

## VIRGINIA

<b>REPORT FILES</b>
OFFICE COOPERATIVE EXTENSION WORK

COUNTY AGENT LEADER  
ASST. DIRECTOR... (W. F. MOORE)..... 1924

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**REPORT OF COUNTY AGENT WORK IN VIRGINIA**

from

**December 1, 1923 to November 30, 1924.**

by

**W. P. Moore**

**Assistant Director.**

COUNTY AGENTS EMPLOYED IN VIRGINIA IN 1904.

COUNTY	NAME	POSTOFFICE
Albemarle	S. S. Teal	Charlottesville
Albemarle	F. S. Herrifield, Ass't	Charlottesville
Amelia	C. W. Richards	Amelia
Amherst	G. B. Bass	Amherst
Appomattox	F. H. Byrne	Appomattox
Augusta	T. J. Thompson, Jr. (P. C. Manley)	Staunton
Bath	(T. Edwin Burke)	Saru Springs
Bedford	E. C. Turner	Bedford
Blind	H. P. Marshall	Blind
Botetourt	J. S. Mills -(D. V. Wiley)	Fincastle
Brunswick	J. E. Lewis	Lawrenceville
Buckingham	J. G. Henscher	Buckingham
Campbell	Bruce Anderson	Hastburg
Caroline	Duncan McKinney	Hawling Green
Carroll	(W. C. Lohse)	Woodlawn
Charles City and New Kent	V. B. Perry	Providence Forge
Charlotte	H. E. McGowan	Charlotte C.H.
Chesterfield	T. D. Barfoot	Richmond, H. S.
Craig	W. O. Martin	New Castle
Culpeper	J. M. Dyer (D. F. Williams)	Culpeper
Dismiddle	E. W. Bellinger	Petersburg
Dismiddle and surrounding counties	K. H. Ellis	Newport News
Elizabeth City and Warwick	H. S. Lippincott	Tappahannock
Essex	D. H. Crosby	Fairfax
Fairfax	H. B. Deery	Fairfax
Giles	C. D. Lewis	Pearisburg
Gloverester	(J. H. Trevathan)	Gloverester
Grayson	D. T. Painter	Independence
Greensville	J. W. Rogers	Emporia
Halifax	H. W. Wilkins	Turbeville
Hanover	J. C. Stiles	Ashland
Henrico	S. L. Pirry	Richmond
Henry	J. Nick Jones	Martinsville
King George	L. H. Walker, Jr.	King George
King William and King & Queen	J. D. Hutchinson, Jr.	Salisborton
Leechen	J. E. Lintner	Leechen
Lanesburg	H. G. Stokes	Kenbridge
Madison - Greens	R. O. Tate	Madison
Mecklenburg	H. H. Williams, Jr.	Chase City
Montgomery	J. D. Lyser	Christiansburg
Newsomnd	F. S. Blanford	Suffolk, HFD
Nelson	J. B. Whitehead (E. H. Anderson)	Livingston
Norfolk	F. L. Partlack	South Norfolk
Northumberland	C. S. Hubbard	Hathsville
Nottony	R. B. Oliver, Jr.	Crese

Oran, s  
Patrick  
Pittsylvania  
Pohatan  
Princess Anne  
Prince George  
Prince William  
Pulaski  
Rappahannock  
Rockbridge  
Rockingham  
Shenandoah  
Smyth  
Spotsylvania  
Stafford  
Surrey  
Sussex  
Warren  
Washington  
Westmoreland

E. V. Breeden  
S. L. Cole  
Gordan A. Elean  
Frank Michaux  
H. W. J. Oelin  
(H. C. Jones)  
E. L. Browning  
E. C. Grigsby  
Sam D. Preston  
H. G. Lewis  
C. W. Sempier  
G. G. Dickanson (H. L. Moore)  
L. M. Cole, Jr.  
H. R. Linthicum  
J. F. C. Catlett  
C. M. Cooken  
W. T. Parker  
R. B. Crumford  
(H. E. Schmidt)  
C. C. Chase

Gordonsville  
Stuart  
Chatham  
Jordan's Store  
Lyonsaven  
Prince George  
Massena  
Pulaski  
Flat Hill  
Lexington  
Harrisonburg  
Woodstock  
Marion  
Spotsylvania  
Stafford  
Elberon  
Snowville  
Front Royal  
Arlington  
Montrose

Halifax  
Spotsylvania  
Pittsylvania  
Becklenburg

Assistants

Carl Bridges  
T. G. Balfour  
C. L. Hall  
D. W. Thompson

South Boston  
Spotsylvania  
Chatham  
Chase City

Note- Names of agents who resigned during the year are shown in parentheses.



REPORT OF COUNTY AGENT WORK IN VIRGINIA  
December 1, 1923 to November 30, 1924.

Extension work was conducted in 1924 in sixty-nine (69) counties; three less than in the year preceding. Clarke, James City, Louisa, and Wythe discontinued their appropriations, while Rappahannock came in as a new county. This action was caused largely by the election of men on the boards of supervisors who opposed the work, Louisa and Wythe dropping out after the new officers had taken their seats. Washington County withdrew in May when the agent resigned to accept a similar position in another State. Lee and Prince Edward Counties made appropriations for the work to be taken up January 1, 1925. An agent was placed in Greene and Madison in June entirely at our expense for one year in order to establish the work and create a demand for an appropriation by the board. While it is not yet time for this matter to come up it appears very likely that an appropriation will be secured in Madison.

Several changes were made in the personnel of the agents, C. D. Lewis, succeeding C. S. Leffel in Giles County; J. G. Hamaker, an assistant going to Buckingham to fill the vacancy caused by the resignation of G. C. Harris; T. J. Thompson, Jr., to Augusta County where a vacancy had occurred on account of the resignation of F. C. Manley who accepted a position with one of the sub experiment stations. T. B. Burke, a new man went to Bath, J. E. Jones, the agent there, having been transferred to Henry to succeed T. J. Thompson. Dungan McKinsey, another new man, took charge of the work in Caroline on account of E. F. Holberton's resignation. J. H. Dyer, an assistant, was promoted by succeeding E. F. Williams in Culpeper, who resigned to look after his farm. J. B. Whitehead was appointed in Nelson to succeed E. H. Anderson; G. G. Dickenson, an assistant, succeeded H. L. Moore in Shenandoah, who resigned to enter college; J. S. Wills, succeeded D. V. Wiley in Botetourt, who resigned to enter commercial work. The vacancy in Halifax, caused by the resignation

of W. S. Wilkins to take up commercial work, is being filled at present by Carl Bridges, an assistant agent, who will be appointed later as agent if his work proves satisfactory.

The practice of employing inexperienced men as assistant agents in order to give them training was continued, seven (7) being employed at different times during the year. Five of these are still serving in that capacity, the other two having been given charge of counties. This system has proved very satisfactory since when a vacancy occurs we have some familiar with conditions and who knows our methods, ready to fill it. This practice will be continued as far as possible.

Two meetings of agents were held in January, one lasting two days in Roanoke where all agents from Southwest Virginia and the Valley, and a few others interested in the same projects, were present; another of all the other agents was held in Petersburg and lasted three days. These group meetings of men interested in the same projects are favored by the agents. The only drawback is that the men are not given an opportunity to mingle with each other and know their fellow workers all over the State as was the case when meetings of all agents lasting a week were held annually during the winter. However, such a meeting is held here each summer in connection with the State Farmers' Institute which all agents are authorized to attend. This is followed by a one day meeting of all agents, both men and women.

Special emphasis was placed on plans of work at the group meetings and each agent given an opportunity to discuss his plans and the needs of his county. As a result the plans sent in here later showed a vast improvement over those of former years. It seems that the agents gave more thought to them and received more assistance from their Advisory Boards in their preparation. This had the effect of making them conform more closely to the needs of the respective counties. In several instances community meetings were held and the local people had a part in making a program to fit their needs. In some counties, the agents, with the assistance of their Advisory

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Boards, studied the agricultural situation more closely and worked out a program for the rural development of their counties, which will take some years to accomplish. Many of the agents have concentrated their efforts on several major projects rather than doing a little along many lines. However, they still bear in mind that some work has to be done with all phases of agriculture conducted in their counties.

A study of the year's work shows that the agents held closely to their plans and probably accomplished more than in any previous year, tho their annual statistical reports show less, there being no place to show many of the important things actually accomplished. It does not fill our needs. The narrative reports are, on the whole, better than formerly, but still do not give as complete a history of their work as is desirable. This is due to a large extent to the agent's dislike for office work and lack of stenographic help. The organization of a large number of Advisory Boards is the outstanding feature of this year's work. These boards are composed of the best men in the counties, men who are interested in their county's development and willing to give their time to this end. A strong effort will be made another year to have such a board in every county that has an agent. The agent in Bedford County gives the following in his annual report:

"An Agricultural Advisory Board was organized in February of this year. The members were appointed by the Director of Extension at the request of the agent and with the approval of the board of supervisors. The farmers on the board are leaders in their various communities and men who have conducted their business affairs with marked success, and have shown their interest in things pertaining to the public welfare by associating themselves with such movements as have been started in the county for the betterment of farm conditions generally. The business men are those who have taken active part in work for the development of the county, and are qualified to render valuable assistance in developing and carrying out a comprehensive Extension program. The individual members of this board, as well as several of the committees, have been called on by the agent numerous times during the year to advise as to how best bring about desired results in the various projects undertaken, both in club and adult work."

Another outstanding piece of work accomplished during the year was the making and acceptance of a Five Year Program for Virginia's agricultural development, the the county agent's part in its preparation was very small. The work was done for the most part by the heads of the different departments in the college, with the assistance of representatives from the various farmers' organizations, and business men throughout the State, composing the Virginia Agricultural Advisory Council.

Work was continued with all existing farmers' organizations, both general and commodity. Very little gain was made in the membership of any of these organizations, but they held their own and did a successful year's work, saving many thousands of dollars to the farmers through cooperative purchasing of supplies and the sale of their products. The members seem better satisfied and I believe cooperative organizations have gained a firmer footing.

Considerable time was spent in county fair work. In some counties the agents are responsible for its success while in others they do a large part of the planning and assist materially in putting it across. In a few cases the agents serve as secretary or manager when the brunt of the work falls on them. This practice, however, is not recommended. A number of agents attended the State Fair in charge of boys' and girls' club exhibits consisting of baby beavers, dairy calves, and pigs. This is justified on account of the widespread advertisement given by State papers and livestock men from all sections of the State. Our agricultural editor says the agents have written more articles dealing with their work and have secured more cooperation from the county newspapers than last year.

