

VIRGINIA

COUNTY AGENT LEADER ANNUAL REPORT 1927
 W. F. Moore - Asst. Dir.

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ANNUAL NARRATIVE REPORT
OF
COUNTY AGENT WORK IN VIRGINIA
FROM
December 1, 1926 - November 30, 1927.

BY

W. F. Moore
Assistant Director.

Blacksburg, Virginia

February 29, 1928.

Mr. J. E. Hutchason,
Director Extension Service,
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Sir:

I have the honor of submitting herewith a report of county agent work in Virginia for the year ended November 30, 1927. This is the fourteenth annual report of the work since the Smith-Lever act became effective. It includes the work of sixty-four county agents working in sixty-eight counties. At the time these figures were compiled one agent's report was missing and the work done in Campbell county, December 1, 1926, to June 30, 1927, is also omitted; the agent resigning at this time and it being too early to secure results. In all, the work was conducted in sixty-seven counties for the entire year and in four others for a period of six months or more.

Respectfully submitted,

W. P. Moore
Assistant Director.

NARRATIVE REPORT

OF

COUNTY AGENT WORK IN VIRGINIA

December 1, 1926 to November 30, 1927.

Extension work was conducted in Virginia during the year 1927 in 69 counties under the leadership of 65 county agents, 3 full time assistants receiving a part of their salary from local funds, and several other assistants employed for the purpose of receiving training such as would qualify them to assume the responsibilities of a county later. The agents in Albemarle, Chesterfield, Dinwiddie, Hennessmond, Prince Edward and Rockingham resigned during the year, their places being filled by assistant agents whom we thought were qualified to take over the work. Several of these men had been in the employment of the Extension Division for a number of years. It might be interesting to mention their approximate period of service and cause of resignation.

S. S. Teel, Albemarle, who had served as agent for six years, resigned in March to enter the race for commissioner of revenue in his county, in which he was later defeated.

E. G. Balfour, Chesterfield, after working three years, resigned in September to take up commercial work at a very much larger salary.

Joe Bellinger, Dinwiddie, after four years service, was not giving satisfaction and was advised to resign in August.

Paul E. Blandford, after a period of sixteen years continuous service as agent in Hennessmond, resigned in October to take up work with the State Welfare Commission.

E. B. Crawford, Prince Edward, resigned to take charge of a laundry business he had bought. He had worked six or seven years: first in Amherst county from which

position he resigned to enter the war. Later he took up the work in Warren and Clarke where he served three years and was then transferred to Prince Edward.

C. E. Wampler, Rockingham, began work in 1911 and with the exception of two or three years had worked as agent in that county and in Page. He resigned December 1st to operate a milling business making a specialty of chicken and dairy feeds.

While the loss of these men will be felt we believe their places have been filled by men who will make excellent agents as soon as they gain more experience.

Three counties withdrew during the year, Patrick, Caroline and Campbell. A group of farmers in the former county had contributed the county's part of the agent's salary for a year upon the board's refusal to appropriate funds for that purpose. We advised the discontinuance of such an arrangement, the burden being too heavy on a few people. The agent affected was transferred to Floyd county early in January. This was the first time an agent had ever been employed in that county. The Extension Division paid his entire salary for two months. At the end of that time he had so popularized the work that the county made an appropriation for the remainder of the year. Before the close of the year the board renewed its appropriation for a period of four years.

Louisa county, where no agent had been employed for the last three years, made an appropriation in March, without being solicited by the Extension Division. The farmers asked for McKinsey, then agent in Caroline. Upon his acceptance of this position the Caroline board was interviewed and agreed to accept a new agent. However, due to our inability to have a man on the ground immediately after this vacancy occurred, the board broke faith and withdrew the appropriation. However, the work started in the county was supervised during the remainder of the year.

Work was begun in Mathews early in the year but Campbell discontinued its appropriation July 1st. Thus three counties were lost and three gained during the year, making the same number as were carried during the preceding year.

The past year was the first year the counties operated under the new budget law passed by the legislature in 1926. This act requires all boards of supervisors to publish a proposed budget including all expected county expenditures at least thirty days in advance of the date on which it will finally be passed upon and approved. It also provides that citizens may appear before the board in opposition to any proposed appropriations. While some opposition appeared at several of these budget hearings some resulted adversely except in Campbell, where the appropriation was omitted from the budget. The object was the reduction of taxes. When the budget was approved and no reduction made in tax rate the opposition leader stated that he would be glad to have the agent retained since no reduction was made in tax rate.

The policy, when employing men who have never done county agent work, of placing them as assistant agents under some good county agent was continued. Nine such agents were employed at different times during the year, five of whom were selected to fill vacancies caused by resignations of old agents; one was appointed as agent in Mathews where an appropriation had just become available and three are still serving as assistants in counties where we have agents.

No trouble was experienced in securing appropriations for 1928, since these amounts were already included in the counties' proposed expenses. Several counties made appropriations for a period of several years rather than take the matter up each year, while others advised that since there would be a change in their personnel after January 1st they preferred not to take up this matter until the new members had taken their seats.

An effort was made early in the year to place agents in several new counties or ones where there has been an agent for several years. With this object in mind visits were made by the district agents in Fauquier, Bath, Fawcett, Franklin and Middlesex. In each case they were advised to postpone appearing before the boards of supervisors until some time next year when they hoped to have men on these boards who would be more favorable to Extension work.

A five day meeting of all agents, instead of the two group meetings which we have been holding for several years, was held at Blacksburg early in January. This meeting was attended by all agents except three of four who had sickness in their families, the district agents, several representatives from the Washington office and the heads of several state departments. Talks were made by a number of the professors in the agricultural department of the college on subjects relating to their respective fields and included the more recent developments. The specialists discussed their plans for the year. One day was given over to discussions of 4-H club work by the state club agents and county agents. The head of the Smith-Hughes department of the state was present and outlined his field, while Director Hatcheson outlined that of the county agent. A day was devoted to group or district meetings where the agents discussed problems bearing on their sections. The agents declared it to be one of the best meetings of its kind they had ever attended and went to their homes full of enthusiasm for the work ahead of them. I sometimes think the inspiration gained at such meetings is one of the most important effects.

All agents were brought together again at the Farmers Institute meetings which were held here during the summer. A number of meetings of district agents have been held and the assistant director has visited each of them several times, either for a conference or to travel with him in his district.

The advisory boards have been active in some instances and given valuable aid in formulating plans of work for their counties. They have also appeared before their boards of supervisors and used their influence in having appropriations made. A few boards have been rather inactive and it has been a hard matter to get their members to attend a meeting.

The year has been more reasonable than for several years, no long drouths. The spring, however, was cold and late, damaging the wheat crop to some extent and cutting

the apple production to about one-half of the average for the past five years. According to the Virginia crop summary prepared by the State Statistician, the total value of the principal crops produced in the state in 1927 is \$156,000,000 as compared with \$145,000,000 in 1926.

Tobacco, potatoes and cotton, three of the most important cash crops, have a larger value than last year, while apples, wheat and peanuts are lower in total value. Tobacco which is the most important cash crop to one-fourth of our farmers, is estimated at \$1,000,000 more than in 1926. The yield is much less but the better prices being paid for bright, ^{dark} sun-dried and burley types bring up the total value.

The total harvested acreage of the principal crops this year is 4,225,000 acres, nearly the same as last year. Hay, peanuts and potatoes showed an increased acreage while corn, cotton and tobacco were decreased, and wheat and sweet potatoes remained about the same. The per acre yields of most crops were smaller. Fruit crops were especially reduced. The yield of barley, buckwheat, cotton, oats, peanuts, rye, wheat, tobacco and sorghum was less while corn, hay, Irish and sweet potatoes was greater. The total value of the principal crops is given as follows:

Corn.....	\$44,130,000.	Wheat.....	\$11,063,000.	Cotton...	\$3,082,000.
Tobacco...	\$25,078,000.	Apples...\$	8,100,000.	Oats...	\$2,559,000.
Potatoes...	\$25,628,000.	Peanuts...\$	5,540,000.	Peaches...	\$0,640,000.
Hay.....	\$33,304,000.	Sweet potatoes...	\$4,934,000.		

No figures are available at this time showing the value of the beef cattle, hogs and sheep sold last year. Prices were good, considerably above the pre-war level, especially prices paid for fat steers. The assessed value of all livestock including poultry is around \$75,000,000. It is fair to say though that this figure is far below the actual selling price. Sales made by the Cooperative Livestock Shipping Associations were generally satisfactory, netting the producers more in most instances than prices paid by local dealers. The association doing business in seven southwest Virginia counties reports having sold 102 cars of lambs and calves, 44 cars of hogs and 22 cars of cattle, 24,903 head in all. Total sales price is given as \$404,662.00 which is an

increase of \$21,000.00 over last year. Several car loads of culled poultry were shipped cooperatively from the south central part of the state.

Governor Byrd in his message to the legislature stated that we produce only 80% of the pork required by the people of the state, 67% of the wheat; 50% of the milk; and 13% of the wool, and that 14,000,000 pounds of butter was shipped into the state in 1926. It would seem from these figures that there is plenty of room for increased production, especially for dairymen.

About the usual time was devoted to fairs. All counties in which agents are employed seem to expect ^{them} to fill an important place; some of them going so far as to act as manager or secretary. Sixty county or district fairs were held and in addition a number of community fairs. The agents helped at all of these, while the district men and specialists served as judges. It has been customary for a number of years to perform this service gratis. In addition to this a great many of the agents had 4-H club or county agricultural exhibits at the State Fair.

Hardly as much time has been devoted to cooperative marketing associations since the failure of the tobacco association. In those sections of the state however, where cooperative associations existed the agents did all in their power to make them successful. No new associations were organized.

Considerable progress was made in the grading and standardizing of farm products. This was done under the supervision of the State Division of Markets, but our agents assisted to some extent by explaining the methods, advantages, etc.

Little or no progress was made during the year by National farm organizations. Both the Farm Bureau and the Farmers Union are very weak. The Grange has come into the state and organized a few locals. It has employed field agents or organizers to organize as many counties as possible in 1926. This will likely make the other two organizations more active.

E. ORGANIZATION OF EXTENSION WORK IN COUNTIES.

1. No change has been made in the plan of county organization during the past year. Several new agricultural advisory boards were organized. These boards were formed for the purpose of assisting the agent in formulating his plan of work, both a long time program and one for the year, and to assist also in putting it across and seeing that Extension work is conducted properly in the several counties. They are composed of the leading farmers engaged in the different types of farming carried on in the county, several business men, bankers, Smith-Hughes teacher, editor of local paper and any other persons who may be especially interested in promoting agriculture and rural advancement. Some of these boards have been inactive while others have rendered valuable assistance. A number of agents have developed, with the aid of the specialists and advisory boards, a long time program for their counties.
2. The State supervisor or his assistants (the five district agents) have either met all boards of supervisors and other local appropriating bodies in the interest of appropriations, or arranged beforehand for the appropriation to be made. All meetings of advisory boards have been attended, their duties and responsibilities explained, and aid given them and the county agent in making their plans of work. Numbers of other meetings were attended where Extension problems were discussed.
3. Seven hundred and fifteen communities in 56 counties were reported as having cooperated with the agent in working out an Extension program. In some instances the specialists interested and the district agent attended these meetings and aided the county agent and local people in formulating their plans. Demonstrators were selected for the various projects to be

undertaken and leaders selected to aid in carrying out the recommendations. No records or copies of such plans are available. Results from such community programs are not satisfactory.

