

# ANNUAL NARRATIVE REPORT

## COUNTY EXTENSION WORK

### *Virginia Agricultural Extension Service*

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## II COUNTY ORGANIZATION

An overall county wide committee on landscaping is operating in the county on a longtime program. Also commodity committees in Agronomy, Dairy, Livestock and Poultry, have developed a longtime program. The Chairman of the committees make up the Agricultural Board in the County. The County is divided agriculturally into six communities.

An Adult Advisory Committee operates in the County to assist with the 4-H Club Program.

The County 4-H All Star Chapter is very active in the County.

The 4-H Club Council plans various 4-H activities for the year.

The 4-H Honor Club assists in many ways with the 4-H Program.

The Richmond Breeders Association operates in the County with headquarters in the Agent's office.

The Henrico DHIA operates the testing work in the County.

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### III TYPE OF AGRICULTURE

Henrico County is located in both the coastal plains and the piedmont plateau of central Virginia. Land in farms, according to the 1960 census is 64,624 acres. 37.5% of the county land area of 172,160 acres in 1960 are in 518 farms averaging 124.8 acres per farm. The 1960 census reports 17,937 acres of crop land harvested from 407 farms.

The land in the county is rolling and it varies from very level to about 350' above sea level. The James River bottom lands are extremely productive. The other soils vary from sandy to wet type, producing good yields with proper land use management. The more difficult soils from a productive standpoint, are those which lie in what is known as the overlay or where the coastal plain and the piedmont plateau come together. Much of this land has not been farmed but has been in forests.

Henrico County ranks 13th among the counties in the State in the sale of milk and milk products. The income from milk and milk products represents 33.8% of the total income from agricultural products. The County ranks 19th among the counties of the State in production of poultry products. The income from poultry products is about 31.8% of the total sales of agricultural products. The sale of horticultural products amounts to approximately 19.6% of the total income. Live-stock sales account for approximately 12% of the cash income.

Approximately 60% of the farms are classified as residential or part time.

The building of residential areas in the county has been going along at a steady pace during the past several years. Much of the area going to residential development has come from the idle land or cut over areas. The present population in the county is approximately 125,000--the daily increase is approximately 150 persons. It is estimated by 1980 the population will be 200,000. This population trend, coupled with that of the City of Richmond, presents an excellent opportunity to the egg producers in the County to retail a high percentage of their eggs. As mentioned above the decrease in crop land has been relatively small in comparison with the number of acres going into residential developments. Even with this growth, more than 85% of the total land area in the county is still in farms, woodland and vacant land.

A growing season in the county for crops is from 200 to 220 days--a long growing season enables many of the acres to be double cropped.

Land value is higher in the county with an average of \$202.13 per acre. The value of land and farm buildings is \$37,304.00 per farm.

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#### IV PROJECT ACTIVITIES

##### A. AGRONOMY

The length of the growing season in the county presented favorable conditions to the county crop producers. The Agronomy program is an important spoke in the wheel of agricultural production in the county. Approximately 78.3% of the income comes from livestock and poultry products. There are approximately 6100 head of livestock, 3100 head of swine and 490 head of sheep, dependent mostly upon grains and forage produced in the county. Land values in the county are exceedingly high, which means good planning in the use of varieties, fertilization and weed control in crop and forage production. There are many types of soil in the county and many of them are gravel and wet types. The many types of soil which are in the county are due to the geographical position of the county. Temperature, insects and weeds are very big problems. Also double cropping or trying to get two crops a year from the acreage to offset the high land values, puts many of the producers behind. The Agronomy Committee met during early 1960 and revised the longtime agronomy program. The County ranks 17th among Virginia counties in the use of fertilizers. During 1961 approximately 3,000 tons of lime and 12,337 tons of fertilizers were used by producers in the county.

To help the county crop producers an all day meeting was held with discussions on the harvesting, handling and

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storage of corn. Also the economics of farm grinding and mixing of feeds was discussed. Special emphasis was given to harvesting without undue high moisture content in corn which would facilitate drying when in the bins. Two of the County dairymen and several of the machinery dealers attended the grain handling show at Tappahannock.

1. GOAL: To obtain average corn yields of 70 bushels per acre.

METHODS USED: The most effective method used was through personal visits with producers and working with seedsmen. Demonstrations on the use of insecticides, fertilizers and varieties were a big help in putting across good management practices. The recommended varieties for the county were distributed to the growers and seedsmen. Since the seedsmen talk with a lot of growers it is felt that information was most important in order to coordinate the practices. During personal visits the characteristics of varieties were discussed and found to be most helpful to the producers in determining the maturity date of the varieties to be used in the farm plan. To help in the weed control program one demonstration on how to calibrate a weed sprayer was given. This was followed with a great deal of interest by the producers. Discussions on the use of a winter legume as a cover crop for corn were effective in personal visits.

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The use of insecticides in fertilizers to control ground insects is increasing. Less corn seedlings were noticed to be damaged from Southern Corn Root Worm, Wire Worms and Corn Maggots. Where alfalfa sod was plowed and corn planted it was found that the use of heptachlor to control the alfalfa weevil has helped to control the ground insects usually affecting corn. A special sprayer for band spraying of corn was made and attached to the corn planter. A demonstration was given using this sprayer with the insecticide Atrazine applied in 14" bands.

RESULTS: The county had more than normal rainfall from spring to the end of June. This rainfall hampered the corn planting and interfered greatly with the cultivation. In some situations where 2,4-D was used as a pre-emergence spray the corn was damaged due to the heavy rains. From July 1 on into early fall the rainfall was exceedingly short. This condition coupled with high temperatures greatly affected the growth and pollination of the corn plants. In several sections of the county along the river the rain did fall at a critical period and this helped immensely. The growers in these areas reported corn yields of 75-100 bushels per acre. However, in other parts of the county the yields were 1/3 to 1/2 off because of growing conditions. It is believed the county will not make much better than a 35-40 bushel per acre average.

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The use of atrazine in place of other chemicals increased during the year and it is believed that 500 to 800 acres were treated. 2,4-D is still used a great deal for post emergence.