Boys' and girls' club work has received its full share of attention by most agents, there being only one who had none, the several should have had a much larger enrollment. The total membership was 5633 in the different projects. This

work was done through organized clubs with leaders to a much larger extent than has been attempted heretofore. This method allows the agent to handle many more members. A full report of this work is given by Mr. C. A. Montgomery, State Agent in Club Work.

The outlook for another year appears very bright. We expect to have practically the same number of counties to start the year as we have had but the indications are that several new counties will come in later. Nine boards of supervisors have made appropriations for their term of office. The Advisory Boards have helped us greatly in this matter. This shows that the work is gaining a firm hold. There will be a number of changes made in the personnel of the agents due to resignations and some transfers. We hope to get all of these matters straightened out early in January. Several assistants will be promoted and possibly a few new agents brought in from other States. Several new assistants will be employed as suitable men are located.

I. ORGANIZATION OF EXTENSION WORK IN COUNTIES.

1. No material change has been made in the plan of organization this year. Thirty two (32) Agricultural Advisory Boards were organized. These, with the fifteen (15) previously organized, rendered material assistance in their respective counties, assisting the agent in making his plan of work, advising generally, and using their influence in securing a renewal of existing appropriations.

2. The State supervisor and district agents have met all boards of supervisors and other local appropriating bodies in the interest of securing local aid. All Advisory Boards have been met and their responsibility explained, and assistance rendered the agents in making plans of work; and in some instances assistance was

rendered in the selection of the members of the Advisory Boards.

In a number of counties help was given in outlining a Five Year Plan of Work. 660 visits have been made the county agents where assistance was given in different phases of work.

3. More attention has been given to community programs this year. Some work was done along this line in a dozen counties. Fifty-eight (58) agents report that the Extension program was worked out cooperatively by the people concerned and the agents in 287 communities. Community meetings were called in several counties where the people with the assistance of the county agent and district agent worked out a community plan of work and selected demonstrators for the different projects to be undertaken. This proved very satisfactory and will be undertaken in a larger number of communities another year.

4. In a number of instances the Advisory Boards have been divided into project committees such as poultry, dairy, horticulture, etc., and these committees have assisted the agent in working out his program along those lines. This method has proved very satisfactory.

5. County programs have been made by the county agent with the assistance of his district agent and Advisory Council. They first analyze the needs of a county and then make the plan to fill those needs. Attached is a copy of a Five Year Program worked out in the above manner. It is too early to give results other than to say a satisfactory beginning has been made.

One of the district agents states in his report:

"Community programs have been developed in three of my counties, in one as a county wide proposition and in certain communities in the other two. At present there are seventeen communities developing community programs. About 90 per cent of the things planned by these communities have been successfully carried out. The way we went about organizing these communities was as follows: first, the county agent appointed a committee of three or more men in each community

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where he intended putting on a community program. The purpose of this committee was to make the necessary arrangements and to form a nucleus around which could be built a successful meeting. In addition to the soliciting done by these committees each farmer in the community was sent a circular letter advising him of the importance of a community program. Upon arrival at these meetings we usually found good crowds. The proposition was first explained, then we went into a round table discussion for the purpose of analyzing the practices and needs of the community. Through this analysis the work needed gradually grew and in point of importance as suggested by the people, the practices and needs were written in diagram form on the blackboard under appropriate headings so that the work could be definitely outlined and all could see just what it was about. Sources of income, community needs, problems or present practices, the solution, goal, object and the names of such demonstrators as were selected constituted the principal headings under which we attempted to indicate the work most needed. In the development of the program in Pulaski County we found that there was a great need for treatment of sheep for prevention of stomach worms. Three men volunteered the use of their flocks as demonstration flocks and as a direct result of this community program every flock of sheep in one community has been treated for stomach worms.

**II. SUPERVISORY PROGRAM.**

1. The supervisory program of the Assistant Director and District Agents included-
  - a. Securing local funds for continuation of the work. To secure it for three or more years in a few counties.
  - b. Assistants to county agents in organizing as many Advisory Boards as possible.
  - c. Spending more time with those agents who needed assistance most.
  - d. Learning each agent's problems and helping him to solve them.
  - e. Aid in forming plans of work, especially long time programs and having committees work out their own programs.
2. Seeing that agents did more publicity work by writing timely newspaper articles, enrolling a satisfactory number of club members and adult demonstrators, and keeping records on same; that they visit all sections of their respective counties; hold field meetings at demonstrations, aid all commodity and other farmers' organizations; keep office and records in good condition; increase their efficiency as far as possible and put extension work on a more solid basis; meet all new problems that may arise; encourage boys and girls to attend club meetings and short courses; produce home supplies.

Progress was made in all of the above named plans. Local support from public funds was continued in all but three counties and three new ones were added, two to

begin January 1, 1933.

Thirty-two (32) new Advisory Boards were organized and a much larger number of committees aided in making plans of work. Nine (9) counties made appropriations for a period of three or more years. More publicity was secured. More club work was done thru organized boys' and girls' agricultural clubs.

Much of the other plans outlined was carried out successfully but results can not be given in figures. Suffice it to say that an improvement was made over former years.

2. A number of agents have their offices either in the county court house or some other public building at the county seat, such as the post office or chamber of commerce, the others having rooms as accessible to the public as possible. These offices are partially furnished when turned over to the agent. The Extension Division assisted each agent to a very limited extent in the purchase of additional equipment such as desk, chairs, filing cases, typewriters, shelves, bulletin files, containers for supplies etc. Only four (4) agents have stenographic or other clerical assistance, most of them doing this work themselves. On the whole their filing systems are incomplete but improvement is noted. The Extension Division owns several lantern slide machines which are shipped to agents upon request. They make frequent use of them.

3. Two group meetings including all agents were held during the winter when practically all lines of work were discussed, each agent being given time to tell of his plans, problems and accomplishments, and instructions for the year given. Special emphasis was placed on making a plan of work to fit the county's needs and following it as closely as possible. A short meeting of all agents was held at Blacksburg during the summer following the Farmers' Institute. Occasionally an

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agent is authorized to attend a meeting of some kind where matters of particular interest to him are discussed.

When men are employed who have never had experience as county agents they are put in first for a period of from three to six months, and in some cases longer, as assistant agents and placed with some good county agent for training. Then as they become qualified and vacancies occur, either by a new county making an appropriation or an agent resigning, we place them as agents in counties where we feel their training has best fitted them. The new county agent is usually met by the district agent who introduces him to the leading people in the county and gives him all the assistance possible, sometimes spending several days with him; after which he visits him frequently, helps to outline a plan of work and keeps in close touch with him.

4. The State leader or district agents always discuss each agent's plan of work with him before it is made. He then makes several copies of same, sending one to the State leader and one to the district agent, both of whom study these plans and frequently write the agent suggesting certain changes. The plans are followed as closely as possible.

5. The heads of the different departments in the State Agricultural College or specialists supply the subject matter for the different projects.

6. Liberal use of local papers has been made by the county agents in addition to frequent circular letters. The agents have given more publicity to their work thru the local newspapers and the editors are more anxious to get articles from them than heretofore. Publicity has also been given thru timely articles in the leading State papers, farm papers, Extension Division News, Club Letter, meetings at demonstrations and public meetings of all kinds, boys' and girls' club encampments and short courses, motion pictures and exhibits at county fairs, community and State Fair. While the State Fair affords wider publicity, exhibits at county fairs

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probably accomplish more real good, since visitors at these fairs are usually more interested in rural development than are city people who through the State Fair grounds seeking amusement. However, the State papers give these exhibits considerable publicity, and livestock men from all over the State see them, thereby giving State wide publicity to what the boys and girls are doing.

III. PROJECT ACTIVITIES AND RESULTS.

A study of the agents' plans of work for the year will show that some work was done along all lines of agriculture practiced in the State. There were no State wide campaigns other than a "Live at Home Campaign" in which most of the agents took part, but a number of counties put on special campaigns, reports of which are given below under proper heading. Except in a few instances there was no project organization, the agents securing their demonstrators largely through personal visits and meetings. As has been said in a few instances communities selected project leaders for the several projects they felt necessary for the development of their communities. Due to the form of statistical report, from which this is taken, a large part of the agents' work is not shown, hence it does not show up the year's work nearly as well as it should. The following extract from an agent's report indicates the interest taken in the "Live at Home" campaign.

"An agricultural independence campaign was put on during the year. This was done to bring to the attention of those interested the necessity of producing a greater quantity of food and feed for home consumption; also to work for richer soils by planting more legumes, and to improve our livestock. Sixty farmers signed and returned the cards distributed showing that they were interested in producing more home supplies."

GENERAL ACTIVITIES

Extension work was conducted in sixty nine counties during the year, and the Extension program was worked out in 578 communities by the agent and the people interested. 407 leaders were actively engaged in forwarding the 622 organized boys'

Had girls' agricultural clubs composed of 5433 members, 2306 of whom completed the year's work. Considerable time was taken in training the ninety judging and demonstration teams, twelve of which competed at the State Fair where the Rockingham team won first place and a trip to the International Livestock Show. Several of these teams gave demonstrations here during the State Short Course and the three best ones were requested to give their demonstrations before the State Farmers' Institute. Three teams went to Camp Vail where they did credit to themselves and the agents who trained them.

One hundred and sixty three (163) members entered college this year, and it may be said here that they did creditable work while in college and as a rule occupy prominent positions.

A total of 56,767 visits were made by the agents and 21,197 different farms or homes visited. 47,167 calls were received. An average of 71 days was spent in the office and 223 days in the field. 51,446 individual letters were written. Extension exhibits were made at 80 county and 33 community fairs. About 30 counties were represented at the State Fair by club project exhibits where many of the members won premiums in open livestock classes as well as in competition among themselves. 4466 meetings were held with a total attendance of 154,730 persons. Four district short courses and several county encampments, in addition to the State Short Course for club members, were held. The total attendance at these courses was 1379 members.

#### Soils

There is possibly no phase of agriculture of more importance to Virginia farmers than that of the improvement of their soils for economic production depends not alone on the quality of the seed used but to an even larger extent upon the fertility of the soil. Yet comparatively few farmers give proper attention to this.

important phase of their farming. It is one thing that so supervising agents will have to impress on our county agents and they in turn emphasize nearly every day in their work. It is hard in many instances to both show a profit and improve the land at the same time, but unless our lands are improved the yields will continue to become less and less.

Many of the agents included soil improvement in their program and the agronomy specialist chose it as one of his major projects, especially the use of lime. The agents' statistical reports show that 856 farms used lime this year for the first time, using 8800 tons of lime in some form. No mention is made of how many other farms used it, but the number would be very much larger.