4. In most cases the advisory boards have been divided into project committees such as agronomy, livestock, poultry, etc., according to the member's peculiar fitness. These committees meet and study their problems, then make certain recommendations to remedy the conditions. These recommendations are later presented to the board as a whole, and are accepted, sometimes with certain changes, as a part of the program for the county. This appears to be the most acceptable method of using advisory boards in working out programs.
5. County programs are developed as explained above, by the county agent on the advice of his agricultural advisory board, district agent and in some cases the specialist concerned. Such a program is given below showing both the goals set and results obtained.

PROGRAM

Goals established

(1)

Results achieved

Boys and Girls Club Work

100 members
2 organized clubs

75 members
1 club organized

(2)

Soil Improvement - Fertilizer

15 fertilizer demonstrations
15 lime demonstrations
15 soil improvement demonstrations

13 completed
14 completed
13 completed

Goals established

(3)

Results achieved

Farm Crops

20 corn	18 completed
20 wheat	17 "
20 oats	20 "
40 rye	39 "
8 alfalfa	4 "
30 soybeans	29 "
15 crimson clover	2 "
12 red clover	15 "
8 sweet clover	17 "

(4)

Animal Husbandry

Poultry

15 new houses	21 completed
10 old houses remodeled	4 completed
20 roosters to be placed	29 placed
50 feeding for winter eggs	106 "
25 flocks to be culled	76 culled

Dairying

10 purebred bulls to place	11 placed
20 purebred heifers to place	10 placed; 13 grades placed
12 feeding demonstrations	21 completed
10 silos to be built	2 completed

Hogs

15 purebred boars to place	11 placed
30 purebred sows to place	45 placed
10 hogging down demonstrations	7 completed
500 hogs for market	500 sold

Sheep

4 rams to place	4 placed
1 purebred flock to establish	1 established
8 docking demonstrations	7 completed
20 ewes to place	11 placed

Race Cattle

2 purebred bulls to place	3 placed
3 feeding demonstrations	2 completed

Goals established

(5)

Results achieved

Home Garden and Orchard

20 garden demonstrations
5 spraying demonstrations
5 pruning demonstrations

19 completed
8 completed
7 completed

(6)

Marketing and Farm Organizations

Exhibition of extension work

County agricultural
fair was held.

II. SUPERVISORY PROGRAM.

1. The supervisory program of the State leader and his assistants (the five district agents) for the year 1947 included:
 - (a) Securing local funds for continuation of Extension Work in all counties where it was being conducted at the close of the year, and in several new counties. Appropriations were secured in all of these. Three counties withdrew appropriations during the year and three others came in as stated earlier in this report.
 - (b) Assistance to those county agents who planned to organize agricultural advisory boards and also where boards already organized were planning their year's work. This was done in every case.
 - (c) Giving special attention to the weaker agents and to those who were new to the work. This was done.
 - (d) Studying each agents' problems and helping him solve them. This was done.
 - (e) Assistance to agents in making a survey of the counties, preparatory to making a long time program, as well as to those who were making a plan of work for the year. This was done.

(f) Seeing that agents gave more publicity to their work by writing timely newspaper articles for their local papers, enrolling a larger number of adult demonstrators and 4-H club members, and kept records of same; seeing that they visited all parts of their respective counties; held field meetings at successful demonstrations; aided all commodity marketing and other cooperative farmers' organizations; kept office and records in better shape; increased their efficiency as far as possible and placed Extension work on a more solid basis; meeting all new problems that arose and aided in solving them; encouraged boys and girls to join 4-H clubs and attended short courses; advised increase in production of home supplies. Progress was made in all of these lines. Newspapers as a whole showed a favorable attitude and gave space readily to agents' articles. Help was given to all farmers' organizations, the agent's efficiency was increased and we believe Extension work is on a more solid foundation.

2. A number of agents have their offices in the court house, others in post-office buildings at the county seat; a few, where public buildings are not available, have offices in their homes. The main idea is to have an office as readily accessible to farmers as possible. These offices are only partially furnished except where the agent purchases equipment himself. The Extension Division has helped each agent to a very limited extent in the purchase of filing cases, desk, chair, typewriter and other miscellaneous equipment. Very few agents have sufficient office equipment. Only five agents have stenographic assistance furnished them, the others doing this work themselves or paying for it out of their own pockets when the occasion demands it. Several lantern slide machines

and moving picture machines are owned by the Extension Division. The agents make frequent use of these machines. A few of the agents own machines and use them to considerable advantage.

3. A meeting of all agents was held at Blacksburg in January, a partial account of which has already been given. Most phases of the work were discussed and instructions for the year given. Special emphasis was placed on plans of work, making them conform to the several counties' needs and the importance of following them as closely as possible. The policy of placing new men as assistants before giving them a county has been continued. This training period lasts for several months and has the advantage of giving the supervising agents an opportunity to acquaint themselves in regard to the man's ability before he is given charge of a county. In some cases he is found to be unfitted for the work and his services are discontinued. As soon as a new man goes into a county he is visited by his district agent who introduces him to the leading farmers, business men, and county officials and given as full information as possible about his county. He is also visited by the specialists who offer him any assistance he may need from them. The district agent keeps in close touch with him by frequent visits.
4. The district agent, and sometimes the Assistant Director, discusses an agent's program for his year's work with him. The advisory boards either assist in its making or approve it after the agent has outlined his plans to them. A copy of these programs is forwarded to the Washington office, one kept in this office, and the county agent retains another for his reference. These plans are followed as closely as practicable.

5. All subject matter is furnished the agents by the heads of the several departments in the college or by specialists. The heads of these departments frequently address farmers meetings held by the agents.
6. Statewide publicity is given through the Extension Division News, a monthly publication consisting of 8 pages, 4 columns to the page. It contains practical suggestions for and results of work done along various lines that are being developed in the state. It now has a circulation of 50,000 among farmers, bankers, county and state officials, teachers, ministers and others interested in rural betterment. Much of this material is supplied by members of the Extension Division. The Agricultural Club Letter, a 4 page, 16 column paper, is issued each month by the Extension Division. It contains items of especial interest to club members and teachers, and those interested in club work. About 15,000 copies are sent out each month. New bulletins are sent out as they come from the press, to people whom it is felt would be interested in the matter they contain. Thousands of circular letters are sent out both by specialists and county agents. Frequent articles are written for the farm papers having the largest circulation in the state. Many of the county agents have a column in their local papers. The Extension Division editor frequently prepares articles for the city papers. The editors of practically all papers printed in the state gladly accept articles bearing on Extension activities. Publicity has also been given through public meetings, club encampments and short courses, motion pictures, and fairs, State, district, county and community.

III. PROJECT ACTIVITIES AND RESULTS.

A study of the agents' reports will show that some work was done with practically every crop or breed of livestock grown in the state. In making his plan of work each agent usually selects several of the leading or money crops as his major projects and pays most of his attention during the year to these, but at the same time he advises with farmers producing other crops of minor importance.

GENERAL ACTIVITIES

Forty-three county agents report 54 county associations of various kinds fostering their work. Seven hundred and fifteen communities assisted the agents in making their plans of work. Four hundred and thirty-four local leaders were actively engaged in forwarding the extension program with 4-H club members and 1053 helped with adult work. One hundred and forty-eight adult clubs were organized having a membership of 5702 men and women. Four thousand and twenty-two boys and girls completed their work while 3705 men and women finished theirs. Sixteen judging teams and 92 demonstration teams were trained. Two hundred and twenty-nine former boy or girl 4-H club members entered college. The agents made 57,349 farm visits to 22,388 different farms. They also made 6914 visits to 3496 different homes. They received 34,196 office callers and 29,419 telephone calls. Four thousand nine hundred and seventy days were spent in the office and 15,591 in the field. Three days were spent in the field to each one spent in the office. Two thousand seven hundred and thirty-seven newspaper articles were prepared; 50,982 individual letters written; 63,232 bulletins distributed; exhibits were made at 77 community or county fairs; 5690 meetings of all kinds were held at which 156,437 persons were present except in cases where the same person attended two or more meetings.

SOILS

All soil building demonstrations are classed under this head. They usually consist of proper use of barnyard manure, lime, fertilizer, and the growing of legume crops. Fifty-eight agents conducted 3457 demonstrations of this nature on 18,195 acres. Two thousand nine hundred and forty farms adopted better practices in the use of commercial fertilizers; 984 farms took better care of manure; 4596 farmers used some form of lime for the first time, using 42,222 tons; 5297 farmers plowed under green manure crops; 13,166 farmers are reported to have adopted some improved practice in keeping up the fertility of their soils.

Extracts from two agents' reports:

Most of the soils in this county have to be handled very carefully in order that they may be kept fit for the production of bright tobacco. For this reason we advocated the division of the farm into two sections, one for tobacco and the other for grain, grasses, clovers, etc. Cooperating in this practice of keeping the soils fit for tobacco, and at the same time producing food and feed, were over 1000 farmers. Forty-three of these were trying out better fertilizers, 981 turning under green manure crops, 554 used lime in some form, and 14 were taking better care of manure. Because of the great distance from the railroad to some of the farms, the saving to be made in the hauling of high analysis fertilizer has been emphasized. Results along this line have been very gratifying and it is very rare indeed to find a farmer using a fertilizer for tobacco analyzing less than 3-8-3, and a great many are using an even higher analysis. To keep up the supply of manure in the tobacco lands, rye is the most widely used fallow crop and the benefits of such practices are such that when a farmer once tries it he continues to use it.

The 36 result demonstrations conducted under this project were conducted with 6 fertilizer demonstrations and 30 lime demonstrations. Most of the fertilizer demonstrations were that of using fertilizer as recommended by the Virginia Experiment Station for all crops. The most outstanding piece of soil improvement work was that of sowing Crimson Clover with buckwheat last fall. The buckwheat being harvested for grain and allowing the Crimson Clover to come along as a cover crop to be turned down in the spring. Four farmers adopted this plan with very satisfactory results, making an average yield of 30 bushels of buckwheat per acre which was sold for a sufficient amount of money to cover all expenses and have a cover crop to turn under. Eighteen car loads of lime were used by the farmers. Most of these cars were bought cooperatively and were used in preparation for alfalfa. Quite a large tonnage was bought in small quantities from local dealers of which

the county agent has no record. In nearly every case where lime was used there was an increase in the yield. Due to the sandy condition of the soil it seemed the best results were obtained from the frequent light applications. Too much of the lime leached away before the plants could use it.

CORN

A larger acreage is planted each year to corn than to any other crop the state produces. Its total value is also greater, however the larger part is consumed on farms where grown. It is estimated that 1,626,000 acres were planted to corn in 1927 and that the average yield was 29.5 bushels per acre. This is nearly three bushels per acre over the ten year average. Better methods, better seed and a better season are responsible for this increase. Forty-nine agents report 677 demonstrations involving 7,773 acres with an increased yield of eight bushels per acre. Six hundred and seventy-eight boys and girls grew 1,337 acres producing 33,496 bushels. Two thousand two hundred and seventy-eight farmers planted improved seed; 1,488 practiced seed selection; 330 treated for disease and 3,676 adopted some improved practice.