2. GOAL: To obtain average barley yields of 50 bushels per acre.

METHODS USED: Recommended varieties and characteristics were used to a great advantage both with the producers and with the seedsmen. Personal visits were most important in discussing varieties and some of the characteristics. Discussions were also held through personal visits and telephone calls on the use of adequate plant food at the right time for maximum yields. Special emphasis was placed on applying the needed top dressing of nitrogen early enough to encourage stooling. Special emphasis was given to weed control through personal visits. Many calls were received by phone for visits to farms to discuss the control of weeds in small grain. Many acres of small grain were planted beyond the optimum date due to producers double cropping. Special emphasis was placed on using varieties under these conditions which carry sufficient winter hardiness. A demonstration of calibration of weed sprayers was very effective for instruction on application of fungicides to control weeds.

RESULTS: The ample rains during the spring gave good barley yields. It is estimated that approximately 1200 acres

of barley were planted and the yield is believed to be about 50 bushels per acre. The quality was not the overall best because of difficulty of harvesting.

The use of liquid nitrogen as a top dressing decreased somewhat during the past year. It is believed this decrease was due to inclement weather and the desire of farmers to use other forms of nitrogen applied on time.

3. GOAL: To obtain average oat yields of 50 bushels per acre.

METHODS USED: Recommended varieties and characteristics were used to a great advantage both with the producers and with the seedsmen. Personal visits were also used in discussing varieties and characteristics. The use of adequate plant food at the right time for maximum yields was discussed in these visits and also in telephone calls. Special emphasis was placed on applying the needed top dressing of nitrogen early enough to encourage stooling. Special emphasis was given to weed control through personal visits. Many calls were received for assistance in control of weeds in small grain. Many acres of small grain were planted beyond the optimum date due to double cropping. Under these conditions special emphasis was placed on using varieties that carried sufficient winter hardiness. A demonstration of calibration of weed sprayers proved effective for instruction on application of fungicides to control weeds.

RESULTS: The ample rainfall during the spring produced excellent oats. However, the continued heavy rains during the harvesting season delayed the harvesting and many of the oats made fell to the ground. The yields obtained were low due to the loss in the field. It is estimated that about 1560 acres were planted with an average yield of about 44 bushels per acre.

The use of liquid nitrogen as a top dressing decreased somewhat during the past year, possibly due to inclement weather and the desire of farmers to use other forms of nitrogen applied on time.

4. GOAL: To obtain average wheat yields of 30 bushels per acre

METHODS USED: Recommended varieties and characteristics were used to a great advantage with the producers and also with the seedsmen. Personal visits were most important in discussing varieties and some of the characteristics. Discussions were also held through personal visits and telephone calls on the use of adequate plant food at the right time for maximum yields. Special emphasis was placed on applying the needed top dressing of nitrogen early enough to encourage stooling. Special emphasis was given to weed control through personal visits. Many calls were received for assistance in control of weeds in small grain. Many acres of small grain were planted beyond the optimum date due to double cropping.

Under these conditions special emphasis was placed on using varieties that carried sufficient winter hardiness. A demonstration on calibration of weed sprayers proved effective for instruction on application of fungicides to control weeds.

RESULTS: Wheat was very light in test weight and it is felt that weather conditions contributed to this particular situation. Adverse harvesting weather delayed harvesting and also affected quality. It is estimated that approximately 2100 acres of wheat were planted and the average yield was believed to be about 23.9 bushels per acre. It was noted that the European Corn Borer did some damage to the wheat. The use of liquid nitrogen as a top dressing decreased somewhat during the year. It is believed this decrease was due to inclement weather and the desire of farmers to use other forms of nitrogen applied on time.

5. GOAL: To obtain average soybean yields of 25 bushels per acre.

METHODS USED: Maturity dates are becoming more and more important in our soybean production program. This is due to the double cropping system that many of the producers used in their rotation. These dates, along with recommended varieties were discussed on personal visits. Weed control which is most important was discussed with emphasis on placing soybeans in rows when planted early. The use of herbicides to control weeds in soybeans is increasing.

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Many of the soybean producers in the county rent land-- in many cases the land is not in the best of condition and also it is double cropped. This situation presents problems in making recommendations as to fertilizer and lime use and the varieties of beans.

RESULTS: Reports received thus far of about 1600 acres of soybeans planted indicates the growing conditions greatly affected the yields. In several sections of the county which received rain during the critical periods the yields were in the top thirties. However, most of the county will be off in yields and it is believed the average yields will not be much more than 21-22 bushels per acre.

The use of dinitro has pre emergence weed control increased during the year and it is believed this trend will continue. It is believed that lime is not adequate in many of the fields which are rented. Also potash and phosphorous levels are too low for optimum yields. The use of a little heavier application is held back because many producers cannot place the fertilizer below and away from the beans.

6. GOAL: To obtain average of 4 tons of alfalfa hay per acre.

METHODS USED: A field meeting was held at one of the alfalfa demonstration plots for farmers and others connected with agriculture to discuss the use of fertilizers, lime, insecticides and herbicides. A great deal of interest has been shown

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in these demonstrations with visitors all during the growing season.

Personal visits have been an excellent means of discussing some of the most important problems in the production of alfalfa for our many head of dairy cattle. List of recommended varieties was mailed to the producers and seedsmen. A demonstration was set up using Cholra IPC for control of chickweed and german moss. Scheduled information was sent to the producers in regards to methods and materials to be used in the control of the alfalfa weevil, which has caused a great deal of damage to the alfalfa plantings in the county. The use of soil analysis was encouraged in personal visits in order to determine the need of lime and applying same at least 6 months prior to seeding if possible.

RESULTS: The dry period during the summer months temporarily affected the yields of alfalfa per acre. It is estimated that approximately 1200 acres were planted and it is believed the average yield was 3.2 tons per acre. The demonstrations, publicity and the personal visits to producers on the use of heptachlor to control the alfalfa weevil prior to the noticing of damage to the plants by the larvae has helped considerably. The bulk of the producers are now applying heptachlor in granula form or in fertilizer by October 15th. The

use of the granular form during this period seems to be doing a little better job of controlling the weevil than that used with fertilizers. Heavy investment of alfalfa weevil along with chick weed and german moss has decreased a little in the alfalfa acreage in the county. However, it is noted that interest seems to be increasing and it is believed the acreage will increase. It was most gratifying to note the producers using the granular heptachlor as recommended this fall. The alfalfa producers were rather skeptical on using heptachlor as recommended in October but the results in the spring of 1961 were excellent.

