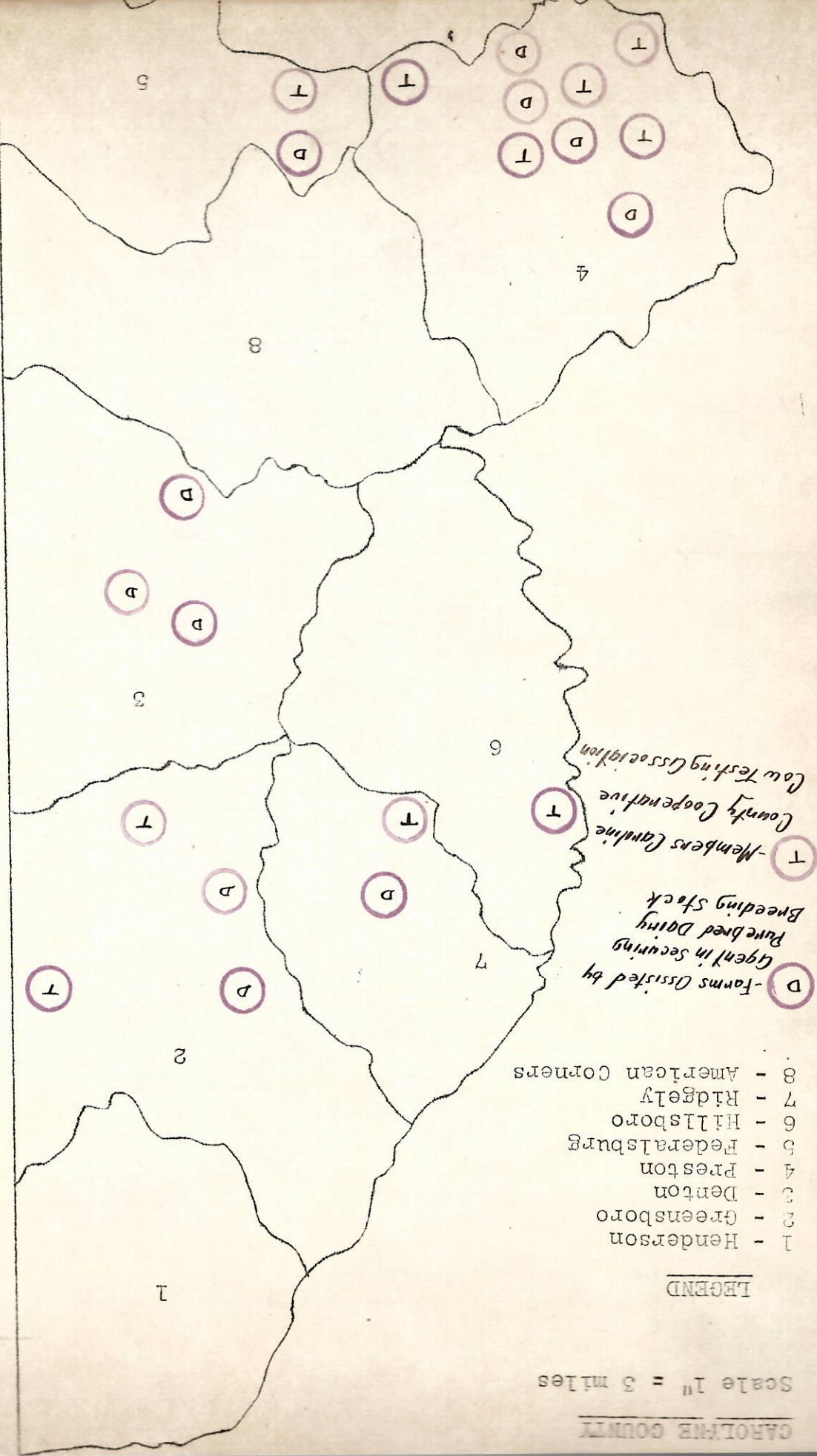
Demonstration thinning

CAROLINE COUNTY

Scale 1" = 3 miles

LEGEND

- 1 - Henderson
- 2 - Greensboro
- 3 - Denton
- 4 - Preston
- 5 - Federalburg
- 6 - Hillsboro
- 7 - Ridgely
- 8 - American Corners



Farms Assisted by
 Agent in Securing
 Purebred Dairy
 Breeding Stock
 -Members Caroline
 County Cooperative
 Low Testing Association

VI. LIVE STOCK

A. Dairy Cattle

Caroline County is by no means a dairy county but each farm has a few cows as a side line to consume the rough feeds and to aid in maintaining the fertility of the soil. The animals are as a rule of inferior quality and unprofitable producers. The County Agent felt that some effort to work an improvement should be made. Through the county agent's efforts eighteen head of improved dairy animals have been placed on farms in the county during the past year. Of this number seven were pure bred registered bulls. Six of the seven are registered Holstein and one registered Guernsey. Five of the Holstein are owned by the members of the Caroline County Cooperative Bull Association organized by the county agent this past summer. The five animals were carefully selected for breeding and production. They are all sons or grandsons of the well known sire King of the Ormsbys.

