ANNUAL NARRATIVE REPORT

1949

Beaufort County

W. L. McGahey
Agent

J. R. Franck
Assistant Agent

NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

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I. INTRODUCTION

A. Projects Receiving Major Emphasis in 1948

Projects receiving major emphasis during the year were: corn production, stressing increased yields; increased soybean yields; purebred cotton seed, sampling and stapling cotton; establishing permanent pastures; farm labor in connection with harvesting Irish potatoes; preservation of meats and vegetables by freezing; sweet potato production and curing; drainage; home gardens; 4-H Club organization and 4-H projects. Particularly emphasized was the use of disease resistant varieties of tobacco; taking soil samples for analization to determine the ph value and fertilizer needs for crops to be grown on the soil; better management practices in raising livestock and poultry; and increasing number of livestock to give the cash crop farmer a better balanced system of farming.

B. General Situation at the Beginning of 1949.

The general situation at the beginning of 1949 was in many respects similar to that in 1948. With farm income still relatively good trends toward more farm mechanization, better drainage facilities and more farm homes and building improvements were expected to continue. Ample storage facilities for small grains, corn and soybeans during the harvesting season of these crops is possibly needed more than anything else.

From an Extension viewpoint the major needs and/or problems of the farmers at the beginning of 1949 were as follows: continuing improvement of drainage facilities; more attention to the proper fertilization and cultivation of corn, soybeans, tobacco and other crops grown in the county; proper management of temporary and permanent pastures; increase the number of hogs, cattle, dairy cattle and poultry and provide ample grazing for livestock and poultry; use of the right kind of insecticides early enough to control increasing numbers of various insects; making the best use of additional acreage made available as results of acreage reductions of the basic crops such as tobacco, cotton, corn and peanuts; better management of woodsland; more home gardens with a greater variety of vegetables; more storage space for storing corn, soybeans and small grains so that at least market price can be received for these crops; use recommended varieties of various crops and make use of seed treatment to prevent seed decay; obtain good quality baby chicks and develop healthy pullets for flock replacement; a strenghtened 4-H Club organization with emphasis on project activities and more home visits with 4-H Club members.

II. ORGANIZATION

A. Adult

1. Adult Organization

The county is divided into 49 neighborhoods with 250 active neighborhood leaders rendering assistance in promoting Extension activities.

2. Farm Bureau

The Farm Bureau is not, strictly speaking, an Extension organization but has done much in promoting Extension work in the county. There is a close cooperation in the county between the Farm Bureau and the Extension workers. The Beaufort County Farm Bureau had a membership of 1525 members in 1949.

B. 4-H Club Organization

1. 4-H Clubs

It was planned to have twenty 4-H Clubs in Beaufort County and hold a regular meeting in each school month. The September meeting was devoted to reorganization of the Club. The meeting for October was devoted to election of officers.

There were twenty 4-H Clubs in Beaufort County during the period December 1, 1948 to November 30, 1949. They were divided as follows: nine junior clubs, four intermediate clubs and seven senior clubs. A total of 487 boys were enrolled. Regular meetings were held during each of the nine school months. The September meeting was devoted to reorganization of the twenty clubs. Each member was given an application for membership blank to fill out. Summer activities were discussed and plans for 1949-50 were made. Officers were elected during the October meeting. For each club the following officers were elected - president, vice-president, secretary, reporter, song leader and neighborhood leaders.

2. 4-H County Council

Four County Council meetings were held during the year. At these meetings the officers were trained to help carry out various phases of Club work and trained to take the lead in carrying out various phases of Club work. In November a new County Council was organized and officers elected.

3. 4-H Summer Camp

As planned Beaufort County 4-H'ers attended summer camp in June in conjunction with Martin and Bertie Counties. Thirteen 4-H boys attended from Beaufort County. 4-H'ers received training in swimming, life saving, handicraft, rifle marksmanship and folk dancing while at camp.

4. Achievement Days

An Achievement Day was planned for November but due to a conflict in schedules it was decided to hold it December 3. The principal speaker was Miss Hazel Garris, State 4-H President. Certificates and awards were presented to county project winners. New county council officers were elected. After a picnic lunch a two hour recreation period was held.

5. Fair Exhibits, County Fair

Three 4-H Clubs prepared exhibits at the fair which was held October 17-22. The Pantego Senior Club demonstrated a method of obtaining year round grazing. Their exhibit earned them a blue ribbon and $20. The Bath Senior Club chose as its subject "Maintaining Soil Fertility with Livestock." They got a red ribbon and $15. The Pinetown Junior Club showed the difference between an unmanaged and a managed forest. This copped third prize for them which amounted to $10.