7. GOAL: To seed 1000 acres of new improved pasture.

METHODS USED: Giving the value of pasture as a cheaper source of feed for dairy, livestock and poultry, through publicity means, helped a great deal. Special emphasis was given as to combination of grasses best suited for different types of soil. Soil testing and its value in determining the pH level for plant food requirements was stressed through personal visits. Planting dates were stressed in order to combat the problem of chick weed and german moss. Buttercups also present a great problem in permanent pastures. Through personal visits emphasis has been placed on using a top dressing of nitrogen in late summer to stimulate greater forage production in late summer and early fall in permanent pastures. The use of herbicides in the control of weeds was

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stressed through personal visits. Also management and its importance in maintaining stands was discussed through personal visits.

RESULTS: It is believed that approximately 550 acres of improved pasture were planted. The definite acreage could not be counted.

8. GOAL: To seed 1000 acres of supplemental pasture.

METHODS USED: The value of cheap feed during the fall, winter and early spring, and the value of different crops as a fallow for corn are used as a two fold approach in encouraging the planting of supplemental pasture. The ASC program helps this winter cover planting immensely. Personal visits are used to explain the ASC program and its benefits. Other points covered in personal visits are economical value of supplemental pasture as relates to livestock production and the holding of valuable nutrients in the soil during the winter months.

RESULTS: It is believed that about 800 acres of supplemental pasture were planted in the county. The ASC program helped tremendously in this phase of the Agronomy program.

9. GOAL: To have 3 producers cooperate in the 20-ton silage club

METHODS USED: Through personal visits, discussions were held on production of corn silage and its value in livestock feed.

RESULTS: Weather conditions during the growing season did not lend itself to wide participation in this program. However, one producer participated and made a yield of 24.6 tons per acre.

B. POULTRY

The sale of poultry and poultry products represents a large segment of the income from agriculture in the county . The income from poultry is approximately 31.8% of the total farm income--the county ranks 9th in the State in the sale of poultry products. The broiler enterprise is rather large and income from this phase of the poultry enterprise represents the largest single element. However, the depressed prices in the broiler industry during the year have greatly affected the income and the number of producers.

The number of laying flocks in the county decreased 3 during the year. However, the loss of these 3 producers did not decrease the number of birds since several increased the size of their flocks substantially.

The bulk of the eggs are marketed through retail outlets. The main problem in the poultry industry is ventilation to take care of the extremely hot days in the summer and the extremely cold days in the winter. Also external parasites are extremely troublesome. A lot of poultry houses are not made to keep sparrows out which contributes a great deal to external parasites. A large majority of the commercial egg producers have gone over to the light breeds such a leghorns

or light hybrids. Practically all of the broiler production is under contract and are supervised closely by the feed concerns and the hatcheries. The laying flocks look to the extension office for assistance.

1. GOAL: To help 10 producers in studying production costs and ways of reducing costs.

METHODS USED: The Richmond Area Poultry Committee of which Henrico is a part, continued active during the year. The committee sponsored an all day poultry meeting with the VPI Poultry Department cooperating. The committee will select each year the problem most urgent to work on as a group. However during the meetings other problems can be discussed.

Personal visits have been extremely helpful in carrying to the egg producers the latest poultry information in studying ways and means of cutting the costs of producing a dozen eggs. The publication Poultry Pellets has been mailed regularly to our producers. Also Peep and Moo was mailed for about 6 months and since the discontinuance of this publication, Virginia Farm Economics has been mailed. Special emphasis has been placed on watching closely the body weight of pullets when they come into production. The Economics Department of VPI has assisted with this program.

RESULTS: Four producers were worked with rather closely on cost of producing eggs. Others were assisted indirectly through mailings of literature and poultry meetings. Emphasis

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of floor space in houses with controlled ventilation has helped production. With the assistance of the Extension Engineers one producer with 8000 laying birds installed a mixing mill to cut feed costs. With the addition of this mixing mill there are now 2 operating in the county.

2. GOAL: To help 15 producers with disease control program.

METHODS USED: The meeting sponsored by the Richmond Area Poultry Committee contributed much to this phase of the program. However, it was not as effective as planned due to low attendance. A poultry school held in Richmond, with faculty members from the V. P. I. Poultry Department and Experiment Station personnel, helped a great deal in explaining the importance of disease control. This meeting was designed to help those businesses which discuss poultry problems with the producers.

Personal visits are used to carry the latest poultry information to the poultrymen regarding the control of diseases as a means of cutting production costs. Poultry Pellets was mailed regularly to our producers, as well as P&E and Moo for about 6 months and Virginia Farm Economics for the balance of the year. Use of the diagnostic laboratory has been most helpful in the early diagnosis of disease in flocks, which has permitted treatment to cut losses.

Also where internal parasites were suspected the laboratory made checks to determine whether it was necessary to treat for internal parasites. This method has been suggested instead of having regular maintenance treatments.

RESULTS: It is estimated that 10 producers were assisted with this phase of the disease program. Improvements in ventilation has helped tremendously in control of respiratory trouble. Many of the producers are now purchasing 16-20 week old replacements pullets. However, the purchase of replacements received some set back during the year because of diseases coming in with these pullets. It is believed more emphasis will have to be placed on the production of pullets by the producer during the coming year.

3. GOAL: To help 15 producers with marketing.

METHODS USED: The Richmond Area Poultry Committee sponsored an all day meeting which contributed much to the marketing phase of eggs. Personal visits with the producers with discussions on the attractiveness of cartons, washing of eggs and proper cooling of eggs, helped in this program. Poultry pellets was mailed regularly to the producers as was Peep and Moo for about 6 months and Virginia Farm Economics the balance of the year.

RESULTS: It is estimated that approximately 9 producers were assisted in the marketing program. However, the participation in the Richmond Area Poultry Committee was not what

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was anticipated. It is hoped that during the coming year more will participate in this program and take advantage of the excellent information supplied. Personal visits have been very effective in carrying to the egg producers the latest information on ways and means to cut costs.