There has been considerable activity for several years in building bins whereby farmers can secure lime in small amounts whenever needed, or to haul back home whenever hauling produce to the station, rather than go back empty. These bins are built by the farmers themselves on land leased from the railroads. Fourteen (14) such bins were built this year, making a total of 66 in the State. Nine (9) portable lime crushers and pulverizers were bought during the year and a number of kilns burnt for home use.

Other soil improvement work would consist of use of manure, summer legumes, the different clovers and use of proper fertilizers. 1287 adult demonstrations were conducted, 906 of which were completed, covering 19,162 acres. 6478 farms adopted improved practices in the use of commercial fertilizers, 1461 farmers took better care of manure, 566 farmers plowed under green manure crops on 5066 acres, while 5416 farmers adopted improved practices in taking better care of their land. One of the county agents in Piedmont Virginia says:

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"With the assistance of the specialists thirteen method demonstrations were given on soils with a total attendance of 240 people. These dealt with the use of lime and a more judicious use of commercial fertilizers in the production of both money crops and crops to be turned down for soil improvement or used as mulch crops in orchards. A number of samples of soil were tested for acidity and lime recommended where needed. As a result lime was used on nine farms where it had not been used before, and a number of other farms left check plots in their fields for comparison.

Improved practices in the use of commercial fertilizers were adopted on fifty nine farms, chiefly in the use of high analysis fertilizers applied in sufficient quantities to feed the crop throughout the growing season.

Demonstrations in top dressing pastures with lime and phosphate were put on on three farms. While sufficient time has not yet elapsed for the results of this treatment to be fully analyzed, the increased growth of white and Japan clover on the treated plots is very evident and would indicate soil improvement."

#### CHICKENS

The organization of the Crop Improvement Association has done a great deal to promote the growth and use of better seeds. This Association now has a membership of 227 farmers, all of whom are producing certified seeds of one kind or another. These crops undergo a very rigid inspection before being allowed to pass certification. In many cases the crops in question do not meet the required standard and are not allowed to be sold as such. The organization of this Association has had the effect of improving the quality of seeds offered by the seed houses. Yields obtained from the use of certified seeds range from 10 to 30 per cent over those produced from ordinary seeds. More farmers are demanding better quality seeds.

#### CORN

The seasons during the past year have been the worst for many years for production. The spring was late and wet, followed by much rain in early summer, causing many farmers to be delayed beyond the corn planting time in the preparation

of their land. Grass took many fields. This was followed by a long continued drought in some sections. Many late crops were ruined or severely damaged by an early frost. These combined conditions resulted in the poorest crop produced in many years.

582 demonstrations, comprising 5616 acres were completed and showed an increased yield of 12.7 bushels per acre. This increase is almost equal to 50 % of the average yield in the State. 1975 farmers planted improved seed for the first time. 1882 practiced seed selection for the first time, while 2334 adopted improved practices. Eight (8) varieties of corn are grown for certification. 1859 bushels of such seed were produced, enough to plant approximately 11,000 acres another year. A great many farmers had their seed tested for germination and disease. This work was done to a large extent by school boys. The agent in King George says:

"The yields on the 20 reported demonstrations varied from 24 to 55 bushels per acre with an average yield of 41 bushels, which is about 13 more than on ordinary crops in this county. There is no doubt but what corn demonstrations have been more constructive and done more good than any other as can easily be seen from the corn now grown in the county. This has been brought about by proper plowing, preparation of seed bed, cultivation and efficient selection of seed as is practiced by a large number of farmers at present, who knew little or nothing about selecting seed before Extension work was started here.

The corn exhibit at the King George fair by club members and demonstrators would do credit to any county in the United States. My district agent said it was the best lot of corn he had ever seen at any county fair. A business man in the grain business in F. told me a few days ago that the work the county agent had done alone in improving corn crops has been worth more than the agent's salary.

Another important fact brought out in some of the demonstrations was the value of flat cultivation, shallow during the growing season. In three of the best demonstrations this was carried out to the letter by three signs I had made and put on the roads by corn fields with the drawing of a young corn plant, showing deep cultivation and shallow cultivation with the wording in large type. "DEEP cultivation breaks roots and decreases yields. "SHALLOW cultivation (1) increases yield, (2) easier on horses, (3) saves possible the cultivation of more acres, (4) keeps down weeds as well as or better than deep cultivation, (5) conserves moisture. For further information see county agent." The signs were put

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on the road by corn fields about the time corn was cultivated the first time, on just fairly good soils, but on farms where I knew the owners would carry it out. I risked my judgment on the crop before it was made and not after it began to look promising. This I think was a fine piece of effective work."

#### Wheat

The same sections suffering from excessive rain and consequent injury to corn experienced injury to most of the small grain crops in that the wet season continued through the harvest season, thus causing much damage through delay in harvesting until too ripe and sprouting in the shock. While about 80 per cent of the wheat grown from certified seed failed to come up to the required standard, 15,562 bushels did pass. This is sufficient to supply seed for a large acreage another year. 300 demonstrations including 3764 acres, were conducted. The yield was 2.2 bushels in excess of the State average. 464 farmers used improved seed; 86 practiced seed selection; 117 treated for smut for the first time, while 764 adopted better practices in growing this crop.

#### Oats

Oats are grown largely for feed in the sheep, but some are threshed as a feed for stock and seed purposes. Practically all oats grown from certified seed were threshed. 171 demonstrations, comprising 1477 acres were conducted. A yield of 8.3 bushels over the State average was made. 264 farms used improved seed, 56 treated for smut and 260 adopted better practices for the first time. 2200 bushels of certified seed was produced of a variety bred here at the Experiment Station. It has proved one of the best yielders in the State.

#### Rye

Rye is grown to a limited extent. 171 demonstrations, comprising 982 acres were completed, giving a yield of 5 bushels per acre over the State average. 220 farmers used improved seed, 8 practiced seed selection, and 260 adopted improved practices

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in growing this crop for the first time. About 1000 bushels of certified seed was produced. The following is taken from a county agent's report:

"All demonstrators used the Abruzzi variety, and on account of its good yielding qualities it is grown almost exclusively in this county. This is due entirely to demonstration work. This variety also sells for around \$1.00 per bushel more than ordinary rye, and is much more in demand. It can also be seeded later than wheat and with a more rough preparation in the way of seed bed since it is more hardy. By growing it in the county local people have a chance to get it as it is in demand as a grazing and early cover crop. It has increased 100 per cent since demonstration work started."

#### Barley

Very little barley is grown, consequently not much attention is given it. 15 demonstrations were completed, comprising 104 acres and showing an increased yield of 6.2 bushels per acre. 15 farmers used improved seed, 13 treated for smut and 29 adopted improved practices for the first time.

#### Alfalfa

The past season was favorable to the growth of alfalfa but not to the harvesting of it. The agent in Hotelourt county put on a short campaign urging the farmers, especially those engaged in dairying to seed a few acres of it. The following extract is taken from an agent's report:

"In July of this year I put on a ten day alfalfa campaign with the idea of increasing the acreage in the county and to get the farmers generally to adopt better production methods. As a result of this campaign about 97 acres of land were seeded to alfalfa under the most approved methods, namely, liming, inoculating, preparing the land thoroughly, and planting early. The use of native grown hardy seed was stressed in this campaign and such was generally used. I have twelve result demonstrations under way where the work was started with the preparation of the soil and two result demonstrations of renovating old alfalfa fields."

530 demonstrators seeded alfalfa during August or September. 383 demonstrations comprising 3648 acres were harvested, yielding .71 of a ton per acre more than that sowed in the usual manner. 370 farmers seeded it for the first time, 267 of whom inoculated their seed. 379 farms adopted better practices relative to its growth.

Soy Beans

The production of soy beans for sale as seed has stimulated the planting of this crop, especially in those sections where farmers had few cash crops. The certification of seed has also had the effect of increasing the acreage, 15,000 bushels being harvested during the past season. Many of the agents are now including it in their program as a major project. 661 demonstrations, comprising 9229 acres, with an increased yield of 4.5 bushels or .5 ton per acre were completed. 631 farmers planted improved seed, 343 selected seed and 972 inoculated for the first time, while 1994 farms adopted better practices in their growth.

Sweet Clover

Sweet clover is becoming more popular each year as farmers learn its true value. This is especially true in the Eastern sections of the State. The following is taken from a county agent's report:

" All growers in this crop are demonstrators as it was unknown except in the wild State before county agent work started. Sweet clover has a distinct advantage over all other crops in this county as a soil builder since it will grow on any soil where lime and inoculation is applied. The estimated grazing value per acre is \$5.00. thru county farm organization lime has been secured at a reasonable price which has promoted the growing of this crop. The greater part of the credit for these demonstrations should always be given Mr. Quisenberry, my district agent, who has so long studied, grown and preached the use of it as a necessary crop for this section, and who often assists me, both in the field and in meetings. This is one of the coming crop demonstrations in this county."

142 demonstration fields were seeded during the past season; 99 demonstrations comprising 696 acres were harvested, showing an increased yield of .4 ton per acre; 52 farmers used improved seed and 90 inoculated for the first time, while 123 adopted improved practices relative to its growth.

Grass Clover

This crop is grown largely as a soil improver, tho in the Eastern part of the State it is grazed or cut for hay, frequently being seeded with oats or wheat. Ordinarily it is seeded at the last cultivation of corn or some other crop, but best results are obtained by seeding alone on land especially prepared, the time of the last cultivation of crops being rather early in most cases. 528 demonstrations were seeded during the past season. 382 demonstrations, comprising 4627 acres were harvested, showing an increased yield of .4 ton per acre. 178 farmers seeded it and 108 inoculated for the first time, while 526 adopted better practices in its growth.

Clover- Red etc.

For the past three years the agents have laid special emphasis on the use of better seed, especially those of "known origin". The results obtained at the Experiment Station here shows conclusively that clover seed produced in some of our northern or western States gives much better results than the imported seed as they stand the winter much better. The use of lime as an essential factor in the growth has also been stressed. Due to its use many farms are now producing splendid crops of hay where a few years ago it was a complete failure. The past season was admirably suited for its growth and the largest crop for many years was produced. In conformity with the Five Year Plan of Work it is recommended to seed the clovers alone in August or September for best results. 789 farmers seeded it in this manner during the past year. 666 demonstrations, comprising 9,189 acres and yielding .5 ton per acre over the State average, were completed. 723 farmers used improved seed and 162 inoculated, for the first time, while 766 adopted improved practices in its growth.

#### Garbanos

Soy beans are fast taking the place of the cowpeas, being equally as good a soil improver, standing unfavorable seasons better and being easier handled in harvesting. They are also suited to a larger range of territory.