Of the eleven females brought into the county five were registered, three Guernseys and two Holsteins. The other six were high grade Guernseys.

Through the co-operation of F. W. Oldenburg, Agronomy Specialist, and J. A. Conover, Dairy Specialist the County Agent put on an all day feed schools at three community centers during January of 1924. The meetings were held at Ridgely, Greensboro, and Preston. There was a total attendance of 240 at the three places. At these meetings Mr. Oldenburg discussed the raising of field crops for dairy cattle and Mr. Conover discussed the economy of home grown feeds for dairy cattle and illustrated how to use them in balancing a ration.

B. Cow Testing Association.

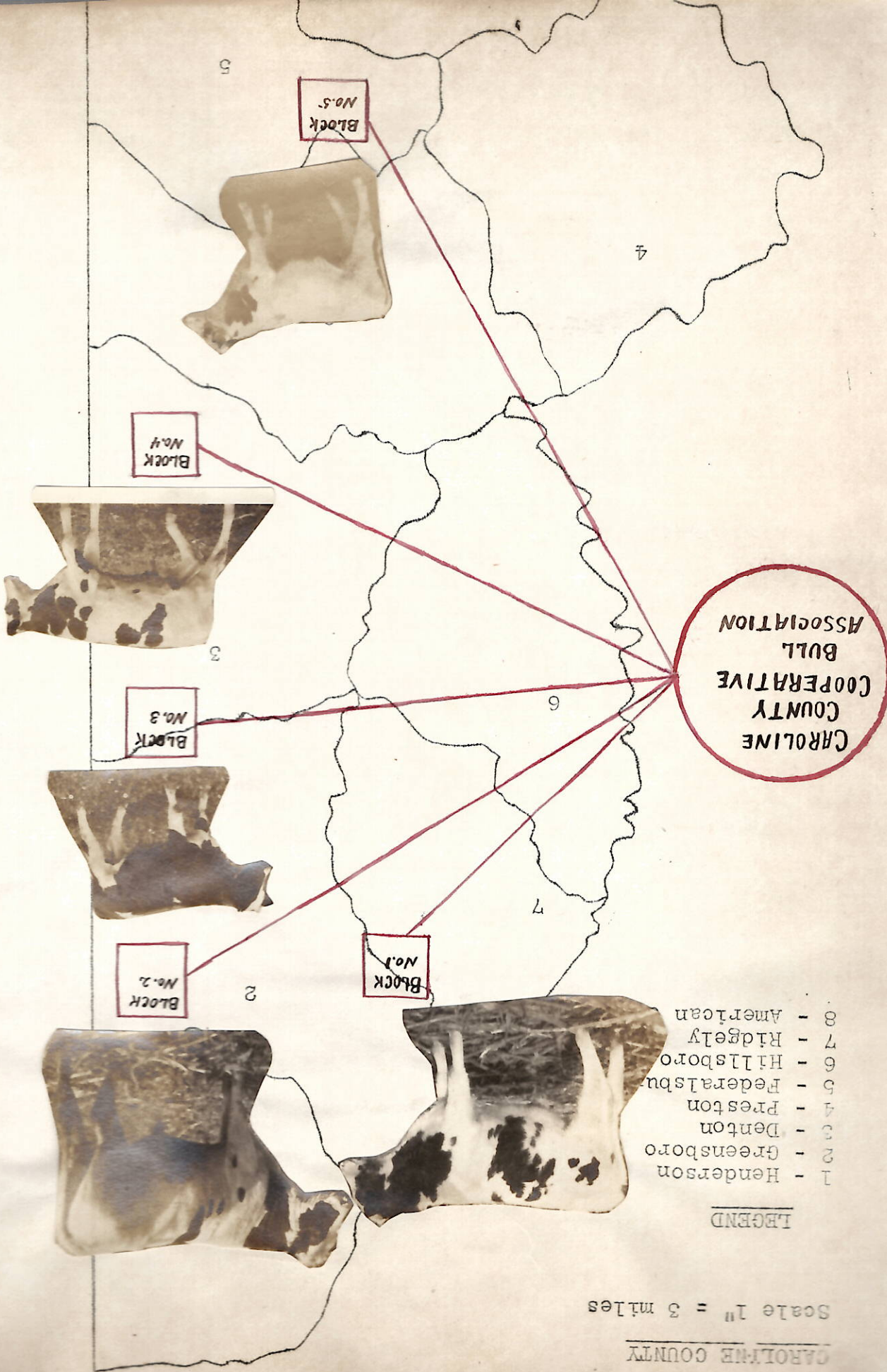
There were a few farmers in both Talbot and Caroline counties interested in becoming members of a cooperative cow testing association. County Agent Walls, of Talbot and the County Agent of Caroline talked the situation over and decided that enough members could not be secured in either county to justify hiring a full time tester so an association was organized in each county and one man was employed to do the work for both. There are ten dairymen in the Caroline County Association at present and it is the object of both counties to get enough additional members to eventually employ a full time tester for each Association. There are 106 cows under test in Caroline county in the ten herds. The animals making thirty-five pounds of fat or producing 1000 pounds of milk a month are reported in the county papers together with the names of the owners. The problem of feeding for economical production is also, a factor that the tester assist the members in solving.