4. GOAL: To hold 2 All Day Poultry Meeting

METHODS USED: Through personal visits discussions of various problems in poultry were carried on. From these discussions and talks with poultry committee members information was gathered as to the frequency and type of meetings desired by the poultrymen.

RESULTS: Through the sponsorship of the Richmond Area Poultry Committee one all day meeting was held. The attendance was rather disappointing but the enthusiasm of those attending was excellent.

5. GOAL: To have 1 producer start participation in the Mail In Farm Record Management Program.

METHODS USED: Personal visits for discussions on the Farm Management Program.

RESULTS: One producer was secured to participate in this program but decided to drop out in the month of May.

C. DAIRY

The income from dairying is approximately 33.8% of the total income received from the sale of farm products. According to the 1960 census there were 16 grade A dairies in the

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county. The number of dairy cows in the county is approximately 2500. During the past 5 years the number of Grade A dairies has decreased but the size of the herds has increased, maintaining about the same number of milk cows for the county.

After approximately one and a half years without a DHIA tester one was secured to start work with those testing and to try to interest others in the testing program. Production records are lacking and it is believed that such records could be of tremendous help in the management program in the county Grade A dairies.

Recertification of the county for the Modified Brucellosis Free Rating was started and completed during the year. The county was recertified.

A big problem in the dairy herd management is the culling of cows due to udder trouble. More than one third of those culled during the past year were due to udder trouble. A concentrated program is planned to try to alleviate this situation. The lack of adequate and competent labor aggravates this condition.

1. GOAL: To have 100% of dairy herds participate in DHIA

METHODS USED: Discussions were held with dairymen explaining the importance of DHIA records to enable producers to know which heifers to keep for herd replacements and which cows to cull. Also the value of DHIA records as relates to better

cost figures was discussed. One meeting was held with invitations extended to all dairymen for the purpose of discussion on the County DHIA and EPDM program, and what it would do for those interested in keeping good production records. Eight letters seeking to interest dairymen in the DHIA program were mailed to all dairymen in the county--these letters originated in the VPI Dairy Department/ Peep and Moo was mailed regularly for the first part of the year and Virginia Farm Economics after the discontinuation of Peep and Moo. Many personal visits were made to discuss the value of the DHIA program.

RESULTS: Only 6 dairies in the county are now participating in the DHIA program--2 of these are on EPDM record keeping. Continued publicity will be given to the DHIA program with the hope of bringing in more dairymen. Some dairymen are on the border line as to going into testing, but the price seems to be a little high for them. It is hoped they can be reached during the coming year.

2. GOAL: To have 100% of herds to participate in the Mastitus Program.

METHODS USED: Personal visits were used extensively in talking with dairymen about controlling mastitus in the herds. Discussions were held on economic losses due to cows being removed from the herd at an early age because of mastitus.

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Discussions on prevention rather than treatment were presented to the dairymen through personal visits. Ten leaflets on mastitis control received from the Dairy Department were mailed regularly to the dairymen.

RESULTS: All owners of dairies in the county are keenly interested in mastitis control. Some corrective measures have been implemented but the program has a long ways to go since the milkers and others working with the cows must be worked with in order for them to realize the importance of this control program in the dairy industry. The owners of the dairies depend on the herdsmen and the milkers and they are they key men in such a control program. The only publicity given to this program was directly to the owners of the Grade A dairies.

3. GOAL: To set up a program for dairymen to reduce incidence of milk odors through better management of pastures.

METHODS USED: Personal visits were used extensively in discussing this particular management program with dairymen. The handling of milk through bulk methods makes it more imperative that attention be paid to controlling odors. This particular point was discussed and also managing cattle on pastures was presented to the dairymen through personal visits. The control of odors from weeds in pastures was also discussed.

RESULTS: Interest is good in this phase of the dairy program and some progress has been made. This type of program is a long time effort.

4. GOAL: To visit each dairy farm and check milking procedures.

METHODS USED: Very little work was done this year on this goal. Mastitus control discussions were held on milking procedures as a means of control.

RESULTS: All dairymen were not reached with this particular goal. Field discussions were held with 4 dairies on checking milking procedures.

5. GOAL: To have 100% of the dairymen increase forage use.

METHODS USED: More emphasis was placed during the year on forage production, harvesting methods, storage and feeding. Dairymen from the county attended the forage handling meeting at Tappahannock and also a meeting was held in the county on storage. Personal visits have meant much in this program.

RESULTS: The dairymen are becoming more and more aware of the cost angle in producing milk. Also they realize that quality has a great deal to do with the amount consumed by dairy cows and its true value. An actual indication of progress in this field could not be given. However, during the coming year more effort will be placed on forage use.

6. GOAL: To have one producer start participation in the Mail In Farm Management Record Program.

METHODS USED: Personal visits to explain the Mail In Farm Program, the value of DHIA records and the overall farm program were used.

RESULTS: One dairyman is participating in the Mail In Farm Program of record keeping.

#### D. LIVESTOCK

Income from livestock and livestock products still plays a very important part in the total income in the county. Income from this segment ranges 3rd in the county. Prices received from livestock during the past year has been favorable in most instances. Steer feeding in the county is just about holding its own. Also interest is being shown through questions on installation of pig parlors. One pig parlor is operating.

The control of external parasites has been fair--more works needs to be done on this phase of the livestock management program. The cow-calf herds are about the same as they were a year ago. It is not believed that full advantage is taken through participation in the feeder calf sale and the feeder pig sales.

During the year the Richmond Area Feeder Feeder Pig Sale Incorporated sponsored 6 sales with excellent results. Comments from both buyers and producers were favorable regarding these sales. Also our regular feeder calf, spring feeder calf and two yearling sales were available for producers.

Approximately 151 animals were sold through these sales.

1. GOAL: To obtain 3 new producers to participate in special marketing program.

METHODS USED: To encourage producers to participate in the special marketing sales special visits were used to discuss the advantages of group or organized marketing of cattle. To help give a clear picture of the sales, results of the sales were given to prospective cattle producers.