77 demonstrations, comprising 480 acres which gave an increased yield of 4 bushels of seed or 1 ton of hay, depending on the purpose for which it was harvested, were completed. 33 farmers seeded them and 15 inoculated for the first time, while 218 farms adopted improved practices in their growth.

#### Favales

This crop is confined to the southeastern part of the State where it is one of the chief money or cash crops. The past season was extremely unfavorable to its growth, being wet in the spring and early summer which delayed the planting and prevented the proper cultivation, after which an early frost came before they had matured, thus further reducing the yield. Only six (6) demonstrations, comprising 85 acres were completed. There was an increased yield of 25 $\frac{1}{2}$  bushels per acre. 10 farmers planted improved seed for the first time. 29 farms adopted improved practices.

#### Festuca

Realizing that pastures were deteriorating and not affording the grazing they former- did, some work was done by the agronomy specialist, and the agents in attempting to improve them by the use of lime and acid phosphate. 34 such demonstrations in eight counties were conducted. In addition to these, 368 other demonstrations were started, comprising 1745 acres. It requires several years to obtain the best results.

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### Birds Eye Beans

This crop is limited to four counties, Grayson, Carroll, Wythe and Pulaski. Only two agents report any demonstrations. In Grayson, where it was first introduced several years ago, it has become very popular and brings considerable cash into the county. 159 demonstrations, covering 1565 acres and making an increased yield of three (3) bushels per acre were completed. The usual yield is around 10 or 12 bushels per acre and they sell from \$3.50 to \$4.00 per bushel. 325 farmers planted selected seed and 505 inoculated, for the first time, while 327 adopted improved practices in their production. The following extract was taken from an agent's report:

"Birds eye beans is the only money crop we have. This variety was developed in the county from a corn field type. Grayson produces more beans than any other county in the State. This year the yield is around 50,000 bushels. The number of acres is between 4000 and 5000. I have eighty demonstrators that selected and hand picked their seed from high yielding vines and who also inoculated thoroughly. The result was that the yield was increased three bushels more per acre over those not planted with selected and inoculated seed. This spring over 400 farmers were induced to inoculate their bean seed for the first time."

### Irish Potatoes

The production of Irish potatoes as a money crop is confined largely to those counties in Eastern Virginia which produce an early crop for market, and a few Southwest and Valley counties which produce later crops. The principal ones producing an early crop have no agents. However, the vegetable specialists have done considerable work there and conducted a number of demonstrations. Northern grown seed are used almost entirely for the early crop. Several years ago a small number of experiments were conducted by using seed grown in the higher elevations of the State. In the main these experiments were successful and the yields compared favorably with those of Northern grown seed. Arrangements have been made to continue this practice to a larger extent. This will afford the potato grower in the mountain section a good market for his potatoes and

the producer a nearby source of seed at a lesser price. 105 demonstrations, comprising 632 acres with an increased yield of 63 bushels per acre were completed. 208 farms planted improved seed, 50 practiced seed selection, 89 treated seed for disease, and 51 dusted or sprayed for disease or insects for the first time, while 273 adopted improved practices. The following is taken from a county agent's report:

\* Seed potatoes for the early spring crop are usually grown in New England, New Brunswick and Nova Scotia. Frequently these are badly diseased, causing heavy losses to the farmers of this county. Dr. T. J. Johnson of the Truck Experiment Station, spent some time where these seed are grown, inspecting fields and otherwise endeavoring to secure good seed for the growers. However, it is difficult to control these things at a distance and duty is high on imported seed. Mr. A. G. Smith, Vegetable specialist of the Extension Division, conceived the idea that these seed potatoes might be grown to advantage in certain mountain sections of Virginia. This is now being tested and if we find that an early and abundant yielding variety can be grown, we are confident that disease will be more completely controlled. It will be an advantage both to the grower here and those in the mountain sections.

To do this it is necessary to test out here the seed that were grown for this purpose last year. I selected twenty farmers for this, each planting some of these seed at the same time and under identical conditions to watch results. Unfortunately the Virginia seed were stored here at too low a temperature and did not germinate so readily as other seed which prevented a fair test in the matter. These farmers readily appreciate what happened and most of them wish to assist another year in determining whether it is best to get their supply from the mountains of Virginia or not. "

Sweet Potatoes

The production of sweet potatoes for market is largely confined to counties in tidewater sections. An effort has been made to induce growers to use better seed, free from disease, and to cure the crop before placing on the market. Should this practice be followed our growers would receive much more for their crop than at present. Now the whole crop practically is dumped on the market as soon as dug, which causes a glut and consequent drop in price. A large quantity rot from not being cured properly. 82 demonstrations, comprising 409 acres, giving an increased yield of 42 bushels per acre were completed. 45 farmers planted improved seed, 42 selected seed, 62 treated for disease for the first time, and 178 adopted improved practices.

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Cotton

The interest in cotton growing was greatly stimulated by the splendid crop produced and price obtained in 1922. While its growth heretofore had been confined to a few counties in the southeastern section of the State, a number of other nearby counties became interested this year, and it was planned to put out a much larger acreage. However, the late wet spring prevented many farmers from putting out what they had expected. The yield was further reduced by an early frost which damaged most crops to a considerable extent. The Crop Improvement Association certified three varieties and 630 bushels of such seed were produced. It has been found that in most counties an early maturing variety is desirable. 647 demonstrations, comprising 2627 acres, giving an increased yield of 261 pounds per acre were completed. 560 farmers planted selected seed for the first time and 533 adopted improved practices. The following extracts are taken from agents' reports:

"The work conducted in cotton this year is very satisfactory when conditions under which this crop was grown is considered. On account of a cold, wet spring cotton which should have been planted the first of May was not planted until June 7. I have never seen hill cotton with as much fruit formed on stalks in any section of the South. A late frost caught all that was planted late resulting in about one third of a crop. The "King Improved" variety was used in this experiment, and being the first time it was grown in the county, the county agent advised from one to five acres per farm. 200 acres were planted and growers are well pleased with results."

"Cotton was having a big boom in this county due to the fact that in the preceding year a man had made 40 bales on 80 acres. He did not encourage the people to grow cotton but rather tried to guide and help them in securing good seed. Considering the unfavorable year the cotton did unusually well. He proved that cotton could be grown successfully. Results showed that an early cotton is most desirable. He had a total of 42 adult and 8 club demonstrators who grew 314 acres of cotton."

Tobacco

Tobacco is the chief money crop in a number of Southside and Middle Virginia counties, and as such deserves consideration at the hands of the Extension Division.

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Diseases known as angular leaf spot and wildfire have ruined many crops in the past few years, doing much more damage some years than others. Our agents have been very active in having farmers treat their seed and use all other precautions to hold these diseases in check. They have also advised regarding the best fertilizers and rotations. The Tobacco Growers' Cooperative Association is now in its third year. While there is dissatisfaction among some of its members, the majority are supporting it loyally. This Association has been the cause of maintaining better prices than those obtained in any given number of years. Several hundred new members joined during the past year. 206 demonstrations, involving 796 acres, making an increased yield of 220 pounds per acre, were completed. 197 farmers planted selected seed, 686 treated seed for disease and 76 dusted for insect pests, for the first time, while 1541 adopted improved practices in growing this crop. The following extract was taken from an agent's annual report:

\* The County tobacco growers' organization is made up of seven local organizations, consisting of 788 members, or about 60% of the growers in the county.

At the suggestion of the Executive Committee I worked out a complete program for the entire season, and set aside one week of each month for organization work. One of the principal features was the adopting of a "Cost Account" system on the production of tobacco. This was accomplished by making out a large chart giving the names of each man who would keep a cost record, and the number of different phases of work mentioned. At each meeting this was placed in the room, and information as to number of hours spent by men and team was filled in under its respective heading. This proved to be very interesting and helpful in keeping up local interest. While all records are not complete, we find that some growers have spent as much as 36¢ per pound for producing tobacco, while others have produced it at a cost of less than 14¢ per pound.

Grading demonstrations were also established at the meetings of the local organization, at which time all different types of tobacco were assembled and the warehouse grader explained the different grades to the grower.

In addition to the "Cost Accounting" system adopted, we were able to persuade at least 700 farmers to use the open formula fertilizer. This has created a great deal of interest among all farmers, and caused them to make a particular study of the particular kind of fertilizer to produce tobacco on different types of soil. As a result we purchased thru the county organization over 400 tons of fertilizer this season cooperatively at a saving of from \$2.00 to \$3.00 per ton."

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Tomatoes.

Tomatoes are grown for home use by practically every family having a garden. In a few counties they are grown on a large scale for canning and supplying the nearby markets during the season. In a few other counties having an earlier season they are grown and shipped in baskets to northern markets, being pulled green and wrapped in paper. In Northumberland County the Coan River Tomato Growers' Association has been organized with 180 members growing over 400 acres of tomatoes. During the peak season the past year the yield was small but prices were good and the association members received about 35% more per crate than non members shipping to same markets. Considerable work was done in disease prevention. Among these may be noted the community plant beds, in some instances covering one half acre or more. These beds are supervised by the specialist or county agent, being handled according to best known methods. Plants are furnished to farmers at approximately cost of production. Seven (7) such beds were grown this year and one and one quarter million plants were furnished growers. Twenty three (23) demonstrations involving 164 acres, making an increased yield of 28 bushels per acre were completed. Ninety (90) farmers planted improved seed and 24 sprayed for disease for the first time, while 78 adopted improved practices. The following extracts were taken from agents' reports:

"Through meetings and personal visits the tomato growers were induced to plant all land intended for tomatoes this spring, last fall and seed to rye or German clover. This was practiced on 280 farms. The county agent and Vegetable Specialist of the Extension Division worked out the fertilizer or plant food requirements to produce a certain number of tons of fruit. The recommendation was 1000 pounds of 5-6-6 per acre, applied in three applications, one in preparation of field or seed bed, one at second cultivation, and one when plants are about knee high. 280 farmers followed this advice which resulted in 2 1/2 tons more of fruit per acre than under the common practice of the growers. \$80,000 was paid to the growers by the canners as compared to \$30,000 past year. This demonstration meant a saving of \$50,000 on the same number of acres."

" The average in tomatoes was the largest in the history of the county, the early crop was damaged about 80 % by wet weather and leaf spot. Twelve demonstrations were carried on as to varieties, fertilizer and control of diseases by spraying. The variety test worked out in good shape, and it is very likely that as a result of this work a better variety of tomato for early shipping will be developed for this section. An account of wet weather the fertilizer and spraying demonstrations did not show up so well but it was clearly shown that land rich in organic matter adds larger yields and the fruit was of better quality. In one case a good clover fallow doubled the yield in tomatoes. A campaign has been put on with the help of the Extension Division and Truck Experiment Station to increase the yield and quality of the tomatoes by increasing the organic content of the soil. As a result of this campaign 300 bushels of Abruzzi type have been seen by about 80 farmers to be turned under for early tomatoes."