Extracts from agents' reports:

Fifteen corn demonstrations were planned in program of work and fifteen completed on two hundred and ninety-two acres, most of which was planted with the improved seed of adapted varieties. These demonstrations brought out the value of well prepared seed-bed, good feed, high analysis fertilizer and good cultivation. Four of them were where crimson clover was turned under for the corn crop which brought out the value of a good green manure crop turned under. The estimated yields on demonstrations were from 35 to 80 bushels per acre and approximately 15 bushels more than ordinary crops. Corn yields this year have been better than usual owing to season. There was also more good corn exhibited by adults at the county fair than ever before. I am told that the general quantity of corn exhibits was far better than past years. From the interest shown at the county fair corn show this year, it is believed that corn will continue to improve in quantity over the county as a result of demonstrations and other county agent work.

Corn came in this year more than ever before for a complete fertilizer. One fertilizer dealer told the agent that he just could not keep a stock of the goods he recommended. In most cases the fertilizer used on corn gave paying returns. Of course the season is somewhat a limiting factor.

The following figures taken from a demonstrator's books will probably be good reading for those interested in soil building:

Expenses		Receipts	
1924. Plowing	\$6.00	1924. Corn, 26 barrels	
Barrowing	4.00	@ \$5.00	\$130.00
Fertilizer	54.00	Fodder	21.00
Lime	30.00		
Seed corn	1.00		
Cultivating	8.00		
Cutting & shocking	15.00		
Beans sowed in corn	12.00		
Seed wheat	4.00		
Fertilizer on wheat	18.00		
1925. Nitrate on wheat	4.00	1925. Grazing wheat	3.00
Clover seed	8.00	44 bushels wheat	
Harvesting & threshing	8.00	@ \$1.80	79.20
1927. Plowing	9.00	Straw	6.00
Barrowing	4.00		
Planting	2.00	1927. 39 barrels corn	
Fertilizer	40.00	@ \$5.00	195.00
Seed corn	1.50	360 bundles of	
Cultivating corn	12.00	fodder @ 6¢	21.00
Cutting corn	7.50		
Shocking corn	7.50		
Beans sowed in corn	6.00		
Total -	\$260.90	Total -	\$445.90
Total profit		\$185.00	

In 1926 this piece of land rested. There was, however, a good crop of clover on it which was not mowed but turned under.

From these figures it will be seen that it is possible to build soil and at the same time stay ahead of the game financially. Taking the four years, there was an average of \$15.25 profit per acre during the time the land was being built from practically nothing to a high state of fertility. This man has often been criticized by the agent for using too much fertilizer. In fact he says that the only criticism he has to make of the agent is that he will not let him use as much fertilizer as he wants.

WHEAT

Nineteen hundred and twenty-seven did not prove as good a wheat year as 1926. About the same acreage was seeded both years but due largely to a wet, cold spring and a late freeze which injured the crop in the valley and southeast Virginia, the yield was reduced. The estimated yield is given at 8,381,000 bushels or 18.2 bushels per acre. Stinking smut has been prevalent nearly all over the state for the past few years. Last year it appeared to a greater or lesser extent wherever wheat is grown and seed were not treated. This gave the agents in those sections much concern and considerable time was devoted to giving seed treating demonstrations. As a result of this work 48 agents report that 6,527 farmers treated seed. Forty agents report 2,126 demonstrations involving 18,009 acres making an increased yield of 4.7 bushels per acre. One thousand five hundred and seventy-seven farmers used improved seed for the first time; 182 practiced seed selection and 7,427 adopted some improved practice.

Extracts from agents' reports:

Wheat work consisted in making two head selections on two certified growers' farms, making two hot water treatments for loose smut, and the fall campaign for control of bunt by the copper carbonate method. Our equipment is now about 30 barrels and two machines, well distributed over the county. As was expected, it has been difficult to induce farmers to continue treating after the disease has been controlled to a point where but little smut is seen. The volume treated totaled only 8000 bushels as against 18,000 in 1926. The body of this county has smut under control. Some outlying areas and one adjoining Maryland, failed to respond to urging and have some losses this year. One farmer adjoining the town of Leesburg was too stubborn to treat and took a loss of 25% on every bushel sold. His crop was rotten.

Local millers and dealers reporting through the season show that ⁱⁿ one place only three crops were smutty enough to cut the price. One showed no crop too smutty, while a third found all crops had a trace but none too smutty to make first grade. Still another found that all crops had a trace and the proprietor advises that he thinks nothing of the copper carbonate method. This dealer however, handles but little wheat. This data is given to show the general attitude towards bunt control after three years of intensive campaigning; all dealers but one cooperating fully.

The work conducted with wheat was that of variety, seed treatment and fertilizer. There were 78 growers growing V. F. I. No. 121, twenty of which were demonstration fields yielding on an average of five bushels per acre more than other varieties. There were 1800 bushels seeded this fall and 1700 bushels were treated for control of smut.

There were approximately 2700 bushels of wheat treated in the county for smut. The county agent's advice was followed as to seed bed preparations, seeding, the use of 0-12-0, 3-6-3 and 16% acid phosphate, using 400 pounds per acre. Through the help of the county agent, the Crop Improvement Association established the idea of good seed in the minds of the farmers in this county.

CATS

The value of the 1927 oat crop is estimated at \$2,559,000 or nearly a million dollars less than in 1926. The acreage was about the same but the yield was four and one-half bushels less per acre. One hundred and fifty-nine demonstrations involving 1,648 acres were conducted, yielding 8.6 bushels more per acre than the general yield. Four hundred and nineteen farmers planted improved seed; 352 treated seed for disease prevention and 675 adopted improved practices.

Extracts from agents' reports:

In 1922 there were 38 acres of this crop grown in the county. In 1927 we had 1100 acres. There are 40 farmers growing V. F. I. No. 1 oats and a great many growing Virginia Gray Winter. There were 20 completed records on this crop with an average yield of 84 bushels per acre. The V. F. I. No. 1 yielded 14 bushels per acre more than the Virginia Gray under the same treatment. The white oat predominates here this year due to the color of the hull, which makes a light colored mixed feed. This crop is grown principally for the feeding of poultry and dairy cows.

The work conducted with oats and rye has been a very outstanding one, especially for dairymen and sheep raisers. There were 28 grazing demonstrations completed, using only the Abruzzi variety. These pastures have furnished all the fall grazing that these dairymen and sheep raisers needed. Since the Abruzzi variety was brought in the county four years ago by the agent and by constant preaching this

variety is the only variety used at the present time. Concerning oats, there were 19 demonstrations started and 15 completed. This work was done chiefly among dairymen who were influenced by the agent to seed enough of the V. F. I. No. 1 to take care of their home mixed dairy ration and leave enough for seed. The majority of the oats grown in the county at the present time are of this variety.

RYE

Rye is grown on a small scale as compared with the other more important grains. In 1927 the state produced 42,000 acres yielding about 12 bushels per acre and valued at \$370,000. A considerable acreage is grazed and then turned under each year for corn or some other crop. The agents advise it as a winter cover crop. Two hundred and twenty-six demonstrations involving 2,171 acres produced an average increased yield of 4.5 bushels per acre. Two thousand one hundred and forty farmers used improved seed; 105 selected seed in the field and 2,260 adopted some improved practice.

✓ Extracts from agents' reports:

Demonstrations in rye were not planned in the program of work, but there being a few growers is a good reason for growing same. Some were added to the year's work, resulting in two good demonstrations which were completed and carried through the year covering sixty-five acres which produced three bushels more than ordinary crops, which was due to better preparation and better seed. There was also one grower of certified seed rye who sold it as such and received a hundred dollars more for the crop than if it were ordinary seed. More of these demonstrations should be encouraged since many of our soils will grow this crop better than wheat and for the past several years it has had a ready market as a seed crop. A quantity of it is grown here, which is used only for cover and grazing crops for all kinds of livestock. It also has a prominent place on livestock and grazing work for which reason its growth should be encouraged so that it will be accessible to local farmers who want seed.

Abruzzi rye is used as a seed and grazing crop. One hundred and thirty-five farmers seeded this crop around the middle of August for early grazing. Forty of this number are supported by records, part of which were seeded in 1926. The yield of grain was four bushels more per acre than Rosen Rye and the Abruzzi can be grazed three weeks earlier than the Rosen. The beef cattlemen, dairymen, sheep and hog raisers of the county are using this crop for grazing to reduce their roughage bill.

BARLEY

Barley is grown to a very limited extent though there has been some increased interest in recent years. The acreage in 1927 however, was smaller than in 1926. The yield per acre was less also, being given as 26 bushels. Fifty-five farmers conducted demonstrations involving 600 acres and report an increased yield of nine bushels per acre. One hundred and fifty-six farmers planted selected seed; 143 treated for disease and 193 adopted improved practices.

ALFAIFA

Due to the splendid season this crop made an excellent yield. In many sections of the state four good cuttings were made. The 1925 census gives Virginia 33,767 acres of alfalfa of which Roanoke County has 2400 acres. This estimate for the state seems rather low. Many of our agents have been urging their farmers for years to seed a few acres of it. Six hundred and thirty demonstration fields involving 3,412 acres were seeded in 1927. Five hundred and thirty-nine demonstration fields involving 3,412 acres were harvested and yielded seven-tenths of a ton of hay more than the general average. Seven hundred and sixty-four farmers used improved seed; 534 inoculated seed for the first time and 1268 farms adopted improved practices in growing this crop.

Extracts from agents' reports:

In carrying out the recommendations of our County Agricultural Advisory Council, in regard to raising feed and food stuff; our farmers are getting a good deal more alfalfa sowed. The getting in of free lime donated by the Bertha Mineral Company, and the increasing appreciation of the value of lime along with the cheapness of alfalfa seed has also been a great stimulant to many farmers to try a lot of alfalfa. The county agent worked with 25 farmers on alfalfa this year, ten of them seeding alfalfa this year for the first time. Two hundred cards for securing inoculation for legumes free from the Department of Agriculture in Washington were given to farmers. The county agent inoculated the seed for one farmer. Most farmers appreciate the value of inoculation.

Instead of putting my time on poultry culling this fall I worked on lime and alfalfa and the results, while not large, are gratifying. Fourteen men, eleven new growers, seeded some 24 1/2 acres and eight of these fields are on public roads where the passerby can see. In addition two men seeded 3 1/2 acres to a mixture of alfalfa and known origin red clover.

Last spring I got a letter from E. M. Stovall of Bakerville, E. S., who asked me to come by and talk with him regarding poultry culling, his orchard and using lime. I could not get down at once but when I did go Mr. Stovall said something about liming some land as an experiment. I told him about ordering a car of the free lime and urged him to see one of his neighbors who had this in charge. He succeeded in getting two tons and he put the two tons on some land he had been trying to improve and seeded the field in compass. Shortly after the peas came up the difference between the limed and the unlimed land was very striking and continued so until nearly harvest time. This man told me he wanted to grow some alfalfa and of course I was pleased. I inspected the field and told him that he could get this limed land in alfalfa this year if he was careful to fertilize and handle the land and crop according to the best methods of other alfalfa farmers. To make a long story short, the farmer disced down his peas, fertilized his land, inoculated his Highland grown alfalfa seed and seeded the crop. On my last visit, November 30th, the man was so carried away that he wanted 10 tons of lime and wished to start at once manuring another acre for alfalfa, as well as seeding several acres to sweet clover, being much impressed with what the district agent had told him of that crop. He has a good stand of his present alfalfa. I am especially pleased with this man's work as it is in a section where very little alfalfa has been grown.