RESULTS: One new producer was secured and he participated in the special marketing sales during the year.

2. GOAL: To have 3 livestock producers install handling facilities.

METHODS USED: Adequate handling facilities for beef cattle are lacking as a whole for the county, and yet is most difficult to get across to those handling beef cattle the importance of such facilities for treating cattle and for safety. Discussions were held through personal visits on the value of being able to handle cattle with ease for treatment of diseases and parasites. The safety angle was also discussed. Plans for construction of handling facilities were given upon request.

RESULTS: One producer did construct such handling facilities.

3. GOAL: To feed 600 steers.

METHODS USED: The value of additional income and the part that steer feeding can play in the overall farm situation were

discussed on the telephone and in personal visits. The length of the growing season and the grain producing characteristics of our soil were discussed.

RESULTS: It is estimated that approximately 400 head of finished cattle were marketed during the year.

4. GOAL: To have 75% participation in external and internal parasite control.

METHODS USED: Personal visits and telephone calls were used to explain the value of controlling parasites in terms of dollars and cents. Discussions were also held on feed conversion and rates of growth as related to parasite control.

RESULTS: It is hard to estimate an accurate percentage of those participating in the control of external and internal parasites, but it is believed a good 65% per cent were active in the use of insecticides for control of parasites. The lack of sufficient holding facilities affects somewhat the effective use of the insecticides for controlling parasites in beef cattle.

5. GOAL: To have 100% of herds to vaccinate for brucellosis control.

METHODS USED: Personal visits and telephone calls were used to explain the value of controlling parasites in terms of dollars and cents. Discussions were also held on feed conversion and rates of growth as related to parasite control.

RESULTS: The recertification of the county for the Modified Brucellosis Control Program stepped up interest in brucellosis vaccination. The county was recertified and interest continues to be high in this phase of the program. The small producer is the big problem.

6. GOAL: To have 2 producers participate in special Feeder Pig Sales.

METHODS USED: Personal visits with prospective producers of feeder pigs to discuss the advantages of marketing through grading and size were helpful. Also discussions were held on results of prices received in the Feeder Pig Sales in Richmond.

RESULTS: One producer is in the process of setting up equipment to produce feeder pigs. This producer now has 40 brood sows and had hoped to have some pigs in the marketing program during late 1961. However some problems occurred and prevented this participation. It is believed these problems can be solved with adequate equipment.

E. HORTICULTURE-LANDSCAPING

Work on landscaping in the county increases in proportion to the increase in population. At present the population is estimated to be 125,000. Many of these people have new homes and are keenly interested in developing a landscape plan for their homes. Also there is much interest in all phases of horticulture work. Many calls are received for assistance with lawns since Henrico County is so situated

that it makes development of lawns rather difficult. The Extension Program is designed to help all home owners in the Richmond Area, and more and more people are learning just what this program can do to help them with their many problems along the line of horticulture. Many garden clubs request lectures on various phases of this work.

1. GOAL: To help 500 home owners in landscape planning

METHODS USED: The Agent gave 11 lectures to Garden and Civic Clubs on some phase of horticulture or floraculture. Numerous personal visits were made in answer to requests for assistance. Emphasis was placed on taking soil samples--many were analyzed and recommendations given to assist in the overall landscape planning. Lawn mixtures were worked up to suit various types of soil. Approximately 5000 pieces of horticulture subject matter material were distributed to the county residents. Landscape plans were worked up for individuals as well as public buildings. Three cooperators were secured as demonstrators in using zitron in the control of crab grass.

Pesticide clinics were held in two sections of the county for identification of insects and diseases and to give recommendations for control. Landscape notes were mailed regularly to those requesting same.

RESULTS: It is difficult to give accurate figures on this goal, but it is believed that 500 or more were reached in some phase of horticulture relating to landscaping.

2. GOAL: To help 1200 families in proper care of plant materials.

METHODS USED: Pesticide clinics were held in two sections of the county for identification of insects and diseases and to give recommendations for control. Landscape notes were mailed to those requesting same. Demonstrations were given to four on pruning shrubs. Lectures were given to 11 garden and civic clubs on various phases of floraciture and horticulture. Numbeous personal visits were made on requests for assistance with various problems. Soil analysis were made and recommendations given.

RESULTS: Through the lectures given to garden and civic clubs, personal visits, telephone calls, and distribution of subject matter material, it is estimated that 1200 families were asisted with the care of plant materials.

3. GOAL: To help 1200 home owners in controlling pests and diseases of lawns, shrubs and trees.

METHODS USED: Personal visits, telephone calls and the distribution of approximately 5000 pieces of subject matter material served to inform thepeople. Pesticide clinics were held in two different sections of thecountywhere residents could bring insects and diseased plant material for identification and recommendation of control measures. Soil analysis

tests were made followed by recommendations. Controlling pests and diseases of lawns, shrubs and trees was discussed at 11 meetings at which lectures were given. Landscape notes were sent to all requesting same. Demonstrations on controlling weeds in lawns and fungus diseases also helped. Many specimens were sent to VPI for identification.

RESULTS: It is believed that more than 1200 families were assisted in controlling various pests and diseases of lawns, shrubs and trees, although it is a little hard to place an accurate figure on this goal.

#### F. VEGETABLE GARDENS AND SMALL FRUITS

The constant increase in the county population means more requests to the Extension office for information relating to the production of vegetables and small fruits. The Extension Office keeps on hand adequate and up to date information to be distributed to those making requests. The time spent in personal visits and over the phone is exceedingly heavy. The Vegetable Garden letter is mailed regularly to those requesting it. The analysis of soils is emphasized in this program and many recommendations are made on the basis of soil tests. The insecticide clinics were held where producers could bring in insect and disease specimens and receive recommendations for control measures. Many specimens were sent to Blacksburg for identification.

in addition to those which were identified in the office. The spray program service which is available is used extensively by those growing both vegetables and small fruits. Many specimens were sent to VPI for identification.

#### G. ENTOMOLOGY, PLANT PATHOLOGY AND RODENTS

Requests for assistance in Entomology, Plant Pathology and Rodents among the county residents continues to stay at a high level. The local Extension Office maintains a service for identifying and giving recommendations for control. With the many new county residents each year this service continues to increase. The Entomology and Pathology phase is also included in the Agronomy and Livestock section.