The Coan River Tomato Association was organized with 180 growers signing up to sell through the Association all the early tomatoes raised by them for three years. This represented about 60% of the crop. After plans had been set in the field it was estimated that the Association would have the tomatoes from about 400 acres to market. Due to wet weather the crop was damaged about 80 %. The Association bought crates etc. for the farmers, thereby saving them about \$2800. The total profit was \$48,800.00. Most of the members are well satisfied and preparing for the best possible crop next year."

Horticulture

Virginia is the third State in the union in <sup>commercial</sup> apple production, consequently considerable time was given by the agents in the apple producing counties to the better methods of growing and handling this important crop. The greatest advance made was the standardization of the pack through inspection rings, where apples were graded and packed under the supervision of experts. The organization of these rings was done by the agents and inspection under the supervision of the State Division of Markets. Information was given on spraying to all apple growers. This information was supplied by the specialists at the proper time for each application to the county agents who in turn furnished it to each grower in his county by sending out cards showing proper time and material to be used. This information was given to approximately 8000 growers.

1295 demonstrations, involving 2660 acres, giving an increased yield of 50

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bushels per acre, were completed. 648 farms pruned, 794,076 trees, 540 sprayed 8700 acres, for the first time, while 1771 adopted improved practices. The following extracts were taken from agents' annual reports:

" The major project of the fruit growers this season was the Community packing shed. Sheds were established at Amberst and Indian Creek. Seven or eight growers in each community formed a smaller association and purchased a sizing machine. This was located at a central point, a packing house manager employed and necessary hands secured. A grower would harvest his apples, hauling them directly from the orchard to the pack shed where each man's fruit was packed in turn. One man was able to sell practically the entire cut out of the orchards. The fruit packed averaged about \$1.25 per barrel more for its owners than was received by the average grower of the county.

The second phase of horticultural work was the organizing of an orchard inspection ring here. About forty of the fruit growers combined and secured the services of the State Inspector, who visited the orchards and inspected the packing of the fruit. If it came up to specifications the grower was allowed to stamp packages with the Picket brand. This resulted in a uniform pack and has raised the standard of the fruit in the county."

A spray service was continued during the year to 163 commercial orchards in the county.

There was widespread interest in pruning demonstrations, resulting in a fruit of much higher quality."

" I held 25 pruning demonstrations in different sections of the county at each of which the question of applying spray materials was discussed and spray calendars furnished. Just before picking season we organized two inspection rings, one shipping 15,000 barrels and the other 25,000 barrels. As a result the fruit sold for at least 20¢ per barrel higher.

A local organization was formed at Mount Airy where a community packing house was built where 25,000 barrels were inspected and packed."

" Four pruning demonstrations were held in this county witnessed by 76 people. Spray calendars were sent to every grower in the county; also notices telling them when to spray, proper amount and kinds of material to use. Inspection rings were formed, a man from the Division of Markets visiting each orchard daily to see if fruit was packed properly. The desire was expressed that schools be held to show the people how to pack apples properly. This was done during September with the assistance of the horticultural specialist from Hickoryburg. There were four schools and 100 people present. Four inspection rings were established and approximately 20,000 barrels inspected at a comparatively low cost. Better packs of apples have gone out from this county this year than ever before, the percent inspected was small.

As home apples are growing more and more in demand, 20,000 boxes from California were ordered and a grading machine bought. The warehouse was then rented and used as a community packing house. The growers were much interested and feel that they have done something that will be more profitable each year."

#### Bush and Small Fruits

Comparatively little time was given to these crops. Strawberries are produced in large quantities in eastern Virginia but chiefly in counties having no county agents. Assistance given consisted of advising proper fertilization, cultivation, spray and packing. 200 demonstrations were started and 146 completed. 92 farmers pruned for the first time. Sixty seven (67) sprayed for the first time, while 202 adopted improved practices. Most of this work was done with owners of small plots for home consumption.

#### Market Gardening, Truck and Greenhouse Crops - Home Gardens.

This work was confined largely to those counties adjacent to the larger cities, and consisted in giving information relative to seed treatment, fertilizer, cultural methods and preparation for market. Most all rural families have good summer gardens of with the exception, perhaps, some of those in the bright tobacco district where it is neglected. Stress has been placed on having fall and winter vegetables for home consumption. 1167 demonstrations were started, 680 of which were completed. 872 farmers adopted improved practices. The following extract was taken from an agent's report:

"Truck farming is the most extensive and most important line of farming carried on in the county. The best work I can do for this class of farmer is to stress the importance of good seed and the proper fertilizers of the right analysis for a special crop and compounded from the proper materials. They are realizing more than ever before the importance of using a good fertilizer in which the ammonia is derived from proper materials. At the request of some of the farmers I have given the manufacturers of fertilizers formulas for certain crops which were put up for them. These gave excellent results."

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Forestry.

The average farmer in this State feels that it is his duty to market as much of his timber as possible and little or no interest has been manifested in taking care of the forests. During the past few years a number of counties have become interested to the extent of appropriating a small amount for the employment of fire wardens cooperatively with the United States Forestry Department. The following extract from a county agent's report is interesting:

\* After making an agricultural survey of Patrick County we found that out of 210,000 acres in the county only 55,000 were in cultivation and orchards, about 100,000 acres in original timber, which left 100,000 acres of burnt over timbered land. For this reason after holding consultations with the leading timber men of the county, we decided to form a Forestry organization. Immediate steps were taken to have fire wardens appointed to protect the forest against fire, as well as to do educational work. A campaign was put on at which time I visited over 100 schools in the county and explained to the pupils the importance of taking care of the timber, and the protection against forest fires. \*

Dairying.

Fifty two (52) agents report work in dairying. It consisted in assisting farmers in securing better sires, better cows, organizing cow testing associations, culling out low producing cows, testing for butter fat and production, and tuberculosis eradication, growing crops suitable for feeding dairy cows and also feeding a better balanced ration, and use of silos. 336 demonstrations, involving 4226 animals were conducted and showed a profit of \$9460. 186 dairy calf club members were enrolled. 283 farmers were assisted in obtaining purebred sires and 185 in securing purebred cows. 271 cows were culled out of 70 herds as being unprofitable. 7 purebred bull clubs with 71 members were organized. 16 Cow Testing Associations with 201 members owning 7366 cows were either organized or re-organized. 229 farmers not in associations tested 2704 cows for production. 943 adopted better sanitary precautions in production of milk, 228 fed a better ration, 329 tested cows

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for tuberculosis and 766 adopted improved practices.

### Beef Cattle

Thirty-five agents report work with farmers owning beef cattle. They are confined chiefly to the Valley and Southwest Virginia where the blue grass affords excellent grazing. Five sales of purebred cattle were held at which 158 head were sold at an average price of \$108. Baby beef club work engaged in by boys' and girls' agricultural club members come under this heading and was supervised by the agents. 140 individuals were fed, of which 100 were placed on exhibition at the State Fair where they received probably more favorable comment than any exhibit there. A campaign for the replacement of scrub sires was engaged in by several agents, this applying to all breeds of livestock. The agent in Grayson County had the honor of having the most replacements to his credit, having replaced 27 scrubs with purebreds. The following from an agent's report deals with this project:

" An intensive purebred sire campaign was held this year with meetings on 30 farms in different sections of the county. Specialists from the Extension Division discussed the value of purebred sires and how they could be obtained and where. Each night after the day meetings we held community meetings in the school houses, showing moving pictures in regard to purebred sires, and we also had several good speakers for the occasion. There were 1280 in attendance at the meetings during the week and we found about 60 prospects to place purebred sires. Information was obtained as to what they wanted and we tried to help them secure the sires. A sale of purebred bulls was arranged and 12 out of 20 on exhibition were placed. "

### Swine

The major project in swine production was the ton litter contest inaugurated by the swine specialist in which several agents participated. Its object was the improvement of feeding and management methods. 70 farmers entered the contest, but about one half dropped out later, on account of small litters, high prices of feed and other causes. 20 of them fed throughout the entire feeding period of 180 days

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at which time five litters exceeded the ton mark. Princess Ann won first place by producing a litter of twelve pigs, purebred Durocs, weighing 2845 pounds at the close of the contest. Note the following extract from the agent's report:

"I supervised the feeding of one litter of pigs that were entered in the Virginia Ton Litter Contest. This litter consisted of 12 purebred Duroc Jersey pigs which weighed 2845 pounds at 180 days old. This litter won the State contest over 70 entered, beating the nearest competitor by 421 pounds."

361 demonstrations, involving 5861 animals were completed, showing a net profit of \$10,393. 871 club members were enrolled and fed 1268 pigs. 266 purebred sires and 194 purebred cows were placed. 236 farmers fed a better ration. 1016 farmers were influenced to vaccinate herds against cholera and 1574 adopted improved practices in swine production.

#### Sheep

The sheep industry received more attention this year both from county agents and specialists. Treatment for stomach worms, docking and castrating and the breeding of better animals were the principal points emphasized, the Jersey City Stockyards claiming that the inferiority of our lambs was due to these causes. An auction ram sale, the first to be held in the State, was held in Augusta County where 44 purebred rams were sold, most of them going to that or nearby counties. Note extract from agent's report in that county bearing on this sale:

"A purebred ram sale was held in the county in July at which time 44 purebred rams of different breeds were sold. This sale was put on by the county agent and specialist from the Extension Division and backed by the Jersey City Stockyards Association who furnished the money to buy these rams, allowing them to be sold at auction to the farmers of the county. They were picked from the best flocks of sheep in the States of Virginia, and Maryland, some coming from the government sheep farms in Maryland. Advertisements were sent to the sheep breeders all over the State and we had a crowd of live buyers who bought rams at good prices. We sold 44 rams for an average of \$42.75 and sold them in 88 minutes. It was the first purebred ram sale ever held in Virginia. Twenty four of these rams stayed in the county and 20 went to adjoining counties. The Jersey Stockyards Association was very much pleased and is.

trying to do everything possible to improve the quality of rams coming to this section of the State. About \$330 was cleared over and above expenses of the sale which amount was to be used for future ram sales."

Fifteen purebred flocks were established. 11,400 lambs were docked and castrated, bringing a cost of more per pound more than those not so treated. Treatment for stomach worms appealed to a large number of farmers. 10,796 head of sheep were treated and showed a marked improvement. 330 demonstrations involving 21,376 animals and showing a profit of \$11,067 were completed. 157 farmers bought purebred rams and 52 bought purebred ewes. 73 farmers fed better balanced rations and 443 adopted improved practices in sheep production. The Montgomery County agent says:

"Three flocks of sheep numbering 47 head were started in the county this year. The number of purebred rams has increased enormously, practically all bought by the Livestock Shipping Association being purebreds. 12 demonstrations in docking and castrating lambs were conducted. There were 450 lambs in these demonstrations and about 150 additional done by the farmers themselves. They brought from 50¢ to 90¢ per cut, more than those in the same shipment not docked and castrated.