CAROLINE COUNTY

Scale 1" = 3 miles

LEGEND

- 1 - Henderson
- 2 - Greensboro
- 3 - Denton
- 4 - Preston
- 5 - Federalbu
- 6 - Hillsboro
- 7 - Ridgely
- 8 - American



CAROLINE COUNTY COOPERATIVE BULL ASSOCIATION

Block No. 5

Block No. 4

Block No. 3

Block No. 2

Block No. 1

5

4

3

6

7

2



Future factors in Caroline Countys' Herd
Improvement



18.17

A Pure Bred Holstein



?

CAROLINE COUNTY

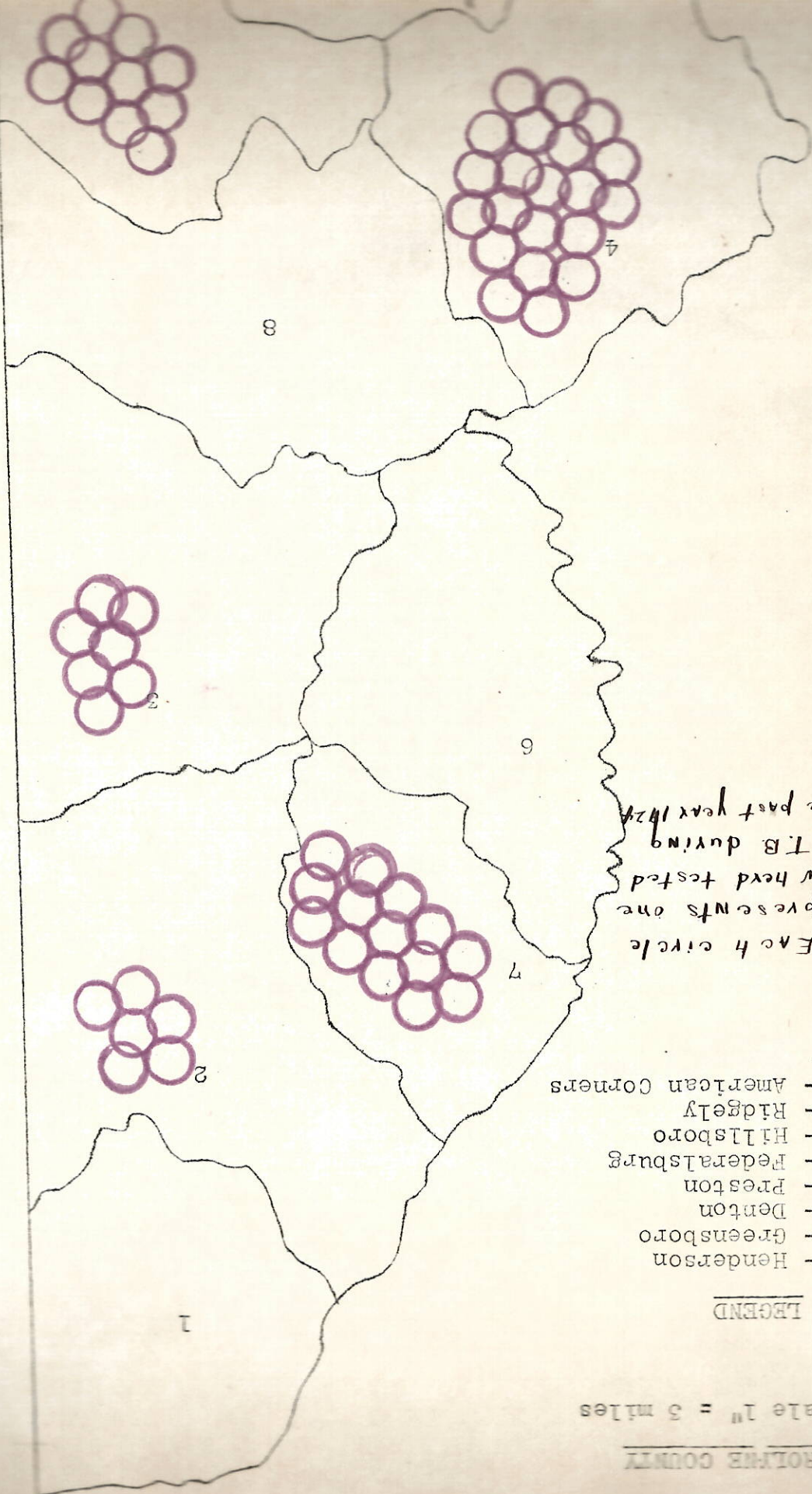
Scale 1" = 5 miles

LEGEND

- 1 - Henderson
- 2 - Greensboro
- 3 - Denton
- 4 - Preston
- 5 - Federalburg
- 6 - Hillsboro
- 7 - Ridgely
- 8 - American Corners



- Each circle represents one cow herd tested for TB during the past year



C. Bovine Tuberculosis.

Largely through the County Agent's influence fifty-eight new herds have been placed under State and Federal Supervision during the past year. The fifty-eight herds total 573 head. There are fifty-one new herds on the waiting list for test at the present writing. While there are still a small percentage of county farmers who look upon the tuberculin test with suspicion the majority believe in it and would favor an area clean up.