#### H. COOPERATIVES

There are two cooperatives operating in the County. The membership participation in these is rather high. The County Agent's office supplies information as requested from these cooperatives. New copies of bulletins, circulars, etc., are supplied upon request.

The Richmond Breeders Association is operating in the County. The membership increased somewhat during the past year and non-members also participated in this program. The Agent works closely with this Association relative to supplying educational information.

The Richmond Feeder Pig Association, Incorporated, operates in Richmond. The Agent assists this organization in their sales program. The Association held 6 sales this year.

## VI FARM AND HOME UNIT PROGRAM

The number of families in the Farm and Home Program did not increase during the past year. There are at present 4 families in the program. One of the families has an automatic up to date poultry house with a capacity of 4000 layers. They have also an installation of a complete grain storage, drying, grinding and mixing feed operation. This installation creates a great deal of interest locally and also throughout the state and nation. Poultrymen from four counties visited this installation during the year. Another farm has an up to date pig parlor. A third farm under the program retails eggs as their main agricultural products and accrues a fair income from the sale of veal calves. This program is operated without the assistance of an organized committee.

## VII COOPERATION WITH ASC

A. Organization to handle educational work. The relation between the County ASC and the County Agent is very good. The Agent has assisted the local committee in setting up its handbook of practices and other ASC programs.

B. Individual Farmers Contacted. The County Agent assisted local farmers who were interested in the ASC program as relates to explaining the ASC committee practices. Field visits were helpful in explaining the work of the ASC Committee.

VIII COOPERATION WITH FARMERS HOME ADMINISTRATION

The County Agent's office cooperates fully with the local FHA. Information is supplied when requested.

IX COOPERATION WITH DISTRICT SOIL CONSERVATION PROGRAM

The County Agent's Office cooperates fully with the local SCS technician, who has his office with the County Agent. Discussions on practices and needs of the District are held. Also the Agent refers prospective farm cooperators to the local SCS Technician. The County Agent attends meetings of and cooperates with the District Board of Supervisors.

X COOPERATION WITH CREDIT AND LOAN AGENCIES

The County Agent's office cooperates fully with the local credit and loan agencies. All calls received and discussed with the caller are referred to various loan and credit agencies.

## XI EVALUATION

4-H CLUB - The boys 4-H Club membership was 329, a little above the previous year. Participation in county wide events was much better during 1961. The Adult Advisory Committee which was organized in 1959 has been invaluable in getting participation of 4-H Club members and in assisting in the various events. During 1961 the Leaders of the County started a Leader's Organization which should, in the years to come, be of assistance in the 4-H Club Program. During the past year the 4-H Club program in the County received more financial assistance from Civic Organization than in previous years. The All Star Chapter and Honor Club continue to take active part in the 4-H Club Program. The All Stars sponsor the annual Public Speaking Contest and the Honor Club the annual 4-H Sunday Service. This year the County Council sponsored for the 2nd year a combined Training Program for the Officers and a Bowling Party. This was very successful and the percentage of attendance quite good. This meant of course that more 4-H'ers received training for their duties as officers in their individual clubs.

AGRONOMY - A most unusual growing season was experienced in the County in 1961. Early spring was exceedingly wet and from early summer to fall there was a dry season. Hay produced during the spring and very early summer was especially

good but growers experienced difficulty in corn because of weather conditions. Summer hay production was short because of dry weather. The yields of small grain were rather low because of weather conditions. Barley yields were good and wheat was fairly good but light in weight. Many of the oats fell to the ground because of weather conditions. Corn yields were under the previous county average because of lack of rainfall. Several farms along the river where some rain did fall during the summer reported good yields. Soybeans yields are running up and down because of adverse conditions in most of the county. Some acreage was not planted because of weather conditions. There was excellent participation of alfalfa growers in the use of heptachlor in the fall for the control of the alfalfa weevil. More pre emergence weed control was carried on in the corn production. Very little weed control was used in the control of weeds in pastures. The control of winter weeds in alfalfa is excellent. More alfalfa acreage is needed.

DAIRY - The DHIA Program operated during the year with a tester. Two herds are now in the EDFM Program. Preliminary work has been done with dairymen in the program in the hope of bring them into testing during 1962. The mastitis control program needs much to be done in order to slow down economic losses of the dairymen. More interest began to be

shown amongst the dairymen in quality forage. The use of the Artificial Breeding Association program continued to be strong during the year.

POULTRY - The Richmond Area Poultry Committee sponsored an all day meeting which was most helpful to the poultrymen. The year has been rough on broiler producers because of low prices. The bulk of the broiler producers have increased their size of operation in order to stay in business. Commercial egg producers were about the same with a few producers increasing in numbers. Egg prices have been favorable during the year. Another producer added the mixing mill in order to mix his own feed. More interest is being shown by the poultrymen in regards to producing their own replacements. Many are getting diseases which are giving them trouble in maintaining production. Ventilation and temperature control continue to be big problems.

LIVESTOCK - Beef cattle producers increased in participation in marketing of their cattle through the Richmond Feeder Calf Association sales. The Richmond Feeder Pig Association sponsored 6 sales during the year which helped both the seller and the buyer. One lamb feeding operation was started during the year. More interest is being shown in the production of feeder pigs.

XII TRENDS

The County's estimated population is up to approximately 125,000. This increase is bring more requests for assistance from home owners in horticulture and floraculture activities.

Poultry - It is believed the number of laying flocks will remain about the same. However, some increase in size is expected. Most producers will begin growing their own replacement flocks.

Beef Cattle - Beef cattle numbers will probably remain about the same during 1962.

Sheep numbers will probably hold to about the same as in 1961. There may be some increase in lamb feeding.

Swine production will probably increase somewhat. More feeder pigs will probably be produced for the Feeder Pig Sales.

Agronomy - Alfalfa acreage will probably increase. Acreage in small grain and corn will probably remain about the same, but it is expected that soybean acreage will increase. It is believed more herbicides will be used in weed control.

Dairy numbers will remain about the same during 1962. Greater interest will be shown in feeding for greater profits.