55 demonstration treatments were given, involving 5120 head of sheep and lambs. The farmers are following instructions and many of them say they have never seen such a marked improvement since the dosing began. A student of sheep husbandry states the richness of this prairie was easily worth 50¢ a head which means a saving of \$2565 on a flock of over 5000 sheep."

#### Rural Engineering

This work consisted chiefly of laying out drainage systems, constructing terraces for prevention of erosion, and furnishing plans for farm buildings. 301 method demonstrations were given. 239 result demonstrations started and 173 completed. 60 drainage systems were completed, draining 673 acres. 135 farmers constructed terraces, preventing soil erosion on 1621 acres. 79 homes installed lighting systems and 77 put in water systems. 474 buildings were built or remodeled according to plans furnished by agents. 765 farmers adopted improved practices. The agent in Eisenberg says:

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"There have been more calls for specialists in rural engineering than ever before. One farmer laid off and constructed 5700 feet of terraces with which he is very much pleased. Two surveys have been made for hydro-electric plants for lighting rural communities, one of which will probably be put in in a short time and will be used to light a small town in the lower end of the county. Five surveys and estimates were made for hydraulic runs this year, of which three will soon be put in. One silt was built."

### POULTRY

The poultry industry has received more and more attention each year. The number of calls on the agents has increased, since every farm has its flock. In fact, more people are interested in poultry than in any other one of our projects. The main points emphasized were stalling, feeding and housing, the purpose being to make the home flock pay. The State wide egg laying contest was continued with a large number of contestants from all over the State. The Egg Marketing Association organized last year began to function but after several months of "stompy travelling" the members were notified to discontinue their shipments and the organization was dissolved. 676 demonstrations, involving 61,269 birds and showing a profit of \$26,139 were completed. 2014 boys and girls were enrolled as club members raising 26,443 birds. 415 standard bred cocks and 283 hens were placed. 947 flock owners called their flocks for the first time, discarding 26,266 birds out of a total of 61,920 examined. 561 owners fed a better balanced ration and 283 controlled insect pests for the first time. 1948 farms adopted improved practices relative to poultry husbandry. The following extracts were taken from county agents' reports:

"This year thirty-two flocks were called, with 1903 hens from which 983 calls were taken. A record of egg production was kept for two weeks before and after calling which showed favorable results in every instance. In one case where exactly half the flock was called, 79 calls laid two eggs in two weeks and 79 good hens averaged five eggs a day more than the whole flock had done before calling. Five demonstrations were put on at which there was an attendance of 76 people. Some work was done with feeding and management with flocks called, 21 following instructions through the year.

Some work was also done in poultry diseases, this being discussed at all poultry meetings.

A poultry school of two days duration was planned for each of  
by counties. The one in Charles City was held and much interest  
shown, but we were unable to hold the other on account of heavy rains.\*

\* I have furnished 18 sets of plans and specifications for poultry  
houses, and five have been completed. The movement for better houses  
is gaining ground and others will be built later. Many old houses  
have been remodeled.

Two feeding demonstrations have been carried out satisfactorily.  
An increase of fifty to sixty per cent in egg production was obtained  
in three week's time.

Fifty-eight culling demonstrations have been held in the county  
with a total attendance of 262, and 2,565 unprofitable birds have been  
culled out. Many who attended have culled their own flocks, therefore,  
the total does not represent the total discarded birds by any means.  
One of the poultry dealers told me recently that he could see a marked  
improvement in the size of the eggs he was getting since the poor  
hens had been culled out of his community.\*

\*Twenty five culling demonstrations have been given at which 2376  
birds were handled. A total of 3600 birds, including those culled by  
the owners, were discarded. Plans have been furnished for the building  
of three poultry houses, and five farmers are feeding a balanced  
ration as recommended by the county agent. Five have been assisted in  
getting purebred cocks.\*

#### Agricultural Economics.

The following associations have all been assisted to a more or less  
extent by the agents in whose counties they operate.

The Farmers' Union  
The Farm Bureau Federation  
The State Horticultural Society  
The State Dairyman's Association  
The Crop Improvement Association  
The Poultry Producers' Association  
The Wine Growers' Association  
The Beef Cattle Growers' Association  
The Sheep and Wool Growers' Association  
The Tobacco Growers' Cooperative Association  
The Peanut Growers' Cooperative Association  
The Southwest Virginia Produce Association  
The Maryland-Virginia Milk Producers' Association  
The Valley of Virginia Milk Producers' Association  
The Virginia Livestock Shipping Association  
The Producers' Cooperative Exchange

The Coan River Tomato Growers' Association and other local associations have also received assistance.

82 method demonstrations were given in farm management; 99 farmers were assisted in keeping account books; 176 farmers were advised regarding leases; 46 farm account schools were held. 360 farmers were assisted in keeping cost of production records. 219 farms adopted improved practices relative to farm management. Two farm loan associations were organized with 89 members. 119 other farmers were assisted in obtaining credit. 91 demonstration were given in marketing. Only a partial report of the business done by the associations during the year is given by the agents. It is so incomplete that the figures submitted below are misleading as to the volume of business done and the saving made. 12 associations with a membership of 29,363 are reported to have bought supplies etc. to the value of \$727,634, at a saving of \$61,703 and sold products produced for \$13,607,418 at a saving of \$664,899.

IV. OUTLOOK:

1. The outlook for 1935 is very encouraging. The Agricultural Advisory Boards have been very active and have given valuable assistance both in making a plan of work for their county as well as assisting in carrying it out. They have also used their influence to secure appropriations for the continuance of the work and in several instances were instrumental in having it made for several years. While several counties failed to make appropriations, others have done so and we expect to have as many or perhaps a few more than in 1934.

2. Two group meetings of agents will be held in January instead of one meeting with all agents in attendance. This seems desirable on account of diversity of interests. These meetings will be similar to the regular annual winter meeting formerly held. One advantage is that we can arrange it so that agents interested in the same subjects can meet together and those not interested in certain projects do not have to sit through discussions in which they feel no interest. Both of these meetings will be attended by the Director, Assistant Director, District Agents and specialists, and it is hoped by several representatives of the Washington office. The full supervisory plan for the year has not been made yet but will not differ materially from those of the past.

3. Any assistance the Federal office can give will be appreciated. Constructive criticism of our work might be beneficial. I should also like to have two or more men from the Federal office attend our approaching agents' meetings and take an active part in them.

Number agents employed	64
Number counties worked	69
Number visits made	66,769
Number different farms visited	21,159
Number calls received	47,167
Number letters written	21,446
Number meetings held	4,446
Attendance at these meetings	104,730
Number of days worked- office	4,622
- field	14,453
Number method demonstrations given- crops	6,628
Number method demonstrations given- livestock	2,145
Number result demonstrations started or under way- crops	10,319
Number result demonstrations started or under way- livestock	2,226
Number result demonstrations completed- crops	9,427
Number of result demonstrations completed- livestock	1,763
Number of acres involved - crops	72,720
Number of animals involved	93,074
Number club members enrolled - crops	1,899
Number acres involved	1,113
Number club members enrolled - livestock	3,170
Number animals involved	28,034
Number farms planting improved seed for the first time	6,177
Number farmers practicing seed selection for the first time	2,442
Number of farmers adopting improved practices in growing crops	13,865

Number purebred sires purchased	1,208
Number purebred females purchased	766
Number farms adopting improved livestock practices	5,308

Respectfully submitted

W P Moore

Assistant-Director

FIVE YEAR PROGRAM

Mecklenburg County, Virginia.

Drawn up by Mecklenburg County Advisory Board, 1924.

Recommendations of the Live at Home Committee

This Committee believes this subject to warrant the most thoughtful attention of all our people and, therefore, will attempt to make recommendations from the following angle of this problem:

Gardens  
Poultry  
Orchards and small fruits  
Corn and small grains  
Hays and pastures  
Cattle  
Hogs

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The Sub-Committee on Gardens urges:

That more attention be paid to gardens in Mecklenburg County and that the owners be urged to consider the use of more vegetables throughout the year as a means to health as well as the savings effected in the food bill of the household. In the opinion of this Committee, the family garden can be made the most profitable spot on the farm.

This Committee makes the following definite suggestions:

1. Heavy fertilization.  
Manure will give good results but a combination of manure and commercial fertilizer will pay well.
2. Thorough preparation is very important. The garden should be fallowed in the fall or winter, and a firm seed bed, fine on top, should be obtained before planting any crop.
3. Good seed of carefully selected varieties. Good seed always pay, and due to the great difference in yield and quality of varieties should merit careful consideration.
4. A variety of vegetables should be planted in succession with special emphasis given to the winter vegetables.
5. Thorough, systematic cultivation, this to conserve moisture, destroy filth, and hasten maturity of vegetables.

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The Sub-Committee on Poultry Recommends:

1. That enough poultry be kept on every farm to amply supply the family with poultry and eggs the year round.
2. That care poultry and eggs be provided for the family table.
3. That the farm flock be of such size as to furnish a surplus for sale to meet the needs of at least the small groceries purchased.

These objects can be achieved provided:

1. Good standard bred fowls are kept.
2. The flock is well housed.
3. The flock is well fed on properly balanced rations.
4. Pullets are hatched early so as to lay in the fall and winter.
5. The flock culled every year.
6. The flock and house kept sanitary and free from vermin.

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#### Marketing Committee:

This Committee urges that farmers practice more economical production and states that it believes that this is the first step in successful marketing. It urges the use of better soils and better methods, and also of better seed and better fertilization so that more farm crops of higher quality may be produced per acre and per hand.

This Committee endorses cooperative marketing, not only of tobacco, but of wool, certified seed and of eggs.

This Committee recommends that wherever there is a small surplus of any product that a group of people in that section or locality be induced to go into the growing of the same commodity, wherever possible, in order that group marketing be practiced.

It also suggests that as a means of marketing farm products to the best advantage that more attention be paid to the attractiveness of the article and that products be more carefully graded according to quality and brought to a high standard before being offered for sale.

This Committee by resolution was made a standing Committee with C. F. Johnston of Wightman, President, and H. H. Williams, Jr. Secretary.

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#### Live at Home Committee-

Sub-Committee on Orchards and Small Fruits.

This Committee makes the following recommendations:

That a small orchard to supply home demands should be planted on every farm.