SOYBEANS

Very little if any increase appears in the acreage seeded to soybeans to be harvested for seed in 1927. In fact the acreage harvested for seed appears to be smaller. This is probably due to a drop in the price of seed. The season being favorable caused a large growth of vines, while the set of seed was not as heavy as usual. It is estimated that the state produced about 196,000 bushels from 14,000 acres. In addition to this a large acreage was harvested for hay. Fifty-five agents report that they conducted 1629 demonstrations; 1372 of these involving 13,367 acres were completed, made reports showing an increased yield of four bushels of seed or four-sevenths of a ton of hay per acre. Two thousand and thirty-seven farmers used improved seed; 246 of them selected seed for another year; 2348 inoculated seed for the first time and 3976 farms adopted some improved practice in growing their crop.

Extracts from agents' reports:

Soybeans as a soil improving crop is almost universally employed. This plant has taken the place once held by cow peas. Hardly a farm in Norfolk County that does not grow soybeans as a land improver. Even the truck growers are growing soybeans after some winter truck crop to be turned in as a green manure. With the general farmer, soybeans is a standard crop. As a hay crop there is nothing that equals it for this section of the state. It so nearly fills the need that it is sometimes difficult to induce a farmer to try a field of alfalfa even if conditions are favorable for success. There were six farmers who planted the Dixie to test its merits as compared to better known varieties. This resulted in a very favorable impression for the Dixie for general purposes. There are four uses of the soybean which make it exceedingly popular, viz: turned in as green manure, cured for hay, harvested for beans and as a grazing crop to be hogged down. The last named use of soybeans will be mentioned later under "Hog Raising."

The soybean has found more favor with the farmers who keep sheep or dairy cows as it is equal in feeding value to either the alfalfa or sweet clover and can be produced more cheaply. Eleven sweet clover and twenty-seven soybean demonstrations were completed. In each of these

demonstrations free inoculation was furnished through the county agent from the United States Department of Agriculture. In one of these plats a strip twelve feet wide was left through the middle of the field where the soybeans were not inoculated. The beans on this strip were only half as high and turned brown long before the rest of the field ripened, producing only half the amount of hay. The fact that cards for the inoculation of three hundred bushels of legume seed were sent out by the county agent is enough evidence that the farmers are convinced of its value.

SWEET CLOVER

Each year shows a larger number of farmers seeding sweet clover. This is probably due to several reasons. It is becoming better known and the seed are comparatively cheap. Good reports have been made both to its value as a land improver and grazing or hay crop. Fifty agents report 533 demonstrations seeded in 1927 as compared with 321 in 1926. Four hundred and twenty-one of these demonstrations involving 2,963 acres were completed and indicated an increased yield of seven-tenths of a ton of hay per acre. Three hundred and eighty-eight farmers planted improved seed for the first time; 563 inoculated seed and 948 adopted some improved practice.

Extracts from agents' reports:

Although sweet clover has grown wild here for a great many years it has been used very little as a crop; nearly all attempts at seeding failed. This last spring a number of farmers seeded sweet clover. Ten farmers asked for advice but only two agreed to follow out all instructions, and so far as I have been able to find out there are only two crops in the county now. One of these was grazed as soon as the wheat was out; the other was allowed to grow and was cut for hay in October. The chief cause of failure here was the lack of lime and inoculation. The two demonstrations were seeded in the wheat the middle of February, using unhalbed seed, 2000 lbs., of shell lime and 600 lbs., of 12-3 fertilizer. The farmer who grazed his crop had an excellent pasture. After the other crop had been cut and shocked

a meeting was held in the field for the purpose of discussing this crop. This meeting was called at a very busy time and the attendance does not indicate that interest in sweet clover has waned. The 19 farmers present were addressed by Mr. J. E. Quisenberry, District Agent. The demonstration yielded 2 tons of hay per acre and gives promise of a splendid fallow for corn next spring. It was of special interest because six of this man's neighbors had seeded sweet clover without lime or inoculation, and consequently had no clover.

Much sweet clover was seeded during the past spring, most of which was inoculated and the soil limed before seeding. In most cases excellent results were secured. A few demonstrators failed to get even fair stands when seemingly every requirement was met. Sweet clover seeded in the spring of 1926 gave excellent yields. Some demonstrators pastured their sweet clover, some was cut for hay and in a few instances the first crop was cut for hay and then seed saved from the second crop. All who secured good stands were well pleased.

CRIMSON CLOVER

Crimson clover seems to have been somewhat neglected in the past few years though there is an increased acreage over 1926. Its growth is confined chiefly to the eastern part of the state where it is used as a hay crop as well as a soil improver. It is usually seeded at the last cultivation of some crop and turned under the following spring in preparation for corn. Numerous increased yields are attributed to its use in this way. Thirty-one agents report 234 demonstrations seeded in 1927. One hundred and seventy-one farmers used improved seed; 123 inoculated and 348 adopted some improved practice in its growth.

Extract from an agent's report:

A great majority of farmers seed their corn alleys at the last cultivation to crimson clover, but due to the high price of clover seed this year the practice did not apparently increase. Clover not only serves as a cover crop but prevents leaching and preserves valuable plant food that would otherwise be lost from the soil. In the spring, if the clover has made enough growth to make it valuable hay and the grower feels that it is worth more to cut as hay than to be turned under as green manure, he cuts it for hay. On a few farms where the better methods have been in practice the farmers can often cut twenty-five dollars worth of hay per acre and then have a stubble left that will make a good crop that season.

CLOVER

The bulk of the commercial hay crop in Virginia consists of clover and timothy. The other hay such as alfalfa, soybeans, cowpeas and crimson clover being consumed largely on the farms where produced. For some years farmers have had trouble in securing stands of clover due to several causes; extremely dry season, lack of lime in the soil and unadapted seed. Our agents have always stressed the importance of growing clover. Since experiments have proved the inferiority of certain foreign grown seeds and the value of known origin seeds there has been an increasing demand for more dependable seed. Many of the seed houses are handling better grades, and at the same time more native grown seed are produced. These seem to be better adapted and give better results. Farmers in many sections of the state who had not saved seed for years harvested a nice lot of seed last year. It is estimated that at least 10,000 bushels of such seed were saved.

The total production of hay is estimated at 1,396,000 tons as compared with 1,102,000 tons the average for the past five years. The agents report 470 demonstrations seeded in 1927 and 343 involving 3,023 acres harvested in that year. The increased yield is given at one-half ton per acre. Nine hundred and fifty-five farmers used improved seed; 86 saved seed; 308 used inoculation and 1372 adopted better practices in growing clover.

Extracts from agents' reports:

Success in growing red clover in Orange County is a tribute to Extension Work coupled with known origin seed work. A few years ago many of our farmers had given up trying to get clover hay. One good farmer remarked to the agent: "There is more good money thrown away by the farmers in this county in clover seed than in any other one thing that I know of." That farmer today is growing good clover thanks to sufficient liming of the land and the use of known origin adapted seed, and his is the rule now over the county. This known

origin seed was a source of irritation to the old time seed merchants in the county, but the success of the project is so outstanding that they have almost without exception gone over to known origin seed and the result is that all of our farmers, whether followers of the Extension Program or not, have been benefitted through this detail of the work. This change is worth thousands of dollars in this county. The fact is that this year it has actually presented us with a problem. For years we have been importing hay by the car load, shipment after shipment coming in every winter. This year if any hay is shipped into the county it will not be because it is needed but because someone priced the baled product so far below the market that it seemed a big bargain and is handled as such.

The major portion of the red clover crop is seeded in wheat as a nurse crop in Marsh. This year 18 demonstrations were secured and 17 were completed. Twenty-nine result demonstrations are started or under way to be continued through 1926. This crop has been grown in rotations here for the past 50 years and there are practically no farms or portions thereof where this crop has not been successfully grown, hence the soil is naturally inoculated. Two hundred acres of red clover were seeded this fall in August alone; a perfect stand resulting. The 45 acres which were seeded in the fall of 1926 came through in good condition giving the grower a nice crop of hay and seed this year. As has been stated on the other clovers mentioned above the growers have established a common practice of top dressing this crop with 16% acid phosphate at the rate of 400 lbs., per acre. This is the best fertilizer known to this crop. In 1926 this county harvested 1100 bushels, some acres yielding 40 & 45 per acre. The home grown seed is the only seed we have used in the county which gives the grower a crop. No seed from the trade does nearly so well as the seed produced in the Hephannock Valley in Essex County. This crop can be made a big money crop here. The land is full of weeds and buckhorn. It must be cleared of these two pests before we can put this crop where it should be from a money standpoint. I don't believe there is a machine made that will take dodder out of clover. There are possibilities of organizing a Red Clover Seed Association. The Crop Improvement Association representative inspected with the county agent 350 acres of red clover just before harvest and without exception dodder was found in each field. The cleaning of this area of noxious weeds in this crop is the next project outlined to undertake.

COPEAS

Copeas are not as popular as they were before the advent of the soybeans, though many farmers still seed a small acreage. In some sections there is a common belief that copeas will improve the soil more than soybeans. This is probably due to inoculation and the fact that more of the copea vine is left on the land.

Reports show a small increased acreage over 1926, however the yield of peas is slightly less, probably due to unfavorable weather conditions. Twenty agents report 198 demonstrations and give the yield as 156 of them involving 1,072 acres at two bushels per acre over the general average. One hundred and ninety-three farmers used better seed; 117 inoculated for the first time and 316 adopted better methods of production.

Extract from an agent's report:

A disappointing feature to my soybean campaign developed this year which makes my soybean report look very bad. Briefly it was this. Owing to the volume of soybean seed and copea seed in the markets the copea prices were very low and it so happens that those farmers who had gotten adverse results in soil improvement (or so they thought) from using soybeans, due to their own failure to inoculate, etc., spread their propaganda widely assisted by one of our warehousemen. I took the matter up with members of our board and decided to let the copea farmers "have their head," knowing that there would come a reaction and not get into an unprofitable argument. Except as we can produce our own seed I am as glad to see copea hay as I am soybean roughage, so "why worry" was my policy. Those farmers who follow the program and do it right get soil improvement and are adhering to the soybean and those who dropped back to copeas will tire of the harvest problem and come back to soybeans eventually, or at least this is our theory. We abandoned the proposed seed meeting for the above reason.

VELVET AND FIELD BEANS

Velvet beans are grown only in the eastern counties where there is a long growing season. Only the early maturing varieties succeed there. Five agents report 9 demonstrations but no record of yield is given. Other beans on which report is made are probably the birdseye which is grown successfully for human food in several of the southwestern counties. A yield of 20 bushels or more is frequently obtained. Four agents report 17 completed demonstrations involving 110 acres on which an increased yield of four and one-fourth bushels per acre was secured. Eight farmers used improved seed; 59 inoculated and 236 adopted improved practices.