4-H Club - It is believed the 4-H Club will not show a substantial increase because of the transition period now being experienced through the moving of the Senior 4-H Club members from the schools to communities. It is believed more leaders will be obtained during the year to assist with the program.

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XIII 4-H CLUB

Henrico County has a population of 125,000 with a total of 19,222 children in school of age range from 10 to 19 inclusive. There are 32 white schools in the county with 24 4-H Clubs in 19 of these schools. There are six community clubs composed mainly of senior club members.

A great influx of population into the county has resulted from a desire of many people in the city wanting to experience rural living and rear their families in a more rural area. Following this influx of population in the county the schools have become over crowded and the school curriculum has been stepped up. These factors along with other clubs and activities have become very demanding for the time of the children who are of 4-H Club age. Activities of the metropolitan area are demanding for the time of adults.

A. ORGANIZATION

1. Adult Advisory Committee - this committee organized in August 1959 is still active.

- a. Objectives

- Strive for better understand of 4-H in the minds of the public.

- Increase number of 4-H Adult Leaders

- Adjust program to meet changes

- Make 4-H available to all communities in the county

- Improve meeting conditions of school clubs.

b. Methods

Organize County Leaders Organization

Hold County wide Officer Training

Publicize 4-H Club

Hold 4-H Contest or Achievement Day

c. Results

Two meetings held during the year

County Adult Leaders organized at a meeting in the home of Mr. and Mrs. Frank S. Givens

County 4-H Contest was held on October 21st in the Fairfield Junior High School. 13 contestants participated in demonstrations, exhibits and junior achievement records.

2. Adult Leader Organization - Adult leaders of the county

felt they could be more effective in 4-H Club work by organizing

a. Objectives

Make public more conscious of 4-H and of knowledge and benefits that can be gained.

Secure more adult leaders.

Have County Organization represented in out of county leader activities.

b. Methods

Hold two meetings during the year

Publicize leader recognition.

c. Results

An organizational meeting was held in August in the home of Mr. and Mrs. Frank S. Givens with an attendance of 17 leaders. In September a meeting was held in the

Extension Service Meeting Room with 12 present. Officers were elected as follows: Mrs. Frank S. Givens, Pres. Mrs. Karl Woerner, Vice Pres., and Mrs. E.C. Fleming, Jr. Secretary.

Eight leaders from the County attended the State Leaders Conference at Natural Bridge. They were Mr. and Mrs. Frank S. Givens, Mr. and Mrs. E. C. Fleming, Jr., Mr. and Mrs. R. L. Patch, Miss Kistie Patch, Mr. Sumner Patch. Mrs. Givens was elected and installed as President of the Leaders Organization of the State

### 3. 4-H All Stars

#### a. Objectives

An active County All Star Chapter tends to create awareness of the need for continued service to 4-H Clubs. Also this organization helps to point up the need for and importance of leaders.

#### b. Methods

Hold regular monthly meetings

Encourage members to serve as leaders in 4-H work

Encourage organization to sponsor some worth while county wide activity or project to boost the 4-H program

#### c. Results

The Henrico Chapter of All Stars held monthly meetings in the homes of its members.

The Chapter sponsored a county wide public speaking contest for all 4-H members at R. F. I. and 10 club members participated. A Senior member received a scholarship to Short Course and 5 Junior members received scholarships to 4-H Camp at Jamestown

### 4. Honor Club

Honor Club members select and accept new members each year by voting on each nominee. The purpose of the Honor Club is to inspire 4-H'ers to render greater service to

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the County 4-H Club program. This club held 3 meetings during the year.

The annual 4-H Sunday Service was held with several Honor Club members taking part on the program. Approximately 100 members, parents and friends attended the service. Seven new members were tapped into the organization-- they were J. C. Miller, Walter Givens, Louis Brooking, Raymond Knight, John Horner, Danny Snead and Charles Bost.

5. County Council

The 4-H County Council is composed of all the Officers from each club in the county. A fall Training Meeting was held at the Ten Pin Coliseum with 124 members attending.

The Council sponsored 8 leaders to attend the State Leaders Conference at Natural Bridge on a partial Scholarship.

6. Project Planning Committee

This committee is composed of Junior and Adult Leaders working in cooperation with the Extension Agents. The Committee held a meeting in the summer to select projects to be conducted by the 4-H Clubs for the year 1961-62. This Committee revised the 4-H Year Book which serves as a guide to club members and helps inform parents on 4-H projects and club programs. A copy is given to each 4-H member and leader.

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B. 4-H PROJECTS

The project planning committee chose the following projects for school clubs. Safety for Elementary Schools and Forest Appreciation for the Junior High Schools. The High Schools and Community Clubs chose their own project or projects.

1. Safety

a. Objectives

This project is designed to create in club members an awareness of hazards existing and arouse in them an interest in removing or correcting them. Where it is not practical or within the power of the club member to correct a hazard they are instructed how they may better live with a hazard.

b. Methods

Provide subject matter information to enable Vice Presidents to give demonstrations on various forms of safety.

Have subject matter information available for all club members

Leaders and Agents assist with demonstrations

Have professional person give demonstrations

c. Results

271 members in 20 clubs enrolled in this project

A 16 mm movie was borrowed from the Governor's Highway Safety Committee and shown at each club meeting. The movie was on bicycle and pedestrian safety on streets and crossing of intersections. Sgt. Lindsay of the County Police Force was a great help in our securing the movie and enough booklets for each club

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member on safety with bicycles and pedestrians. Club members were extremely interested and enthused in this program and it is felt that all benefited and will long remember the demonstrations.

## 2. Forestry

### a. Objectives

To have 1 club member plant 500 pine seedlings

To have the county represented in the District Contest with a forestry demonstration

To have 5 clubs carry the forest appreciation project

### b. Methods

To have demonstrations given at each meeting by club members and adults.

To present subject matter through handouts of returns on dollars invested in forests as compared to banks

To illustrate the important part forest products play in every day living.