D. Sheep.

The number of sheep kept on county farms has decreased during the past ten years. But during the past year there seems to be an indication of a revival of interest in this branch of agriculture. A few owners have put small grade flocks on their farms and probably more will follow. The County Agent placed two pure bred Hampshire ewe lambs with one county farmer who contemplates building up a pure bred flock. So far as can be learned this will be the first pure bred flock of sheep in Caroline County. The lambs were of excellent quality and were carefully selected by B. E. Carmichael, Animal Husbandry Specialist, and brought to Maryland from Idaho along with one hundred other breeding ewes.

E. Swine.

The County Agent has made a special effort to secure the cooperation of the county farmers in reporting cases of sick hogs promptly. Very good cooperation has been secured and as a result all cases of hog cholera have been looked after closely enough to prevent the spread of the disease to any extent. Caroline County has had a total of eleven outbreaks of Cholera during 1924. The primary causes has been the feeding of table scraps. Some of the cases were, of course, secondary outbreaks resulting from the spread of the disease in a community from an original outbreak.

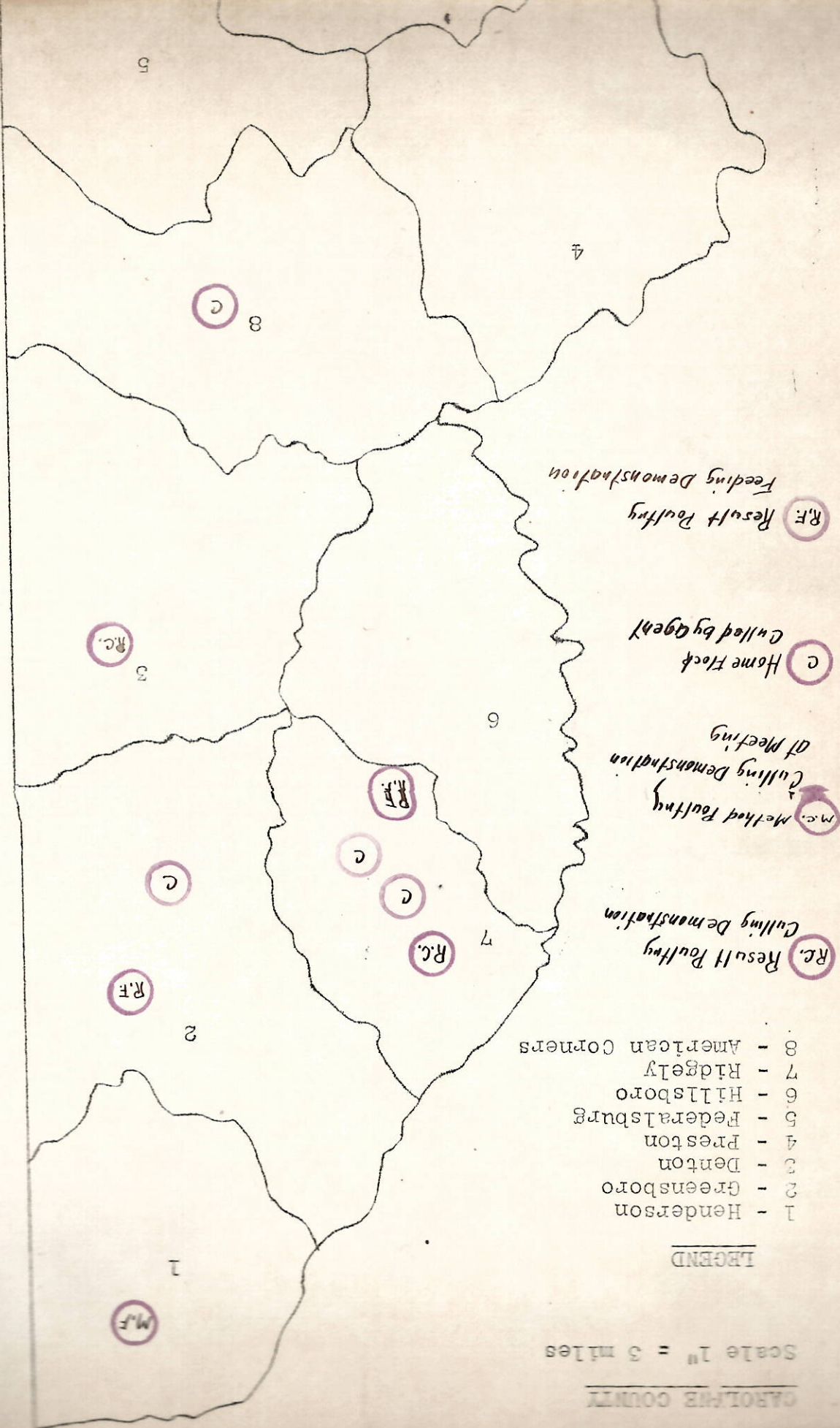
A litter of seven pure bred Poland China pigs from a sow owned by a boy club member a Preston weighed more than two tons at one year of age. They were a remarkable litter of pigs and made rapid and economical gains from the start. They attracted much interest in the community and visitors came some distance to see them.