PEANUTS

The peanut crop was very late in maturing and at the time our reports came in picking was not completed. While there was an increase in the acreage over 1926 the yield was less by about 10%. However, better prices will cause the total receipts to be about the same. This crop being confined to a small section of the state only five agents report any demonstrations. They report 43 completed demonstrations involving 316 acres on which an increased yield of 15 bushels per acre was obtained. Fifty-five farmers used selected seed; 57 practiced seed selection and 226 adopted improved practices.

LEGUMES

More interest seems to be manifested in this crop. While some varieties grow wild in certain sections of the state and make a good summer and early fall pasture, very few farmers have seeded it until recently when seed of improved varieties have

become available. It is especially recommended for poor acid soils and these too damp to grow the clovers. With the large amount of soils of this nature in the state it would seem that lespedesa has a prospect of becoming more generally used. Thirteen agents report 46 completed demonstrations involving 332 acres and an increased yield of one and one-fourth tons per acre. Twenty-one farmers used an improved variety of seed and 27 adopted some improved practice.

Extract from an agent's report:

The most striking pasture demonstrations conducted this season were where two farmers seeded lespedesa last spring. One of these demonstrations has been very closely observed by the agent. Last fall an old broomsedge turf was turned under and rye seeded on six acres. Cattle were allowed to graze this rye all winter and kept it down very close. This spring (March) lespedesa was seeded on the land at the rate of fifteen pounds per acre, 250 lbs. A_2 being applied and the land harrowed. As a result a fine stand was secured and the cattle have spent more time grazing this plot than any other part of the pasture, in spite of the fact that a good part of the pasture had a good stand of a standard pasture mixture growing on it which was seeded the fall of 1926.

Thus with an expenditure of \$3.00 per acre for seed and fertilizer, an old broomsedge field was converted into a good pasture. Lespedesa will be recommended for seeding alone and in combination with other pasture grasses in this section.

PASTURES

While farmers in southwest Virginia claim to have the best natural blue grass pastures in the world some deterioration is noticeable and where lime and phosphate have been applied wonderful improvement is noticeable. The number of pastures so treated is increasing. In Piedmont and Eastern Virginia where there is little or no blue grass, pasture mixtures, clovers, grasses, etc., are seeded. These give good results when handled properly. Thirty-nine agents directed work of this kind during the past year involving 2,260 acres. One hundred and forty farmers seeded improved grasses and 487 adopted some improved methods in bettering their pastures.

Extracts from agents' reports:

A pasture improvement meeting was held in a community where some of the work had been done. This meeting was held in the spring of this year some time after spring growth had started. With a number of interested farmers we visited Mr. A's pastures which had been treated with 200 lbs. of acid phosphate for the past two years. We found grass (clover and blue grass) growing knee high, with the field then carrying twice the number of cattle ever carried before. Such results as we saw there were convincing.

Hand in hand with the development of cream routes must go the development of more and better pastures. The mixtures that were used in the experiments on bottom lands several years ago proved very profitable and today we have approximately 100 acres in this mixture on our bottom lands. It is making profitable lands from our unsightly and worthless bottom lands, and I find more and more demands for mixture as the years go by.

IRISH POTATOES

The eastern shore of Virginia and a few other counties in that part of the state produce approximately 80% of all early potatoes grown in the United States. This crop made one of the finest yields last year on record; about 2,400 car loads were shipped. Prices were good in the early season but declined later. There is also a late crop grown in this section. It amounts to about 30% of the total Virginia crop. It, too, was unusually good last year. The Division of Crop Estimates placed the 1927 crop at 17,606,000 bushels. Our agents have done considerable work to improve the crop by the use of improved seed, most of which comes from Prince Edward Island or other northern sources, and treatment for disease and use of better fertilizer.

Thirty agents report 487 completed demonstrations involving 788 acres on which an increased yield of 38 bushels per acre was made. Three thousand three hundred and thirty-one farmers planted improved seed; 235 treated seed for disease; 3766 dusted

or sprayed vines and 4316 adopted improved practices. An annual farmers tour is held each year, the purpose of which is to look over these demonstrations. This tour arouses a great deal of interest and was attended in 1927 by 300 farmers and "Potato Officials" from seven states.

Extract from an agent's report:

This is the King Crop of this county and amounts to about 80% of all Irish potatoes entering Interstate Commerce during July of each year. Therefore its attention has been uppermost in extension work. A large number of method demonstrations were conducted consisting of all phases of the culture and handling of the crop. Two hundred and seventy-eight result demonstrations were completed which involved about 30 acres of this crop. These demonstrations included strain tests, seed treatment, fertilizers, etc.

Aside from the marketing problem the extension workers gave much attention to the study and demonstration of the various strains of cobbler. Seed was secured from all the leading farms in various parts of the county. Careful records and observations were made on these plots throughout the growing season and on June 15th an inspection tour was conducted which was attended by 300 Eastern Shore farmers and Potato Officials from seven states; New York, Pennsylvania, New Jersey and the Provinces of New Brunswick and Prince Edward Island, Canada.

Our seed source demonstration work is becoming more and more talked about and watched throughout the country. This is chiefly due to the extensive and intensive work that is being done and due to the many contacts the county agent has made on his several trips through the important seed growing districts. This work is greatly stimulating interest in the producing areas to produce disease free and high yielding seed for our Eastern Shore of Virginia farmers have the assurance that this year our tour will be attended by pathologists and certification potato officials from as far west as Minnesota and South Dakota, from which sections we are getting some of our certified seed. While at the Freehold, New Jersey, meeting of potato officials acquaintances were made with several of the Canadian and American Potato Officials who assured the writer of their visit to Accomac County next year to observe and study our conditions and requirements.

The treatment of potato seed for disease control is just nicely getting under way and more extensive demonstrations will be conducted during next year on both the spring and fall crop. There are several materials for this work which give promise of having commercial value and can be more easily handled by the average farmer than by the old Corrosive sublimate.

SWEET POTATOES

While sweet potatoes are grown for home consumption more or less over the whole state they only grow to perfection in the eastern part of the state where it is a commercial crop of considerable proportions. Prices being low in the early season caused late harvesting and a much larger yield. Total production is placed at 5,899,000 bushels. Our agents conducted a number of demonstrations in treatment of seed for prevention of disease, use of a better adapted analysis fertilizer, and better method of handling after harvest. Whereas the whole crop was formerly dumped on the market as soon as dug, resulting in low prices, a large part of it is now stored in curing houses and sold to better advantage later. A number of such houses were built in 1927, the agent in Princess Anne County being instrumental in having nine erected in that county. Seventeen agents report 214 completed demonstrations involving 695 acres on which an increased yield of 19 bushels per acre was made. Six hundred and seventy farmers planted improved seed; 188 practiced seed selection; 1143 treated seed for disease and 1358 adopted better practices.

Extract from an agent's report:

Sweet potatoes constitute an important financial item in Princess Anne county and for the past four years I have given a large amount of time in developing and improving this crop in the county. I feel that I have made fairly good progress with this project and think it safe to say that Extension Work along this line will net the sweet potato growers in Princess Anne, who are following our advice, at least \$30,000. This year, more than would have been realized had the old practices prevailed that were common four years ago. One farmer remarked a few days ago: "That by following my instructions he was growing the best sweet potatoes that he had ever grown in his life and that his crop this year yielded at least twice as many as did adjoining crops where the same old practices were followed, that his crop was entirely free of disease while the neighbors crop was badly infested."

The above work for the past four years resulted in 59 demonstrations in sweet potato seed work this year and reports from 27 of these farmers shows that 2445 bushels of seed sweet potatoes were carefully selected and treated against diseases before bedding as directed, that sprouts from these treated seed were planted on 255 acres, that a total yield of 51,753 bushels were harvested and that this work netted these farmers not less than \$9,703.40, figuring the estimated increase at 75% per bushel.

The average yield of sweet potatoes for the county is about 110 bushels per acre. These demonstrations were well scattered over the county and show conclusively that by following the practice of seed-selection and treatment that an average of 80 bushels more per acre can be realized.

Fertilizer recommendations for sweet potatoes were furnished all of the above demonstrators and reports that have been received show a difference of 46% bushels per acre in favor of recommended analysis over stable manure, and 42 bushels over a lower grade fertilizer. All demonstrations of the recommended analysis also showed a larger percent of marketable potatoes.

Nine new sweet potato curing houses were built this year according to plans furnished and supervised by the agent. This gives our county a total of 40 modern storage and curing houses for sweet potatoes and all have been built within the past four years. These 20 houses have successfully cured this fall about 26,500 bushels of sweet potatoes and judging from past experiences these sweet potatoes will net the owners at least \$20,000. All the owners are very enthusiastic in regard to their houses and have organized to sell their product under a brand name and for all members to use a standard package for sale.

COTTON

Cotton is grown only to a limited extent, a few counties lying in the southeastern section being adapted to its production. The 1927 crop, estimated at 34,000 bales, is much less than the crop for the two years previous when over 50,000 bales were grown. This decrease is attributed to a 30% reduction in acreage on account of low prices in 1926, and a smaller yield per acre, the season being unfavorable. Prices are much better than last year. The average price on October 15th was 20.5 cents per lb., as compared with 12.5 cents a year previous. Six agents report 33 completed

demonstrations involving 183 acres on which an increased yield of 280 lbs. per acre resulted. Twenty-seven farmers planted improved seed and 33 farmers adopted better practices.

TOBACCO

Tobacco is the principal money crop for approximately one-fourth of the farmers in the state. The yield is estimated to be about 7,000,000 lbs., less than the 1926 crop but due to better prices being paid for several types the total value exceeds that of the 1926 crop by nearly \$1,000,000. The acreage of fire-cured was reduced owing to low price received for the 1926 crop. Eleven agents conducted 264 demonstrations involving 633 acres which yielded an average increase of 114 lbs. per acre. They report 406 farmers as having adopted improved methods.

Extract from an agent's report:

Due to such an enormous increase in acreage farther south and the high prices on the local market during the past year, an over production of tobacco seemed inevitable. With this situation in mind the agents did everything possible to keep the acreage down and at the same time improve the quality of what was grown. Right much success was obtained in this respect, for with normal seasons prevailing most of the year the acreage was increased very little if any, and the quality was maintained in spite of considerable black-fire in some sections late in the season. With the help of the local experiment station some interest was aroused in the priming of tobacco instead of cutting. Wherever tried this method of harvesting has proven highly satisfactory.

TREE FRUITS

Work done under this head was confined almost entirely to apple and peach orchards. It consisted mainly in giving instructions in regard to pruning, ^{pruning} cultivation and fertilization. Considerable time was spent by the agents in the principal apple growing counties in explaining a new law passed by the state legislature in regard to

a standard pack. The 1927 apple crop was estimated at 1,300,000 barrels as compared with 2,302,000 the average of the past five years. This decrease is due to cold weather prevailing after the bloom. Piedmont and the northern part of the state produced the best crops. About 44% of the crop packed "A" grade as compared with 53% last year. While the yield was 70% less than the 1926 crop the total value is only 20% less. Forty-four agents report 953 completed demonstrations involving 6309 acres. One thousand four hundred and sixty-one farmers pruned their orchards, containing 245,966 trees, for the first time; 2517 farmers sprayed 141,648 trees for the first time and 2318 adopted better practices.

The peach crop was very short, being about 35% of last year's crop. Prices, however, were unusually good, the amount realized being around 65% of the 1926 crop.