That the trees be bought from a reputable nursery and that varieties well adapted to this section be selected so that fruit may be had at practically all seasons of the year.

Full planting directions may be had from the county agent or from the Extension Service V.P.I.

That pruning and spraying should begin the first year and be kept up throughout the life of the tree. Full directions may be had from the source named above. All trees and vines should be sprayed during the dormant season with lime sulphur solution for scale and general clean up this is probably the

most important spray to use, although, to get good, sound fruit, additional sprays are necessary.

That cultivation is highly essential for young orchards. Legume crops are usually advisable. Small grains should not be seeded in the orchard.

That the orchard as well as other crops needs fertilization. The best time to apply fertilizers is at blossoming time.

Care should be taken in harvesting, packing and storing fruit.

Grapes should be more generally planted and properly cared for.

Peas are growing in popularity and warrant attention from our people. Care should be taken in the selection of adapted varieties.

Unless proper care can be given it is practically useless to plant fruit trees and vines.

More attention should be given to small fruits, especially raspberries, blackberries, and dewberries, and strawberries for home use. A small amount of attention given to these fruits will pay big dividends in supplying the home with attractive and wholesome dishes.

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#### Sub-Committee on Corn and Small Grains:

This Committee urges that all the corn needed in Mecklenburg County be produced within the county, and makes the following suggestions:

1. Avoid, if possible, planting corn on land too poor to produce a paying crop. That this poor land be used for soybeans and soy beans which will improve the soil and also produce first class hay.
2. Wherever possible, corn should be put on sod land or land with a reasonable amount of vegetation.
3. That corn land be fallowed in the fall or winter and this plowing should be as deep as the land permits.
4. Corn land should be thoroughly disced and harrowed before planting.
5. That lime be applied wherever possible and harrowed in and if manure is available that the thinner spots be covered.
6. That broadcasting of fertilizers be practiced, if possible, using 300 to 600 pounds per acre. Acid phosphate is only necessary to obtain good results if the corn follows a sod or legume crop. If not broadcasted, about one fourth the amount of fertilizer be drilled at planting time and the remainder should be applied between the rows when the corn is about three feet high.
7. Good seed be used and that it be from one of the varieties recommended by the Soil Improvement Committee, namely, Home County White, Casey's Purebred, Virginia White Dent, Reid's Yellow Dent and Golden Dent.
8. That care mistakes are made by leaving corn too thick than too thin, especially on poor land.
9. That the use of a section harrow be practiced to break the crust and to kill the grass before the corn comes up, and afterwards the same method be practiced until the corn is too large. In case of the cultivator the corn should be plowed shallow, especially as the corn grows older.

- 10. At last cultivation, wherever possible, seed cowpeas or soybeans in the corn. These may be grazed off, the seed saved, or disced in if wheat or oats follow the corn. In either case the soil will be improved.
- 11. Corn should not be cut until the stalk is brown. The quality of the crop will be increased by this practice.
- 12. That corn be improved from year to year by careful field selection.
- 13. That one of the two rotations as suggested by the Soil Improvement Committee be used, as follows:

Corn	Corn with crimson clover
Wheat or grass	Cowpeas or soy beans (for hay)
Clover and grass two years	followed by wheat or oats.
	Clover and grass( one year or more)

**Sub-Committee on Hays and Pastures-**

The Committee urges in the strongest terms the seeding of more land to hay crops and pastures to meet the great shortage of feeds that exists in this county. By doing this we will enable ourselves: first

- 1. To take better care of our livestock
- 2. To keep more livestock
- 3. To save the money which is now paid out for imported hays
- 4. To improve our soils, which is of vital importance

The following simple recommendations are made:

For hay during summer,  
Cowpeas and soy beans

For hay seeded in fall or early spring,

**Good Soils**

- 10% Timothy
- 8% Spalding Clover
- 5% Hard Grass (Red Top)

**Poor Soils**

- 14% Orchard Grass
- 10% Red Clover
- 5% Alsike Clover
- 5% Hard Grass (Red Top)

As annual hay crops, crimson clover alone or crimson clover and oats often makes splendid yields, while hairy vetch and oats or vetch and smooth wheat sown together often gives splendid yields.

Alfalfa on fertile, well drained soils that have been limed and prepared well, give better results than any other hay crop.

Permanent pastures are highly important and the following mixtures are recommended:

<u>Mixed</u>	<u>Good Land</u>	<u>Medium</u>	<u>Poor Land</u>
14 $\frac{1}{2}$ Orchard grass	14 $\frac{1}{2}$ Orchard grass	14 $\frac{1}{2}$ Orchard grass	14 $\frac{1}{2}$ Orchard grass
10 $\frac{1}{2}$ Perennial Rye grass	10 $\frac{1}{2}$ Perennial Rye grass	10 $\frac{1}{2}$ Perennial Rye grass	20 $\frac{1}{2}$ Japan Clover
4 $\frac{1}{2}$ Kentucky Blue grass	6 $\frac{1}{2}$ Hard grass	6 $\frac{1}{2}$ Hard grass	2 $\frac{1}{2}$ White Dutch
4 $\frac{1}{2}$ Hard grass	6 $\frac{1}{2}$ Alsike clover	6 $\frac{1}{2}$ Alsike clover	6 $\frac{1}{2}$ Red Top
4 $\frac{1}{2}$ Alsike clover	2 $\frac{1}{2}$ White Dutch Clover	2 $\frac{1}{2}$ White Dutch Clover	6 $\frac{1}{2}$ Alsike
3 $\frac{1}{2}$ Alfalfa			
3 $\frac{1}{2}$ Sweet clover			

Recommendations of Soil Improvement Committee

Varieties of Grains

<u>Oats</u>	<u>Wheat</u>	<u>Oats</u>	<u>Rye</u>
Boone County White	V.P.I. #112	V.P.I. #1	Abruzzi
Casey's Purebred White	V.P.I. #131	Va. Winter Gray	
Virginia White Dent	Leop's Prolific	Red Rust Proof	
Red's Yellow Dent	Little Red	Dart	
Golden Dent (Yellow)		White Spring	

  

<u>Tobacco</u>	<u>Cotton</u>	<u>Soy Beans</u>	<u>Corn</u>
Adcock	Trice	Black Eyebrow (early)	Groit (early)
Bald Leaf	King	Virginia (medium)	Uley (medium)
Burns		Mammoth Yellow (late)	Whippoorwill (medium)
Lizard Tail		Mammoth Brown (late)	Brakman (late)

The importance of good seed of adapted and high yielding varieties can hardly be over emphasized.

NOTE REGARDING VARIETIES: V.P.I. #131 Wheat is a bearded variety and is a selection from the Fulcrum or Storer, while V.P.I. #112 is a smooth wheat and is a selection from the Peale.

In making varieties of oats, three winter and three spring oats were selected, while the Fulcrum and the Red Rust Proof are considered of practically equal value for the winter or spring seeding. In the opinion of the Committee, Adcock tobacco shows a greater tendency to disease than one of the other varieties but is considered a good variety under some conditions.

The Trice and King 89 are the only cotton varieties recommended. Other good varieties are not suggested because of their later maturing qualities. King 29 is a selection from the Improved King and while there will no doubt be a shortage of this seed for several years, it is considered a better strain; where this is not obtainable, the use of the best improved King is recommended.

## Rotations

Four Year

Corn  
Wheat or oats  
Clover and grass two years

Five Year

Corn with crimson clover  
Coppens or soy beans  
Clover and grass two years

The grass and clover mixtures recommended for these rotations are:

Good Soils

10 $\frac{1}{2}$  Timothy  
8 $\frac{1}{2}$  Sapling Clover  
5 $\frac{1}{2}$  Red Top or Hard's grass

Poor Soils

14 $\frac{1}{2}$  Orchard grass  
10 $\frac{1}{2}$  Red clover  
5 $\frac{1}{2}$  Alsike clover  
5 $\frac{1}{2}$  Red Top (Hard's Grass)

Tobacco

Wheat or oats  
Red Top two years

Tobacco

Wheat or oats  
Rye

Wherever possible the longer rotations for tobacco are desirable on account of disease living over in the soil.

Cotton with crimson clover  
Corn with coppens or soy beans

Corn with crimson clover  
Corn with coppens or soy beans, oats or wheat  
Clover or grass (1 or 2 years)

Fertilizer Recommendations:

Crop	At Seeding Time		Top Dressing	
	Clay	Loam	Clay	Loam
Small grains	4-12-0	2-12-2	16-0-0	4-12-0
Alfalfa and clover	2-12-2	2-12-4	0-16-0	0-10-4
Grass	4-12-0	2-12-2	16-0-0	16-0-0
Coppens and soy beans	0-16-0	0-10-4		
Cotton	2-10-4	2-12-4		16-0-0
Tobacco	2-5-5	2-5-5		
Corn	4-12-0	2-12-4	16-0-0	16-0-0

**Note:** The first figure in the above analysis represents ammonia, the second phosphoric acid, and the third potash. These formulas are recommended for general use in Mecklenburg County, although special conditions may demand some variation, as for instance 2-0-3 for cotton has been used with good results, especially when nitrate of soda was used as a side dresser. After seed or ligatures, nitrogen may be reduced or left out entirely and only acid phosphate used. Potash usually pays on sandy soils.

### LIME

The more general use of lime should be practiced except on land intended for tobacco.

Lime once in four years, applying the material at the rate of two tons of ground lime or one ton of burnt lime per acre, if possible. Good results may often be gotten from smaller quantities per acre and it is suggested that liming be practiced regardless of whether the farmer can use this amount recommended above.

Alfalfa and the clovers will often give better results if heavier applications are made.

### MANURES, etc.

The Committee urges the better care of all farm manures and the making of more manure by keeping more livestock wherever practicable, and also the better housing of stock and manures as well as the use of more bedding.

The practice of reinforcing stable manures with acid phosphate will give good results and should be more generally done.

Tobacco stalks and trash and wood ashes should be carefully saved for these materials carry valuable plant food.

Where necessary, lands should be properly drained and soil erosion prevented by the more general use of winter cover crops, by deeper plowing and the incorporation of more vegetable matter in the soil and by the use of mangan terraces.

### PASTURE

The Committee urges that a permanent pasture be made on every farm for all livestock and the use of the following pasture mixture is suggested where the land has been limed:

- 12½ Orchard grass
- 4½ Perennial rye grass
- 4½ Kentucky Blue grass
- 4½ Red Top (Hard's Grass)
- 5½ Alsike clover
- 2½ Alfalfa

Where the land is not limed it is wise to reduce or eliminate the use of Kentucky Blue grass, alfalfa and sweet clover, and to increase the other seeds in this mixture.