CAROLINE COUNTY

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F. Poultry.

Caroline County is the leading poultry county of the Eastern Shore of Maryland and probably has as many commercial flocks as any other county in the state. In view of the importance of the industry a large proportion of the Agent's time is spent on this work. There is almost continual demand from the flock owners for assistance from the Extension Service in the control of disease. W. H. Rice, Poultry Specialist has cooperated with the County Agent in this work and valuable service has been rendered the county poultrymen. During 1924 fourteen method demonstrations in the control of disease has been put on. The largest proportion of the work was done during the brooding season with the control of white diarrhea and similiar diseases of young chicks. Assistance was also given in the control of disease and parasites in mature flocks as the control of roup, fowl typhoid, round worms and lice. In the cases where proper cooperation could be secured in carrying out recommendations made by Mr. Rice and the County Agent an early control of the trouble was affected.

One poultry house was constructed according to Extension Service recommendation, and advice was also given along lines of flock management. Four poultrymen were assisted in securing improved breeding stock.

Six culling demonstrations were put on during 1924. Four of the six were method demonstrations and the other two were result demonstrations that were started November 1st., 1923, and ended February 1st., 1924.

The following is a report of the two result demonstrations.

Demonstrator-Claude Olsen-Denton, Maryland, started November 1st., 1923 and closed January 31st., 1924.

Results-200 selected layers Results 100 second selection

Total No. eggs laid	4451	1995
Total cost for feed	\$61.11	\$28.79
Total return for eggs	216.70	\$94.50
Eggs per bird	22.2	19.9
Total return per bird	\$ 1.08	94¢
Net return per bird	.77½	65½¢
Total return net	\$155.59	\$65.71
Average price per doz. for eggs	.58	.55
Feed cost per bird	.30½	.29

Demonstrator A. M. Johnson, Ridgely, Maryland
Demonstration started November 1, 1923; closed January 31, 1924.
*

Results 180 selected layers

Results 125 second selection

Total No. eggs laid	7492	4176
Total cost of feed	\$68.20	\$49.19
Total return for eggs	\$375.49	\$204.17
Eggs per bird	41.6	33.4
Feed cost per bird	38.8¢	39¢
Total return per bird	\$2.08	\$1.63
Net return per bird	\$1.70	\$1.24
Total net return	\$307.29	\$154.98
Average price per doz. for eggs.	\$.60	\$.58

* The selection in both cases were made by W. H. Rice, Extension Poultry Specialist. The demonstrations were originally planned to be a comparison between selected layers and culls but when the owners saw the culls that were selected they showed up to such a disadvantage when grouped together that they decided they needed no further proof of the culls inability to produce at a profit. The demonstration then resolved itself into a comparison of the producing power of birds of equal size and maturity but selected very carefully for body conformation. This necessitated drawing a very sharp line in the selection of the pens. However, the results show a profit in favor of the selected birds that represents an item worthy of consideration in a commercial flock.

There is usually a larger spread between the cost price of commercial mash and the cost of the usual home mixed fine ingredient mash usually recommended by the state and Federal experiment stations. This condition led to the question in the minds of our poultrymen of economy from the standpoint of production. Two feeding tests were arranged in which the highest priced commercial mashes were used in comparison with an open formula mash mixed for the county cooperative association and a home mixed mash from a formula recommended by W. H. Rice, Poultry Specialist. On one of these tests records were obtained covering a period of three months, but the county agent has been unable to secure records on the other demonstration. However, the results obtained from the open formula and home mixed mashes were so satisfactory that the demonstrators did not feel justified in continuing the test over a period of one year as previously planned.

The results of one test follows.

MARYLAND
EGG OR LAYING MASH

GUARANTEED ANALYSIS

Protein (Minimum) 20%
Fat (Minimum) 3.50%
Fibre (Maximum) 7%

INGREDIENT FORMULA

333 lbs. Wheat Flour Middlings
333 " Corn Gluten Feed
333 " Ground Oats—Fine
333 " Corn Meal
333 " Wheat Standard Bran
335 " Meat Scraps

2000 " Egg or Laying Mash
1398 " Total Digestible Nutrients

AN OFFICIAL RECORD OF A FEED DEMONSTRATION CONDUCTED BY H. S. PIGGOTT OF RIDGELY, CAROLINE COUNTY, MARYLAND

Farm Bureau Open Formula Mash
Results 3 Months Feeding Test—100 White Leghorn Pullets

Months	No. Eggs	Lbs. Mash Used	Price Per Cwt.	Cost
1923				
November	395	288	\$2.57 1/4	\$7.40
December	486	220	2.61 1/2	5.75
1924				
January	609	300	2.64	7.92
Totals	1490	808		\$21.07

Cost of producing 1 dozen eggs, 17c.

Brand Commercial Mash
Results 3 Months Feeding Test—100 White Leghorn Pullets

Months	No. Eggs	Lbs. Mash Used	Price Per Cwt.	Cost
1923				
November	330	192	\$3.70	\$7.10
December	351	146	3.70	5.40
1924				
January	341	200	3.70	7.40
Totals	1022	538		\$19.90

Cost of producing 1 dozen eggs, 21c.