Extracts from agents' reports:

Horticulture - This phase of work is of rather settled and permanent nature. There are 127 combined orchards containing 9444 trees in the county. The projects conducted have been in connection with the various phases of orchard management, namely, cultivation, fertilization, applications of sprays, pruning, packing and inspection work. The above activities include the 140 projects that have been carried through the year.

The growers were producing a good grade of fruit, but it was found that their marketing efforts were not keeping pace with production. The problem was brought before the State Horticulture Society with suggestions to work out ways and means of correcting as far as possible this defect. Investigation revealed the fact that the first step towards marketing was the establishment of standard grades. Suitable grades were adopted and a system of inspection was worked out. Inspection rings were formed whereby a State Inspector visited the orchards each day during the packing season, inspecting enough of the packed fruit which guaranteed a uniform package throughout all the orchards in the ring. Project work in the county this year included one of these rings which packed 7176 barrels of apples in addition to this 24 car loads of apples received the Federal inspection. Through this work this year the fruit growers were enabled to turn out the best packed crops that have ever been grown in the county.

In the month of July we again took up the matter of inspection work with the Division of Markets at Richmond and our office was again used by the Chief Inspector in the distribution of that line of work. It was more successful this year than any previous year for the reason that we had the law on grades and standards spoken of in another paragraph, which, when explained to the growers they saw it would be of great help to them and with but few exceptions, and these were soon overcome, our inspectors found most growers working with them.

At the beginning of the work we found our greatest effort was to be with the fruit buyers but they gradually began to appreciate this work and the benefits therefrom and I think without an exception that the buyers were very anxious, and usually specified that the fruit they bought must be either State or Federal inspected. The result of this inspection work shows, even with our small crop, seventy thousand barrels have been State inspected aside from about one hundred and seventy-four cars carrying Federal inspection.

BUSH AND SMALL FRUITS

Twenty-four agents report demonstrations of this nature. Two hundred and thirty-two demonstrations were given; 139 completed demonstrations involving 263 acres showed an increased yield of 75 quarts per acre. Seventy-three farmers planted improved stock; 177 pruned their plantings on 437 acres for the first time and 322 adopted better practices.

GRAPES, MARKET GARDENS & HOME GARDENS & HOME GROUNDS

Considerable attention was given to work of this nature. Probably more time was devoted to home gardens than ever before. There have been also more calls for help in landscape work around farm homes than our specialists could answer. A total of 1314 demonstrations involving 1415 acres were conducted with splendid results. Four thousand four hundred and thirty-one farmers sprayed or treated for insect pests for the first time; 5123 adopted better methods of caring for these crops or home grounds.

Extracts from agents' reports:

Considerable work was done during the year relative to the home garden. In the live at home campaign carried on in the spring the garden was made one of the important points, and more than 300 men signed cards agreeing to raise all vegetables needed during the year. The Mexican bean beetle did a great deal of damage and considerable work was done in spreading methods of combating it. According to the best figures obtainable some 2317 men cooperated in trying to control this insect. Many methods of controlling the beetle were tried in the county with varying success. The calcium arsenate and lime treatment when correctly used proved as successful as any and the methods varied from that to the unique method described by one man when he said the most effective method he had found was to 'sprinkle the vines with either kerosene or gasoline and set them afire.'

Calls for work on the beautification of home grounds were answered in greater numbers this year than those for fruits, 38 visits being made and actual work done, not counting calls for advice alone.

Talks on this subject were given before the County Garden Club, the Tuesday Afternoon Club of Lawrenceville and the Home Demonstration Club of Edgerton.

Assistance was given the Tuesday Afternoon Club and the Edgerton Home Demonstration Club in planting native trees and shrubs along the concrete road between Lawrenceville and Edgerton.

FORESTRY

Since the employment of a specialist in this department calls from farmers for this work have increased. During the past year 23 agents gave 101 method demonstrations. There are now 55 result demonstrations under way in 13 counties. Seventy-one farmers have been assisted in forest management; 73 have adopted improved practices. A number of farmers are planting old fields to pine or locust.

Extract from an agent's report:

In forestry there were eight method and three result demonstrations. These were principally in woodlot and forest management. This county furnishes a large amount of pulp and cord wood for the Washington

market and our farmers should become familiar with its value, and learn how to remove these trees with as little damage as possible. The Extension Forester has been called on several times to give instruction in timber measurement on land to be cut over. Arrangements have been made to hold a school of instruction this winter in woodlot management, etc. A new phase of forestry management will be inaugurated this coming year. There is considerable land that for various reasons has been abandoned, and it is planned to have as much as possible of it planted to locust to furnish posts to replace the chestnut that is now almost extinct. This will be made a project the coming year.

RODENTS & MISCELLANEOUS INSECT PESTS

The advent of the Mexican bean beetle and its rapid spread over the state has caused many calls from gardeners and others desirous of a means to successfully combat it. It appeared in the western counties about five years ago and now there are very few counties where its appearance has not been observed. If not checked it completely destroys garden beans of all kinds. Thousands of circulars giving an effective treatment were sent out. Most of the agents had articles in their county papers describing this insect and telling how to hold it in check. One thousand and twenty-six method demonstrations were given; while 2849 farmers are reported as having adopted control measures there are many more who used the measures recommended.

A large number of other farmers were assisted in the use of control measures for rodents.

Extract from an agent's report:

Mexican bean beetle control required a considerable amount of time. The beetle made its first appearance in the west side of the county in the fall of 1926 but was not reported until the past spring. As soon as the bean crop was well started, or soon after the beetle had made its appearance throughout the entire county, a great demand for information and advice on control methods resulted. The county agent

was instrumental in getting agencies established in various parts of the county for the sale of calcium arsenate to be used in bean beetle control. At least five hundred pounds of the material were sold this season.

DAIRY CATTLE

It is estimated that there are in the state 364,000 cows and heifers two years old and older, kept for milk. This is approximately an increase over last year of 2%. While some counties shipped dairy stock to other sections the railroads report bringing more than 2000 head into the state. The average value of milk cows is \$60.00 per head, compared with \$45.00 last year. The increase in numbers of cows indicates the increased interest in dairying. Pulaski county farmers purchased over 600 cows during the year. This county is so greatly interested in dairying that a specialist in this work has been employed by the county and Extension Division to assist the county agent develop this industry. While there appears to be a surplus of milk on most of the city markets there is a large shortage of butter and cheese and other dairy products. It is estimated that 14,000,000 lbs., of butter is shipped into the state annually. We now have twenty ⁽⁷⁾ cow-testing associations with 394 members in the state. The testers are employed by the associations but are under the constant supervision of one of our specialists who devotes his entire time to this work. Sixty agents report on some phase of dairying, indicating its widespread interest. Four hundred and ten demonstrations involving 6,342 cows were conducted at a saving of \$11,982.00. Two hundred and eighty-two farmers were assisted in buying purebred sires and 414 in the purchase of high grade or purebred cows. Three hundred and twelve farmers tested their herds consisting of 6,096 cows, and disposed of 921 of them as being unprofitable. Eight

Hall clubs or circles were organized with 88 members. Nine thousand eight hundred and sixty-two cows were tested for butterfat; 778 farmers adopted improved practices in milk production; 754 fed a better ration; 2,370 tested herds for T. B; 217 had stock vaccinated against black leg and 4,384 adopted better practices in management of dairy herd.

Extracts from agents' reports:

The Albemarle Cow Testing Association is going strong and is doing more for the advancement of dairying than any other one project. Mr. C. M. Garnett states that the information that he gets through the Cow Testing Association is of inestimable value to him, and will be as long as he is a dairyman. The records of production of each cow has enabled him to cull out the boarders and replace them with high producers. Studying these records enables him to feed the individual cow according to her production of milk and butterfat, and in that way he has been able to increase the production of the good cows while at the same time cutting down the cost of producing a hundred pounds of milk.

The main project put on in dairy work was a Milk-For-Health-Campaign featuring the home cow. The county produces enough milk to supply the people in the county but the milk is shipped out and there is a shortage of 8,000,000 pounds for human consumption.

A survey which was made of the county showed that the people were using only one-fifth of one pint of milk per day, where they should use at the rate of one pint per adult and one quart per day for each child.

Plans were formulated by the Agricultural Advisory Council with the help of the United States Department of Agriculture, the State Extension Service, the State Dairy Council, and the farm and home agents for a Milk-For-Health-Campaign to be put on the last week in October. The county school board and the county superintendent of schools as well as the supervisor of grammar school instruction offered to lend their support to the campaign. The Women's Clubs and two of the six banks in the county, The National and the Peoples National Bank of Manassas, helped in a financial way. The campaign was planned to reach every person in the county. The schools had a great deal to do with the success of the campaign. They took part in the poster, jingle and milk essay contests. Over two hundred posters were turned in and judged, several hundred jingles and one hundred and forty essays on milk were written. The children also gave several plays on Milk-For-Health.

Six circular letters were mailed to a mailing list of five hundred and sixty persons, announcing in the letters the campaign, the reason of its being put on, the milk situation in the county, recipes in which milk could be used, the part milk plays as a body builder, and famous sayings by famous men. These letters were mailed out each week, beginning two weeks before the campaign.

During the week of the campaign every school in the county was visited and the children were given a talk on Milk-for-Health. In three of the schools the parents were invited in the last period in the afternoon to hear these talks and to see the Milk-for-Health plays put on by the children with the help of the teachers.

Fifteen adult night meetings were held during the week with an attendance of over 2100 people. At the night meetings the children gave the Milk-for-Health plays which were followed by one of the lady speakers working in the campaign. She talked on Milk-for-Health and the dairy specialist who followed her talk explained the value of a home cow and how to feed and care for her. Wherever possible moving pictures were shown. Pictures were given at eight of the fifteen meetings.

During the day the men specialists held farm meetings and talked on care, feed, and feeding the home cow. The farm meetings were not as successful as they might have been, chiefly on account of the weather conditions.

The result of the campaign will be hard to measure, but fourteen cows have been placed and the consumption of milk has increased in Manassas to the point where dairymen have been unable to supply the demand.

BEAF CATTLE

Farmers in the cattle sections of the state had become discouraged through a period of low prices. With the better prices paid for beef cattle in summer and fall of 1927 came a renewed interest in this industry. The Division of Crop Estimates says there are 382,000 beef cattle in the state on December 31, 1927, as compared with 350,000 on the same date the year before. This increase is due to the better price which caused farmers to hold calves and to bring in stock from other states. The average value of these cattle is given as \$41.54 per head in 1927 compared with

\$28.83 in 1926. The agents gave 394 method demonstrations and completed 176 result demonstrations involving 3,946 animals with a profit of \$15,062.00. One hundred and sixty-nine farmers were assisted in purchasing purebred sires and 56 in the selection of high grade or purebred cows. One hundred and sixty-eight farmers fed a better balanced ration; 1,949 tested cattle for F. B.; 1,270 vaccinated against black leg and 2,759 adopted improved practices in the production of beef cattle.

Extracts from agents' reports:

At a meeting of the Craig County Agricultural Advisory Board held in March 1927, this board asked that a strong effort be made to eliminate all undesirable breeding bulls from the county by the end of the year.