### Inoculation of Legumes

Legumes that need inoculation should always be treated before seeding. As a general rule, cowpeas, crimson clover, and peanuts do not need inoculation (artificial) here, but such crops as alfalfa, sweet clover, vetch and soy beans should always be inoculated unless these crops have been grown on the land within several years.

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**Recommendations of Livestock Committee-**

The Committee makes the following recommendations:

**Horses and Mules**

1. That all work stock be fed better and especially the young animals.
2. That more attention be paid to the selection of blood mares for size and breeding and that the pregnant mares be fed better so as to foal stronger colts.

**Cattle**

1. The acreage of forage crops should be very greatly increased with special emphasis on the legumes, and the yield per acre of forage crops should also be increased by better methods. The Committee urges as concrete recommendations the growing of more cowpeas, soy beans, clovers, and alfalfa. One acre of forage crops should be provided for every three cows.
2. That more attention be paid to pastures and especially to permanent pastures by the more general use of lime, by heavier fertilization and the use of tame grasses and clovers, and that old pastures be top dressed and reseeded. One acre of good pasture should be provided for each cow.
3. The Committee recommends the use of a silo on every farm where ten or more cattle are kept.
4. The basic grains (corn, wheat, and oats) of the ration should be grown on the farm, it being understood that the high protein feeds, such as cotton seed meal and linseed meal, will have to be purchased in order to balance the ration. The following rations are suggested: a milking cow should be fed one pound of grain per day for each three pounds of milk; dry cows and cows on pasture should be fed grain.

**Cattle**

- 100% corn meal
- 100% wheat bran
- 100% ground oats
- 100% cotton seed meal

**Calves**

- 30% cracked corn
- 30% wheat bran
- 30% ground oats
- 10% linseed meal

5. That only bulls of pure blood be used and that an effort be made to constantly improve each generation by the use of better bulls.
6. That owners of bulls trade to avoid butchering good bulls after being used several years.

**Bulls Set with Cattle**

1. To rid the county of scrub bulls by 1925.
2. To form one bull association with six bulls by 1925.
3. To increase milk production per cow by ten per cent by 1925.
4. Revive the county Livestock Breeders' Association if possible, or organize a County Guernsey Breeders' Association.
5. Organize one Cow Testing Association, if possible.
6. Make use of agencies already existing for marketing of sweet cream.

7. Develop a sour cream market for butter fat, if possible.
8. To ask every alfalfa grower to induce at least one of his neighbors to grow the crop, thereby increasing the acreage.
9. That every farmer furnish his family with an ample supply of good milk and butter, throughout the year.

EGGS

1. That more general use of properly balanced rations be made and that a good mineral mixture be kept before the hens at all times. Some form of milk or tankage or green crops will balance corn, and a formula for a good mineral mixture is:  
10% ground limestone or 1 bushel hardwood ashes  
10% acid phosphate  
1% common salt
2. That more general use of hog pasture crops be made to cheapen the cost of raising hogs and that each rotation include a permanent pasture. With rye, crimson clover, cowpeas and two or three varieties of soy beans and corn, hogs may be grazed a greater part of the year.
3. That more attention be paid to pregnant sows and suckling sows by better feeding, housing at farrowing time and sanitary measures.
4. That only boars of pure breeding be used and as far as practicable of one or two standard breeds.
5. That each brood sow have two litters of pigs annually and that the best time for farrowing is from February 15 to March 15, and from August 15 to September 15.
6. That purebred breeders cull their litters more carefully and the Committee is of the opinion that only 50 to 60% of the pigs should be sold as breeding stock as a general rule and that the remainder be used for killers.
7. That as a general rule, pigs should not be weaned until they are seven to eight weeks old.
8. That all breeding stock be treated for cholera by the double or simultaneous method.
9. That as soon as practicable an effort be made to market hogs cooperatively by shipping into one of the central markets. The Committee believes that if the above suggestions are followed, that hogs may be profitably raised for market.
10. That in confining sows for farrowing that care be exercised so as to prevent the animals hurting themselves by getting out or attempting to do so.

SHEEP

1. That only purebred rams be used.
2. That better feeding and pasturage be provided for the flock.
3. That farmers be encouraged to raise early lambs.
4. That farmers be encouraged to use control measures for diseases and parasites.
5. That farmers be urged where practicable to use their idle land for small flocks of sheep.

Report and Recommendations of  
POULTRY COMMITTEE

The Poultry Committee recommends as a goal for achievement in the Five Year Development Program- Madisonburg County well stocked with standard bred poultry, justifying their existence by capacity production, and adequate marketing facilities for poultry and poultry products.

The Committee fully realizes that the accomplishment of this aim will necessitate hard work and cooperation but considers the aim worthy of the means.

We recommend that the following phases of poultry management be stressed in working towards this goal: Better stock, feeding and housing, early hatching, systematic culling and cooperative marketing, when and wherever feasible. We further recommend community hatcheries as a means toward overcoming the difficulties of early hatching.

We also recommend as the best means of getting the value of proper management over to the people that demonstrators for each phase of management be secured in various parts of the county, increasing in numbers each year.

As one means of promoting the poultry industry in our county, we strongly recommend that at least five flocks be entered in the Virginia Egg Laying Contest.

We further request all farm organizations to cooperate with us in working out the plan submitted.

## PROGRAM FOR COUNTY AGENTS' MEETING

Richmond, Va., Murphy's Hotel  
 Tuesday 27 - 30, 1925.

Tuesday, January 27th

- 9:00 A.M. Ten minute talks by District agents Ferrar, Bruce and Quisenberry.
- 9:30 County agents' Plans of Work. Fifteen minute discussions by H.W. Oslin, Carter Chase, J.W. Rogers, H.E. McSwain, W.H. Eyrne, and D.H. Crosby.
- 11:00 Recess.
- 11:10 General discussion of Plans of Work.
- 12:30 Dinner
- 1:30 P.M. "Club Work; How and Why". C. A. Montgomery, State Boys' Club Agent.
- 2:00 "Winning the School and the Community to Club Work". Twenty minute discussions by Gordon Elcan and W.E. Lanthicum.
- 2:50 Recess.
- 3:00 "The Relation of the County Agent to Individual Members of Organized Clubs". W. L. Kirby.
- 3:20 "How to Determine the proper Club Projects and the number to be undertaken". Twenty minute discussions by J.B. Lewis and J.G. Hamaker.
- 4:00 "How to Get the Maximum Number of Club Reports." L. M. Walker, Jr.
- Night Session - January 27.
- 7:30 "Soil Fertility and Its Relation to Economic Production".  
 T. B. Hutcheson.
- 8:15 General Discussion.
- 8:30 "Better Seed". T. K. Wolfe.
- 9:00 General Discussion of the Distribution of Better Seed.

Wednesday, January 28

- 9:00 "Good Crop Rotations for My Section". Ten minute discussions by J.C. Stiles, J. M. Dyer, and K. N. Ellis.
- 9:30 "Bright Tobacco". Fifteen minute discussions on the following subjects:  
 (a) Rotations. Bruce Anderson.  
 (b) Fertilisers. Norman H. Williams, Jr.
- 10:00 General discussion.
- 10:15 "Dark Tobacco". Fifteen minute discussions on the following subjects:  
 (a) Rotations. W. H. Eyrne  
 (b) Fertilisers. C. B. Richards
- 10:45 General discussion led by H. E. McSwain.
- 11:00 Recess.

- 1:10 A.M. "Sun Cured Tobacco". A general discussion led by J.C. Stiles.
- 11:30 "Peanuts. Fifteen minutes discussion on each of the following subjects:  
(a) Rotations. P. S. Elandford.  
(b) Fertilizers. B. T. Parker.
- 12:30-1:30 Dinner.
- 1:30 P.M. "A Better Corn Crop for Virginia in 1925". Ten minutes discussion on each of the following subjects:  
(a) Preparation of Seed Bed. O. M. Cokes.  
(b) Cultivation. Dungan McKinsey.  
(c) Seed selection. S. S. Teal.
- 2:00 "A Better Hay Crop for Virginia in 1925". Fifteen minutes discussion on each of the following subjects:  
(a) Mixed grasses. W. C. Shackelford  
(b) Alfalfa. J. W. C. Catlett.  
(c) Soy beans. T. D. Burfoot.  
(d) Cowpeas. F. D. Hutchinson.
- 3:00 Recess.
- 3:10 "A Better Cotton Crop for Virginia in 1925". Ten minute discussion on each of the following subjects.  
(a) Preparation of seed bed. C. L. Hall.  
(b) Varieties. D. W. Thompson.  
(c) Fertilizers. J. W. Rogers.  
(d) Methods of cultivation. Carl Bridges.
- 4:00 General discussion of any of the above subjects.

Thursday, January 29th

- 9:00 "The Five Year Program for the Development of Virginia's Agriculture."  
John R. Hutcheson.
- 9:30 General discussion of the Five Year Program.
- 10:00 "Special Phases of the Five Year Program in Agricultural Engineering to be Emphasized in 1925". C. E. Seitz.
- 10:30 General discussion of agricultural engineering projects.
- 10:45 Recess.
- 11:00 "Special Phases of the Five Year Program in Agronomy to be Emphasized in 1925". G. W. Pattenon, Jr.
- 11:30 General discussion of agronomy projects.
- 11:45 "Special Phases of the Five Year Program in Vegetable Gardening to be Emphasized in 1925". A. G. Smith.
- 12:15 General discussion led by F.L. Portlock.
- 12:30 Dinner.

- 1:30 P.M. "Special Phases of the Five Year Program in Poultry Development for 1925". A. L. Dean.
- 2:00 General discussion led by V. E. Perry.
- 2:15 "Special Phases of the Five Year Program in Dairying to be emphasized in 1925." F. A. Buchanan.
- 3:00 Recess.
- 3:10 "Special Phases of the Five Year Program in Animal Husbandry to be Emphasized in 1925".  
L. I. Case  
G. C. Herring
- 4:00 General Discussion.

Friday, January 30

- 9:00 "Special Phases of the Five Year Program in Agricultural Economics to be Emphasized in 1925".  
C. C. Taylor
- 9:30 General discussion led by C. W. Hubbard
- 9:45 "The Cooperative Marketing of Peanuts".  
J. R. Worsham
- 10:30 Recess.
- 10:40 "The Cooperative Marketing of Tobacco"  
E. R. Patterson, Cooperative Tobacco Ass'n
- 11:20 General discussion of Cooperative Marketing.
- 12:00 Special instructions  
W. P. Moore.

**REPORT FILES**  
OFFICE COOPERATIVE  
EXTENSION WORK

VIRGINIA

Negro District Agents      Charity - Patterson      1928

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