Eggs produced on Farm Bureau Mash cost 25% less than those produced on a well-known Buttermilk Egg Mash.

It will be noted that the amount of the unnamed feed was only about two-thirds the amount consumed by the hens fed on Farm Bureau Open Formula Egg Mash, and only two-thirds the amount that should be consumed for best results by that number of birds in a period of three months.

This speaks well for the palatability of the open formula mash. Had the consumption been in proportion, of course the difference in cost per dozen eggs would have been still greater. Notice also that the production at the end of the test showed no increase in the case of the unnamed feed while the production on the Open Formula Farm Bureau Egg Mash was picking up rapidly.

The pullets for both pens were carefully selected and approved by the State Extension Poultry Specialist, and were as even in quality and stage of maturity as was reasonably possible. The production, of course, was not high per bird in either case, due to the fact that the birds used were pullets and were just starting to lay.

VII. AGRICULTURE ECONOMICS.

The Caroline County Farm Bureau organized and incorporated their cooperative association during 1924. The County Agent has assisted the organization and cooperated with the manager in so far as possible to get the organization on a working basis. The activities during the first year have been principally along purchasing lines. Some little effort has been made to establish the cooperative marketing of a few farm products especially tomatoes but after making a careful survey of the situation it was decided that the time was not right for the establishment of an association to market the tomato crop according to the plan advocated by a majority of the growers. The experience of neighboring counties has later confirmed the decision.

Feed, fertilizer, binder twine, egg crates, baskets and coal have been the principal supplies purchased. Nine hundred and fifty tons of feed was purchased cooperatively through pooled orders during 1924. The saving on this transaction has been greater than on any other commodity purchased. Supplies to the value of \$73,061 have been purchased. The saving to the members of the Association buying through organization has amounted to \$14,080. This estimate is reached through a comparison of the association price and the retailers price. The general activities of the cooperative has had a tendency to drive prices down on supplies purchased by farmers outside the organization to an extent impossible to estimate.

Approximately 1000 head of livestock have been shipped representing a profit to the shippers over the local market of \$2,600.

The Cooperative Association is still in the infant stage but is being developed as fast as limited resources will permit to a point where it is hoped it will be a real factor in cheaping production and aiding marketing of farm products.

LEGEND

- 1 - Henderson
- 2 - Greensboro
- 3 - Denton
- 4 - Preston
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Each Red Circle