The county agent, in his program of work for 1927, promised to free the county of grade and scrub bulls by January 1928. In January 1928 the county had 18 grade bulls; January 1926 there were still eight grades, these were eliminated by November 26th, 1927 leaving Craig county absolutely without a single grade or scrub bull within its borders.

The breeders are enthusiastic and all farmers are very much interested in keeping the county free of undesirable bulls as they have learned that a cheap, poor type beef bull is expensive and should not be permitted to remain in any community. It has been proven by actual demonstrations that for calves and yearlings sired by a good registered bull, even if the mother of the calf is a good grade, there is always a ready market at any age and the price will average at least ten dollars higher than the same animals from grade bulls.

In order to advertise Craig County and to show tourists and others coming in and passing through the county that Craig has no inferior breeding bulls, signs are being erected at the county line on all roads entering, in order that those passing our way may be informed of our standing as cattle breeders, and spread the information to others.

Beef cattle improvement work has made rapid progress with the results that 26 scrub and grade bulls have been replaced this year with purebred sires. There are yet about 20% scrub and grade bulls in the county which we hope to replace with purebred sires next year, so that Grayson county may be the third county in the United States to be free from the scrub bulls. Grayson county in the "Better Sires Campaign" ranked second in the

state this year in the number of replacements. Mr. F. who is a large cattle dealer, told me this fall that the grade of cattle had improved 50% in the last four years due to the Better Sires Campaign. Four thousand seven hundred and forty-five calves and yearlings were vaccinated against black leg by agent or aggrassin furnished to the stockman from the agent's office.

Mr. M. told me after I had vaccinated his young cattle in the spring, that he had never lost an animal since he began vaccinating four years ago, but prior to that time he had always lost a number of young cattle due to blackleg and that the losses had become so great he had to discontinue keeping young cattle.

Grayson county ranks 14th in the United States in the number enrolled in the "Better Sires-Better Stock Crusade."

SWINE

It is estimated that there are 643,000 or 15% more hogs in the state than a year ago, but due to decline in price the total value is possibly less. Sixty-three agents report having done some work under this head. One thousand six hundred and forty-seven method demonstrations were given; 1140 result demonstrations involving 26,354 animals were conducted and showed a profit of \$185,769.00. Two hundred and eighty-seven farmers were assisted in the purchase of purebred boars and 346 in the purchase of purebred sows. Eight hundred and eighty-two farmers fed a better balanced ration; 3,444 vaccinated against cholera and 5,622 adopted better practices in hog production.

Extracts from agents' reports:

The hog cholera gave some scare last winter, and I was called upon to help out. I gave eight demonstrations in treating hogs for cholera, in which 50 hogs were treated. Not a single one of the treated ones became sick, but a good many hogs died which had not been treated.

Wilson county has something to be proud of as long as it is a county, and that is the fact that the first honor in the Ton Litter Contest belongs to one of her farmers. Mr. J. D. Allen, Montebello, won first in the contest by raising eleven Duroc Jersey pigs which at the age of 180 days weighed 3465 lbs. He will be given a medal by the Duroc Breeders Association. There were two other contestants in the county whose pigs weighed up nicely. The profit made by Mr. Allen was most satisfactory to him and he hopes to reach a higher mark next year.

He said, while smiling like a new moon, "I entered that others in the county would become interested, and I trust that more will join next year."

The work done with hogs this year consisted of supervising five hogging off projects for the purpose of demonstrating the economical value of growing pork this way over the common practices of harvesting and feeding. In each case the hogs were ready for market four weeks ahead of the old practice and were thus sold before the slump in prices that comes later in the fall.

Nine purebred boars and 7 purebred gilts were placed on farms this year where there were no purebreds before.

Thirty method demonstrations were conducted in treating and handling pigs to prevent stomach or round worms. This work consisted in treating individually 808 pigs with drugs prepared for this purpose. There is no way to figure in financial returns for this work, but practically all farmers for whom this work was done reported much faster gains after the pigs were treated and there is no doubt but that the work is a very profitable one to continue.

Fifty-seven method demonstrations were given in using anti-hog cholera serum and in all 1082 hogs were inoculated. The feature of this work is that around 1800 hogs were inoculated against cholera this year by the farmers themselves whom I had previously taught to do this work. Add to these the hogs inoculated by veterinarians throughout the county and the total number of hogs treated would near the 5000 mark for this year. Ten years ago there were scarcely six farmers here who believed in this cholera treatment at all; comparing this with the above record would probably make this work worth around \$25,000 a year to the hog men in Princess Anne county.

Four method demonstrations were given in using the hemorrhagic septicemia aggrasin against swine plague with a complete check on the disease in each case. One hundred and forty-three hogs were given this treatment.

Four litters were enrolled in the Virginia Ewe Litter Contest but due to adverse conditions only one of them was fed out the 180 days and while this litter consisted of only seven pigs, they made an excellent showing for their owner and made the purpose of the demonstration very clear.

SWEE

Due to prices paid for wool and lambs the number of sheep has been increasing for the past six years by 3% to 3 1/2% each year until we have according to estimates 426,000 head in the state. Last year not only were more ewe lambs saved but a large number of sheep were brought in from other states. There has also been an increase in value of approximately \$1.00 per head. The average in 1927 being \$11.50 as compared with \$10.30 the preceding year. Our agents in all sheep producing counties have been very active for several years in aiding farmers to treat their flocks for stomach worms, which at one time infested nearly every flock in the state. They have been very successful in this treatment and in many cases farmers report their flocks benefitted to the extent of \$1.00 and in some cases \$2.00 per head. The agent in Montgomery county has interested a number of 4-H club members in a sheep club. There are now 36 members enrolled owning 345 high grade ewes. Fifty-three agents report having done some work with sheep; 960 method demonstrations were given; 767 result demonstrations involving 38,090 animals were completed and showed a profit of \$40,376.00. Two hundred and ninety-seven farmers were assisted in the purchase of purebred rams and 206 in the purchase of high grade or purebred ewes. One hundred and fifty-eight farmers culled their flocks consisting of 4,016 head from which 556 were sold; 662 fed better balanced ration and 2,072 adopted improved practices.

Extract from an agent's report:

With a view of producing a carload of top lambs for market fifteen farmers agreed to sign up 400 ewes to produce this carload of lambs. Rules governing the production were furnished as follows: (1) Lambs sired by purebred ram. (2) Lambs docked and castrated. (3) Ewes treated for worms. (4) Sufficient green feed provided to grow lambs fast and condition them for market. (5) Lambs not to weigh less than 75 lbs., when marketed. (6) Market lambs cooperatively. With practically every one of the demonstrators these rules were observed and the carload of lambs was perhaps the best ever produced in Giles county. These lambs weighed from 75 to 85 lbs., and were shipped the second week in June. They brought \$17.75 per hundred, top price at that time. One-half carload shipped at the same time by the same Livestock Shipping Association brought \$17.50 per hundred. In this half car part of the lambs were not docked and castrated, showing a difference of 25 cents per hundred in favor of docked and castrated lambs. Later in the season docked and castrated lambs brought a premium of 50 cents per hundred. Lambs sold the same week in June by individual buyers brought \$17.00, showing a difference of 75 cents per hundred in favor of top lambs. This demonstration will have a far reaching effect in producing better lambs in the years to come.

POULTRY

The poultry industry represents about \$30,000,000 annually. Practically every farm has a home flock and many of them have flocks large enough to produce a surplus of eggs and young fowls. In many cases this goes a long ways towards paying the family grocery bills and for other needed supplies. There has been a large increase in the number of baby chicks hatched and offered for sale. Many farmers who do not own incubators prefer buying these chicks at a day old rather than to set eggs under hens. The agents probably receive more calls for assistance in the production of poultry than for any other one thing. Sixty agents report work under this head. One thousand seven hundred and thirty-three method demonstrations were given; 1260 result demonstrations involving 155,455 birds were completed and indicated a profit

of \$48,257.00. One thousand four hundred and eight farmers were assisted in the purchase of better stock; 1925 culling demonstrations were held, 146,981 birds handled from which 42,154 were discarded as being unprofitable. Three thousand six hundred and fifty-three farmers fed a better balanced ration; 2,144 treated fowls for insect pests and 6,286 adopted better practices in caring for their flocks.

Extract from an agent's report:

Special work in poultry improvement called for twenty demonstrators to build twenty brooders, twenty laying houses with modern equipment, to secure standard birds, feed balanced rations, crate fatten their culis and grade their eggs. This work was started with nineteen demonstrators all of which have not yet completed their project. Eight modern brooders and twelve laying houses have been built. Good equipment is used and balanced egg laying rations fed. Two of these demonstrators bought 600 Leghorn chicks in the spring and the daily income from their pullets is \$5.00 at present. Practically every one of them have received more income from their flocks since October than the cost of maintaining it. This appears to be an outstanding piece of Extension work and reports of it will appear in next year's work. All of these nineteen demonstrators have entered into a flock improvement contest.

Perhaps the one single demonstration in the county that has interested the people most is the one of raising turkeys by artificial means. Everywhere the people who had raised turkeys before said it was impossible to raise turkeys under a brooder. I could find no one who was willing to shoulder the responsibility of it alone, so agreed to put up half the money to finance the project and a farmer who had made a success of farming as a business agreed to go in with me fifty-fifty. A brooder house appeared on this man's farm over night and the poultz were ordered from a large turkey farm in Indiana. Before the poultz arrived people came to us and offered to give a spot on their farm free as a burial ground. The 150 poultz ordered reached Pearisburg in fair condition, only two dead. They were immediately taken to the brooder, given their first feed, and the next day we found them well adapted to their surrounding conditions. They were fed five times a day the first week on a mash consisting of 80% yellow corn meal, 5% bran, 5% shorts, 5% lime grits and 5% bone meal. This mash was mixed to a crumbly mash with buttermilk and these little fellows had a new vision of life in a short time. Then they were two weeks old they were fed only three times a day on the same mash, giving them all the buttermilk they could drink. The corn meal was gradually reduced and bran increased and when they were three months old they were getting 55% bran, 30% corn meal, and 5% each of shorts, lime grits and bone meal with plenty of

buttermilk. Grains were supplied only when the weather began to get cool.

The brooder house 10' x 12' was enclosed with a small mesh poultry wire eighty feet square which was divided into four equal yards. The poults had a four weeks rotation giving them new yards every week. As they grew larger we found our enclosure was too small to furnish the green feed necessary and a larger yard was built. When three months old they were transferred to a lot of about three acres which was sown to clover, and have been on this lot since that time.

From the 150 poults 120 were raised. Forty of these birds have been sold as breeders in the county. This demonstration has done more to stimulate interest in turkey raising in the county than all the talking and pleading could accomplish in several years.

These birds averaged around 15 lbs., the first of December, and dressed for market brought \$6.00 each, or \$720.00. The total cost of producing them was; \$150.00 for poults; \$125.00 for feed; \$100.00 for labor and \$100.00 for equipment, fencing, etc. Total cost \$475.00. The net profit on this project was \$245.00.

The runs were limed occasionally and preventatives were used at all times to keep down worms. By having them confined where a close watch could be kept over them at all times, and not allowing them to be overfed tells the whole story. The total cost for feeds from May 15th to December 1st was a little more than \$1.00 each.