### c. Results

Five club members assisted the County Fire Warden, Mr. Philip Nase, with planting of 5000 pine seedlings on five acres of public land. The planting bar and planting machine were used. Also one of these boys planted 200 seedlings on the home farm and another assisted a farmer in planting several thousand seedlings

One boy entered the District 4-H Forestry Demonstration

Five clubs enrolled in Forest Appreciation with 52 members. These members studied how forest trees differ from shade trees. They learned to identify ten trees, how to make leaf prints and how to press and mount leaves. Mr. McElfresh of VPI attended each of the five clubs and gave demonstrations.

It is felt that all of the members gained knowledge and information from this project that will make their lives more full.

Demonstrations were given at each of the club meetings.

### 3. Home Grounds Beautification

#### a. Objectives

To instruct club members in the appreciation of their home grounds through learning to care for them

#### b. Methods

Have demonstrations on pruning and caring for shrubs

Give subject matter information on general care and management of yards and surroundings

Agents and Leaders give demonstrations and talks as well as individual help where needed.

#### c. Results

26 enrolled in this project with 29 participating in two all day workshops. One workshop was held at home of Mr. and Mrs. R. E. Knight for project instruction. Each club member gave a demonstration. Three visits were made to study landscape residents homes.

A second workshop was held at the home of Mr. and Mrs. Joseph Meredith. Project instruction was given and club members gave demonstrations on some phase of the project. A newspaper reporter and photographer visited this workshop and as a result a picture appeared in the Richmond paper. Home of three residents were visited to study plant material and landscaping.

A junior and senior 4-H club member will give demonstrations at the 1962 District Contest.

### 4. Livestock and Dairy

Both livestock and dairy farms in the county are going out as the competition for land use becomes more valuable for building space. Fewer children in the county have facilities for carrying on effective project programs of this type.

Three members carried the brood sow project. These same members grew out pigs from their project and entered them in the Junior Richmond Premium Stock Show and Sale. They entered 15 hogs in this contest. Another member grew out 5 hogs for the State Fair, but the hogs did not reach the desired weight to be exhibited and were in turn sold locally.

Two members fed out three steers. One steer was shown in the Junior Stock Show and the other two sold locally because of wart development. One of the boys also showed a Steer at the State Fair.

One club member carried a project of five grade ewes. He has learned a great deal in this project and is improving

Three boys represented the County in District Contests and placed 2nd.

In the field of Dairy Project work we had only three members enrolled with two of them exhibiting five animals at the State Fair. The third boy sold his dairy project.

#### 5. Poultry

Facilities for carrying poultry projects sets the pattern for interest in this project. During the past year there were few with necessary facilities. Help was given those who carried the project as to sanitation, disease control ventilation and general management. 8 members carried this project with 4 members making exhibits at the State Fair.

Three boys composed a county poultry judging team and won 1st place in District Competition. This team participated in the State contest at VPI. One boy was 2nd<sup>h</sup> high individual in the State and placed on the first Virginia team to participate in the National Contest. Another boy placed 6th in the State and placed on the second Virginia Team to go to Neppco where the team placed 7th in 12 teams.

#### 6. Electric

This project is designed to teach club members the fundamentals of electricity through demonstrations and the importance of proper usage. Likewise some of the hazards one may expect is taught.

Twenty three members enrolled in this project and one of them represented the county at the State Electric Congress where he was awarded a 19 Jewel Wrist Watch as a District Winner.

A meeting was held in the auditorium of Veppo with instructions given by the Agricultural Engineers and Home Economists.

7. Agronomy

Three members carried projects of small grain, corn and soybeans. They carried a total acreage of 37 acres. Two of these boys made exhibits at the County Contest and two are receiving a years subscription to the National 4-H News. One submitted a Field Crops Achievement record in the State Contest and was awarded a \$50.00 Savings Bond

8. Vegetable Garden and Small Fruits

Thirteen members carried this project. Visits were made to these projects and a scoring was made by the County Agent. This visit seemed to create more enthusiasm and interest in making exhibits at the State Fair.

Members were sent the monthly garden letter and visits made and advice given on mulching, insect and disease control.

Five members made vegetable exhibits to the State Fair with some exhibits in the blue award group.

9. Other Projects

These projects include Home Improvement, Career Exploration, Junior Leadership, Wildlife.

In the Home Improvement Project one boy had done considerable such as helping his father with building a kitchen and dining room on to their home. They also built modern kitchen cabinets, installed a furnace and the boy built a table and lamp. He exhibited the lamp and table at the County Contest

In the Career Exploration Project which 8 senior members took the group interview a secretary, nurse, policeman and a businessman. Each member made two additional interviews on his own. By studying this project a club member can take a look into careers to help them decide if they wish to pursue this career.

In the Junior Leadership project which one club took the group worked to put together two sample achievement record books for use in teaching younger club members.

Twelve members enrolled in the Wildlife project and studied migration of birds, identification and as-thetic. They made bird houses and feeders. One member put up an exhibit at the County Contest and received a blue award. It is felt all the members gained knowledge from study of this project.

10. Other Work

During the year the Agent worked in cooperation and assisted with the Richmond Feeder Calf Sale, Richmond Feeder Pig Sale, Richmond Junior Premium Stock Show and Sale, State Fair, County Fire Warden, Duroc Swine Type Conference, Richmond Artificial Breeders Association, provided programs for two Kiwanis Club meetings, one Ruritan Club and one P. T. A. meeting, Alfalfa Demonstrations, District 4-H Club Contest, State 4-H Club Short Course, two County Pesticide Clinics, meeting on kick off of County Soil Survey, Richmond Ram Sale, District All Star Key Banquet, Junior 4-H Camp, State Electric Congress, Agent's Conference and was delegate to the National County Agent's Association, State Adult 4-H Leaders Conference, and District Forestry Tour.

The Agent also worked with the Virginia Electric and Power Company, County School personnel, Farm and Garden Supply Stores, Bankers Farm Credit Conference, Guide for visitors from Spain, Guide for visitors from Connecticut, and worked with home owners on landscaping and insects and diseases. Also worked with some farmers.

Sponsors or donors in the County 4-H program were: All Stars, County Council, County Home Demonstration Clubs, Varina Home Demonstration Club, Glen Allen Kiwanis Club, Southern States Cooperative, Thalimers Department Store, Varina Ruritan Club and West End Kiwanis Club.