Marks Location

Junior Club Members

Project

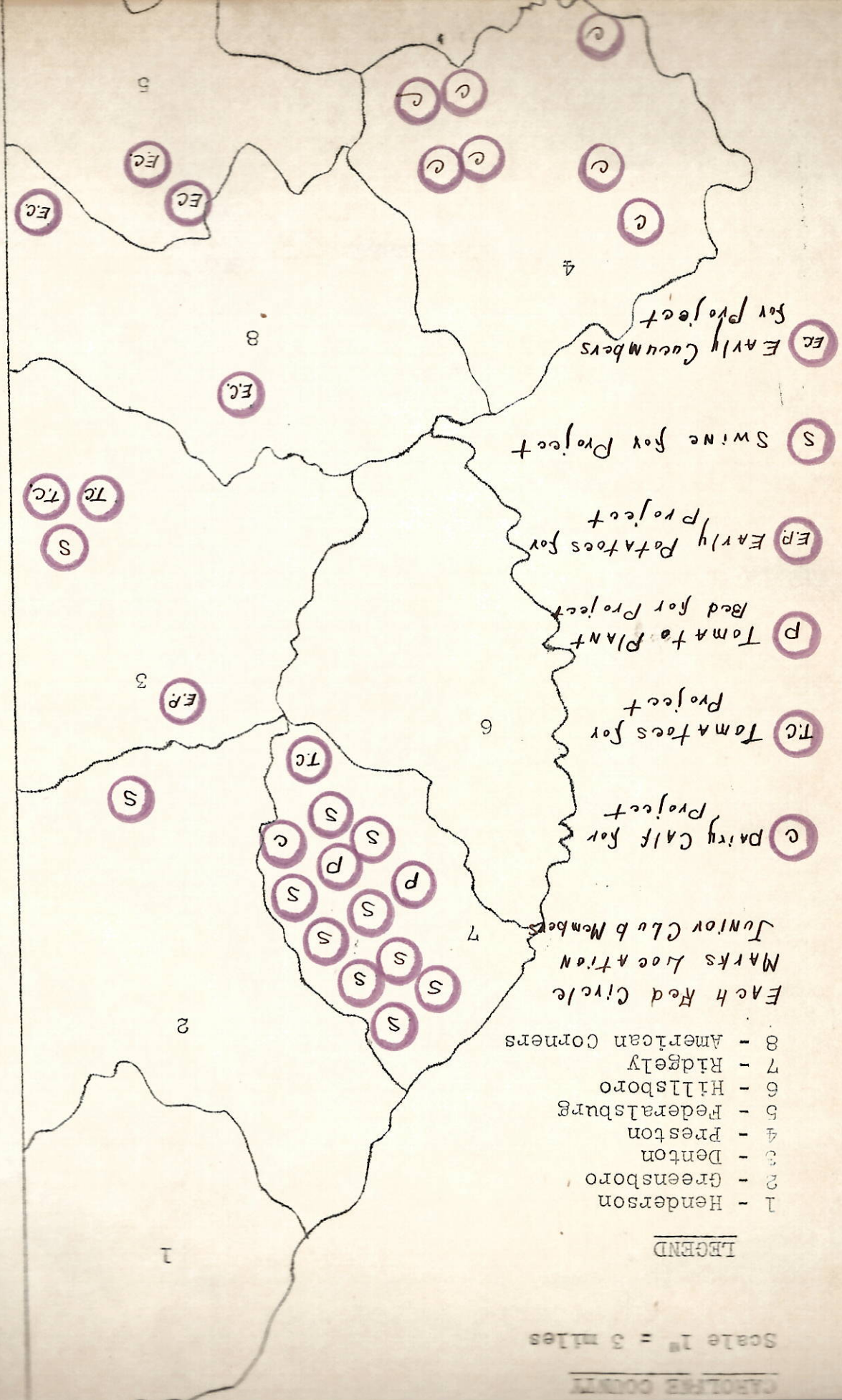
Project

Project

Project

Project

Project



VIII. JUNIOR EXTENSION WORK.

The County Agent in co-operation with the public schools has endeavored to keep going the club work already started and to expand the work to include branches of agriculture not touched on before.

The Agricultural projects carried on by the boys included the raising of dairy calves, pure bred swine, poultry, tomatoes, potatoes, and early cucumbers. A total of twenty-nine boys successfully completed club projects.

The first dairy calf club was organized at Preston this past spring (1924). The boys were assisted in financing the purchase of their calves by the local bank. The animals were carefully selected by a committee of parents and the County Agent. This project has created much interest and favorable comment from the local community. The calves were exhibited at the County Farmers' Picnic and also at the Queen Annes' County Horse and Cattle Show.

Four county boys attended Club Week at the University of Maryland. Three of these boys put on a demonstration dealing with the grading and packing of eggs for market during the week at College Park. Their demonstration was considered one of the best put on at College Park by the county teams. Their work attracted sufficient notice to earn for them a trip to Timonium Fair where they gave daily demonstrations in connection with the University of Maryland's Poultry exhibit.

Caroline County was also represented at Timonium Fair by a dairy cattle judging team. They were in competition with like teams from other counties of the state. Caroline placed eight.

Joseph Long a county club member was selected as one of four state boys to represent Maryland at the Eastern States Exposition held at Springfield, Mass. This is the first year a Caroline County boy has won this honor. He was a member of Maryland's Poultry judging team at Springfield. Our state team placed second in this event. They were in competition with teams from the other Eastern States.

Three boy's Clubs are now in the process of organization and it is the desire of the County Agent to eventually expand this work to reach every boy interested in agriculture.

The importance of interesting the farm boys in agriculture cannot be over estimated. If America's agriculture is to continue to hold its position of leadership in the world it is necessary that the best and brightest farm boys be given an active interest in farming that will keep them on the farm instead of allowing them to drift to other vocations. The way to keep the boy on the farm is to make him a partner in the business of farming. This is the object and aim of 4-H Club Work.



The boys' Projects arrive
for distribution



Calf Club Members and their calves
at County Farmers Day



Junior Demonstration Team Grading
Eggs for Market



Junior Dairy Cattle Judging Team

IX. OUTLOOK FOR 1925.

The outlook for Extension Work in Caroline County for 1925 is bright. The County Agent believes that sufficient work has already been done and enough contacts made with substantial farmers in all parts of the county to open the way for more ambitious future programs of work. In making a survey of the needs of the various communities many problems requiring attention are visible but it will not be the policy of the County Agent to endeavor to attempt the impossible by trying to do everything in the short space of one year. Rather the program for 1925 will be founded on a part of the outstanding needs and a conservative but sure building up of the county's agriculture somewhat wifer in scope than has been attempted in the past will be the goal for 1925.

Some of the chief projects in mind at this time for a suggestive program of work are as follows: Continuation of dairy improvement through the introduction of pure-bred sires and dairy calf work; two additional spray rings to the one already established; one dusting ring for truck crops; continuation of the tomato plant bed plan in the old communities and introduce the plan in three communities; the development of early tomato raising for early market and early canning in at least one community; Tomato variety test using seed from five county growers who have made a practice of home selection for ten years and are successful growers; test to be conducted near a plant equipped to save seed with a view to having the best varieties saved for seed; establishment of at least one cooperative cannery; Sheep flock improvement by introducing pure-bred males and females; forestry program consists of seven plantings and three thinnings; five tile drainage projects and one tax ditch; continuation of orchard work in aiding orchardists to control disease and insects to better advantage; Continuation of drive to interest new farmers in using pure seed; having as a goal the use of 3000 bushels pure seed wheat and five new growers with pure seed demonstrators; establish one boys poultry club, from county poultrymne's association; cooperative marketing of live and dressed poultry at holiday time.