RURAL ENGINEERING

The specialists in the agricultural engineering department have been busy answering calls from the agents for help in terracing, in construction of water and lighting systems, plans for buildings and use of pyrotol for clearing land. Forty-four agents report some phase of this work. They gave 620 method demonstrations; conducted 574 result demonstrations, 452 of which were completed. Sixty-four farmers drained 956 acres of wet land; six installed irrigation systems; 242 constructed terraces on 3,350 acres to prevent soil erosion; plans were furnished for 24 dwellings and 1,081 other buildings. Sixty-three sewage disposal systems, 70 water systems and

and 46 lighting systems were installed. One hundred and eighty-four farmers cleared 3,135 acres of stumps, rocks, etc. One thousand seven hundred and twenty-five farmers adopted improved practices relative to work of this nature.

Extract from an Agent's report:

with the valuable aid of specialists sixteen method demonstrations were given in rural engineering.

Two farms are installing drainage systems with a total of sixty-four acres being drained.

One farm is constructing soil dams to prevent erosion.

One hydraulic ram is being installed.

Six farms are constructing or remodeling barns, poultry houses, etc., according to plans furnished. Plans have been furnished two farms for constructing concrete silos and one in constructing a home-made wood stave silo. These silos are to be built in the spring of 1928.

Five demonstrations were given in the use of explosives on the farm. Pyrotol was used. The practicability of using pyrotol for ditching was thoroughly demonstrated on George Caray's and George Carr's farms. Mr. C. F. McCue can testify as to its efficiency in stumping.

The Extension Division is making a survey for an electric light and power line to serve the Hydraulic and Owensville communities.

Plans have been furnished for the construction of two concrete bridges and one concrete dam. The dam to be used in storing water for spraying an orchard in the summer and used as an ice pond in winter.

Numerous requests for plans for constructing and remodeling dairy barns, stock barns, poultry and hog houses, are being received and plans are being furnished as rapidly as possible.

Specialists in rural engineering have worked 14½ days and the county agent 16 days on these projects.

AGRICULTURAL ECONOMICS

There has been considerable interest shown by several agents in having farmers keep account books. One of the specialists has devoted a great deal of time to holding meetings or schools for the purpose of giving instruction to farmers in method of keeping these books. Thirty such schools were held in 1927. Four hundred and three such books were distributed in 1927. Two hundred and thirty of them were kept up throughout the year. The agents assisted 142 of these farmers in summarizing their accounts. Six hundred and nine farmers adopted better systems of conducting their operations; 235 were assisted in keeping cost of production records. One thousand one hundred and twenty-four farmers adopted some of the better practices recommended under this head. Eighty-four farmers were assisted in obtaining credit. One hundred and three demonstrations in marketing were given. Comparatively little cooperative selling or buying was reported for the year. The Buckingham Farm Bureau, Augusta Farmers Union, Livestock Shipping Association and Coan River Tomato Association were the principle organizations doing business of this nature. They report a profit or net saving of \$188,127.00.

MISCELLANEOUS

Every agent spends some time and many of them quite a bit doing work coming under this head. They receive calls or visits from farmers wanting information on many things which are not included in their plans of work. Much of this comes under the head of personal service but it is hard to get away from it without causing the displeasure of those wanting the service.

FAIRS

County Agent Bredon of Orange probably has the most successful county fair in the state. The following is what he has to say about it:

The report of the county agent of Orange would not be complete without a comment on the constructive work being done in cooperation or through the agency of the Orange County Fair. It might be well to state that the present county agent was secretary of the local fair at the time he was employed as county agent, and it was understood that he could continue his fair activities as a part of his extension program. At that time the county fair was a very small affair of the county and brought in about \$3000.00, if that. Today the fair has grown to a district proportion; separate departments being given over to Louisa, Madison and Green Counties and the proceeds this year, with two out of four days rainy, amounted to over \$7,000.00.

There are many unique features of our fair not found in the usual county fair, but the outstanding item of interest and the pride of the county agent is the lining up of 187 volunteer workers who set aside their personal work and give four days to the building of their fair. Ten years ago we had to hire two school girls to run the women's department. Today we have the pick of the womanhood of the county to administer this department voluntarily. In fact we have quite a problem not to offend those who want to help and whom we don't need. This unselfish interest on the part of our several department heads in the writer's opinion is the outstanding feature and the item that makes our fair different. When one considers that our county seat is a town which boasts only about 1000 people and our town of Gordonville slightly less, one wonders where we get the commercial exhibitors to occupy every commercial booth in a building 150' x 74' and containing 42 commercial booths 12 x 12 feet each, and yet is not only every booth rented but all are rented for five years, and others not in are practically standing in line for space.

One of the most unusual features of this building, which incidentally was designed by the engineering department of the Extension Division, is a community dance floor which is the pride of all the locals and the wonder of all who see it. This feature was conceived in a spirit of service to the young folks of the community who for a better place were forced to have their dances in a warehouse over the post-office. The fair built a fine floor, solicited the best elements of our society for chaperonage and with the cooperation of the local young folks have, in spite of dire prophecy of the kill joys, conducted a public but most orderly dance during the four days and nights of the fair and have the best young people lined squarely up behind the fair activities.

The department on the floor is carefully watched by the chaperons and a committee of the younger element, and the dance orchestra for this feature is always of the highest quality. There is no effort to make this a profit making department but the fair is satisfied if it pays expenses and thus pays for the music of high quality for the benefit of the fair visitors.

Another feature of the fair is its Womens Exchange Department. This department sells for our patrons any article of handiwork made by our folks and has won universal approval for its service angle. Our schools department is in line with our whole policy and serves the school administration in helping to build better scholastic work.

Of course all of the usual departments such as horse, hog, dairy, dog, poultry, etc., are as at all fairs, with the exception of the personal administration. As an example Mr. T. R. Potts, who superintends our poultry department, applied to the management for permission to run water at his own expense and put in a waterfowl exhibit. Mr. Potts brought his own electric pump, installed a fountain, and after arranging all of the exhibit building proceeded to decorate his building with strips of decorative paper, etc. To you who know the usual county fair poultry house, can you not see the difference in your mind's eye?

In short the Orange County Fair is a product of community service to the community and not a race meet and carnival operated for profit under the cloak of "Agricultural Educational Exhibition."

IV. OUTLOOK:

1. The outlook for 1928 is very encouraging. As the work becomes better known it gains greater support. The agricultural advisory boards have given their support which amounts to a great deal in securing appropriations for the continuance of agents. We expect to have about the same number of counties in 1928 as in 1927, while there is a probability of one or two counties discontinuing the agent others will likely make provision for one.

2. The supervisory program for 1928 will be the same as for the year just closed. The supervising force will consist of five district agents and the assistant director who keep in touch with the situation and report to the director. It is planned to hold a meeting of all agents, men and women, at Blacksburg in January for a week or ten days. No meetings of this kind have ever been held.

The agents will hold meetings of their advisory boards during the winter months for purpose of making their plans of work and submit these plans about March first.

3. We will appreciate any assistance the Washington office may be able to give us. We would like to have their field agents attend meetings of various kinds to be held in the state, be present at meetings of advisory boards and assist in making programs of work; visit the agents in the field and see the results of demonstrations and make constructive criticisms where improvements can be made. Valuable help has been received in regard to office files and equipment. A continuation of same will be appreciated.

GENERAL SUMMARY

Number agents employed	64
Number assistant or part-time agents employed	8
Number counties in which work was conducted	68
Number communities where people assisted in working out plan of work	715
Number local leaders: Junior	434
Adult	1038
Number clubs carrying on extension work: Junior	364
Adult	148
Number junior club members	5806
Number adult club members	5702
Number demonstration teams trained	92
Number former club members entering college	169
Number farm and home visits made	64263
Number different farms and homes visited	25884
Number calls received, telephone and personal	83807
Number days agents spent in office	4970
Number days agents spent in field	15591
Number newspaper articles prepared	2737
Number individual letters written	50952
Number of fairs at which extension division exhibits were made: Community	41
County	75
Number meetings held	5590
Attendance	156,437
Number method demonstrations conducted	16103

SUMMARY (Continued)

Number result demonstrations started	42254
Number result demonstrations carried through the year . . .	17890
Number acres involved in completed demonstrations	158,030
Number animals involved in completed demonstrations . . .	260,187
Number tons lime used	42,292
Number acres green manure crops plowed under	54,911
Number farmers planting improved seed for first time . . .	18,056
Number farmers practicing seed selection for first time . .	3,435
Number farmers treating seed for disease for first time . .	8,778
Number farmers inoculating seed for first time	4,112
Number farmers spraying crops or orchards for first time .	11,060
Number farmers assisted in purchasing purebred sires	1,823
Number farmers assisted in purchasing high grade females . .	1,642
Number cow testing associations	20
Number members in cow testing associations	395
Number cows being tested	9862
Number farmers adopting improved practices in producing sanitary milk	778
Number farmers feeding better balanced ration for the first time	6099
Number farmers controlling insect pests for first time . . .	5421
Number farmers testing for T. B. for first time	3519
Number farmers directly influenced to vaccinate for blackleg	1487

SUMMARY (Continued)

Number farmers directly infuenced to vaccinate swine for cholera	3,444
Number farmers adopting other improved practices in crops and orchards for first time	7,160
Total number farmers adopting improved practices in crops and orchards	56,096
Total number farmers adopting other improved practices in livestock production	21,022

Agents Employed During the Year

ASSISTANT DIRECTOR

W. F. Moore Blacksburg

DISTRICT AGENTS

J. S. Bruce	Gulpeger
F. S. Farrar	Farmville
J. H. Quisenberry	Frederick Hall
W. C. Shackelford	Proffit
E. A. Warriner	Blacksburg

COUNTY FARM DEMONSTRATION AGENTS

COUNTY

NAME

COUNTY/STATE

Accomac	W. C. Strong	Onley
Accomac	E. F. Gristle	Onley
Albemarle	S. S. Teel	Charlottesville
Albemarle	T. O. Scott, Asst.	Charlottesville
Albemarle	F. E. Merrifield, Asst.	Charlottesville
Alleghany	S. E. Surber	Barber
Amelia	C. W. Richards	Amelia
Amherst	O. B. Ross	Amherst
Appomattox	E. B. Hudgins	Appomattox
Bedford	S. S. Eytan	Bedford
Blind	E. F. Marshall	Blind
Botetourt	J. S. Willis	Fincaiste
Brunswick	J. B. Lewis	Lawrenceville
Buckingham	J. G. Hunker	Buckingham
Charles City	V. B. Perry	Providence Forge
Charlotte	H. E. McGowan	Charlotte C. H.
Chesterfield	T. G. Daifour	Chester
Chesterfield	F. E. Jones, Asst.	Chester
Craig	V. O. Martin	New Castle
Gulpeger	J. M. Eyer	Gulpeger
Dinwiddie	Joe Bellinger	Dinwiddie
Dinwiddie	W. E. Daughtrey, Asst.	Dinwiddie
Elizabeth City	H. S. Lippincott	Newport News
Essex	D. H. Crosby	Tappahannock
Fairfax	H. B. Derr	Fairfax
Floyd	S. L. Cole	Floyd
Flovanna	D. D. Sizer	Falmyra
Giles	T. E. Starnes	Fearisburg
Gloucester	D. W. Thompson	Gloucester
Gooseland	W. B. Gordon	Gooseland