X. SUMMARY.

While all the projects planned for 1924 were put through the County Agent was fortunate in being able to get the major portion of the program across. The most important achievements can be briefly summarized under their various headings as follows:

Poultry- Two result culling demonstrations, five method culling demonstrations, two result feeding demonstrations, cooperative association.

Cantaloupes- One result demonstration, two method demonstrations, one hundred and twenty-five pound of seed of two standard varieties used by growers in one community.

Tomatoes- Three community plant beds conducted. Seed saved from fields of three good county growers.

Forestry- Three method demonstrations held and three examinations made.

Orchard- One spray ring organized, county agent and specialist cooperated with commercial orchardists in problems relating to spraying and general orchard management.

Dairy- Fifty-eight new herds tested for tuberculosis and forty one applications for test on file. One cooperative bull association organized, one dairy calf club organized, two in process of organization, one cooperative cow testing association organized.

Field crops- Two thousand bushels pure seed wheat used, six corn root-rot demonstrations conducted, supply pure seed corn established in county.

Livestock- One thousand head marketed cooperatively.

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TEN YEAR SUMMARY OF EXTENSION WORK AND AGRICULTURAL
ADVANCEMENT IN CAROLINE COUNTY.

Probably no county in the State of Maryland has made the rapid advance in Agricultural improvement equal to that made by Caroline County. While this improvement has been in a measure gradual covering the past fifty years the greatest change has taken place in the past ten years. This change has in past been due to better transportation facilities brought about by the building of State Roads. Good roads have opened up sections of the county that were previously unimproved. Land values have advanced rapidly. Land values advanced 62.6 % in Caroline County during the ten year period from 1910 to 1920.

An important factor in this stride forward has been the improvement in farm practice. The County Extension Service has played its part in bringing about the change. The past ten years has seen the coming of the dairy cow as such. A few cows were kept previous to 1914 but they could hardly be called dairy cows. They were what is locally known as being of the "Sedge Field" variety and were kept for the calves rather than for milk. The opening up of markets for whole milk at an attractive price has stimulated dairying. The Extension Service has been able to give valuable assistance in introducing pure bred dairy sires and cows with producing ability. The average milk production is still low but it has increased from practically nothing over what it took to feed the calf to weaning age to the present production of about 3000 lbs milk per cow.

The past ten years has marked the introduction of the hen along with the dairy cow. Much of the soil of Caroline County is of a sandy nature and is well adapted to poultry keeping. For this reason the county poultry industry has assumed a position of importance. Larger farm flocks are kept and commercial flocks are numerous. Attention is being given to selection and care of the poultry for production.

There has not been much change in the acreage devoted to wheat and corn but there has been some important changes in the special crops. Caroline County has a soil adapted to many special or truck crops and these have been an important source of cash income to the farmers. Peaches were once an important crop, today there is but one commercial peach orchard of any size in the county. The destruction of the orchards by the yellows has been responsible for this change. Commercial apple orchards have increased in number and size. The growing of strawberries has rapidly decreased due probably to the scarcity and cost of labor. The following new crops have been introduced and being successfully grown at present: Soy beans, early and mid season crops of cucumbers and cantaloupes, early tomatoes, stringless beans for canning, watermelons and cauliflower.

All these have been factors in working toward an improved agriculture but probably the three chief factors in Caroline County are good roads, the dairy cow and the hens.

Principally through the efforts of the Farmers Club, an organization of county farmers, the first County Agent was established in Caroline County early in the year 1916. The members of the Farmers' Club went before the County Commissioners in a body and through their influence \$1000 from the county funds was appropriated for County Extension Work. Mr. Alva Norman was the first Agent to take charge.

Mr. Norman met with considerable opposition but this was in a large measure overcome. There were parts of the county opposed to aiding in the support of an agent. This condition was a result of a lack of understanding of the real aim and purpose of Extension Work.

Mr. Norman was well fitted for the job of introducing the work in the county. He did some very effective work in organizing the various communities of the county and teaching them the cooperative idea. Of the actual demonstrational work done it is difficult to report at this time due to lack of records. But some very effective boys' club work was done during the early years of the Extension Services' establishment.

Following Mr. Norman's death during the summer of 1918 Mr. A. O. Anderson took charge. During Mr. Anderson's time as County Agent he succeeded in introducing some very fine registered male and female dairy animals which has been a great aid in building up the dairy industry of the county. Mr. Anderson was followed by Mr. W. C. Thomas who took charge January 1, 1920 and resigned June 1, 1922.

Mr. Thomas did some very creditable work along many agricultural lines as swine improvement through pure bred pig clubs, orchard work, demonstrations relative to the control of insects and disease of cantaloupes, organization of cooperative packing and shipping association for cantaloupes. Mr. Thomas also succeeded in organizing farmers association in various parts of the county. He aided in establishing a new chapter of the Grange at Harmony this county. It was also during Mr. Thomas' time as County Agent that the American Farm Bureau Federation drive was put on in Caroline County.

It is difficult to measure the real value the Extension Service has been to the agriculture of the county but that it has been an important factor is without question. This is demonstrated by the change in attitude of the people toward the work. The increased interest and use made of the Service and the cooperation received by the present Agent in formulating and forwarding agricultural projects.