6. 4-H Church Sunday

Plans were made for 4-H members to take part in church programs in nine churches in May. At the 4-H County Council meeting in May, officers were given 4-H Church Sunday Programs and asked to put on these programs buy only one Club put on a program, that being the Old Ford Senior Club.

7. National 4-H Week

During National 4-H Week, March 5-12, a radio broadcast was made by 4-H members, posters were displayed in the schools by 4-H members, a county council meeting was held, and in cooperation with the local paper, "Washington Daily News", a special 4-H edition was prepared and published on March 11.

8. State 4-H Club Week

Plans were made to send delegates from each Club to State 4-H Club Week in Raleigh, August 1-6. One outstanding Club member was selected from each Club to attend, but only six could make it. Work in tobacco prevented most of them from attending. The delegates were accompanied by Miss Almeta Edwards, Assistant Home Agent.

III. LINES OF WORK AND ACTIVITIES

A. Agricultural Engineering

1. Farm Buildings

Definite plans were not made as to farm building, however during the year quite a number of farmers were furnished construction plans for machinery sheds, poultry laying and brooder houses, tobacco curing barns and storage bins. In most instances on-the-scene recommendations for either construction, remodeling or improving were made incidentally while visiting the farm or home for some other purpose.

An accurate record was not made but it is estimated that during the year at least fifty farm dwellings were constructed and one hundred forty farm houses remodeled. More farm buildings, including both new and old, were painted than in past years. Since rural electric lines have been constructed making electric current available to many farm homes, many of the farmers have installed water works, particularly running water to the kitchen and to the barn for the livestock. Many farmers have installed bathroom fixtures. There are two REA cooperatives in the county, one on the south side of the Pamlico River and one on the north side of the river.

2. Drainage

a. General

With all the drainage work that has been done since 1947 drainage is still the number one problem in the county especially in the black land or swamp land area where the land varies from three to eighteen feet above sealevel. Approximately two-thirds of the cultivated land is drained by open field ditches and canals. Much time has been spent in talking to farmers about draining their farms. Hardly a day goes by without some farmer mentioning his drainage problems.

Recent progress toward improving the drainage situation can be largely attributed to an increased drainage consciousness among farmers who have suffered heavy crop losses during the past four years due to not having their land properly drained.

From January 1946 to November 1949 approximately 60 miles of new canals and lead ditches have been cut with drag lines and approximately 80 miles of old canals have been cleaned out, widened and cut deeper.

b. Ditch Blasting

Plans were made to assist farmers with ditch blasting by holding demonstrations in communities where such demonstrations had not previously been held. In communities where ditch blasting demonstrations had been held, farmers would come to the agent and ask for information as to the size of ditch to blast, the amount of dynamite needed, etc. During the year, ten ditch blasting demonstrations were held using ditching dynamite. These demonstrations alone accounted for the removal of approximately 3,000

cubic yards of dirt from approximately 3,000 running yards of ditch.

Blasting ditches with NG 50% dynamite, as a method of ditching, is used in wet, low boggy and/or woodland areas where the land is too wet to support a dragline; also for small short ditches irrespective of terrain where the cost of moving dragline equipment to the location would not be justified. During the past three and one-half years approximately twenty-three miles of ditches have been blasted with ditching dynamite, the agent supervising at least 95% of the work.

c. Tile Drainage

Three tile laying demonstrations were planned for the year. One was held on the farm of Fenner Jordan near Pinetown. The grade line was established, the ditch cut and 1,540 feet of four inch tile was laid. Mr. Nabe Mills and John Mills of Grimesland failed to get their tile in time to put it down before time to begin farming. The agent secured the four inch tile at nine cents per foot, delivered. The grade line was established by the agent and assistant agent. The demonstration was fairly well attended by interested farmers. In the past years making use of a farm level for laying tile evidently has not been fully appreciated, therefore most of the existing tile drainage systems have ceased to provide adequate drainage.

3. Irrigation

No definite plans were made for irrigation work by the agents however information and assistance were rendered upon request. Twelve farmers made use of the portable overhead sprinkler system during the year, mostly in the production of Irish potatoes. Three of the systems were used in the growing of flowers, mostly gladiola. Farmers who used overhead sprinkler systems were:

John C. Broome	Aurora, N. C.	50 acres
W. A. Broome	Aurora, N. C.	50 acres
C. T. Allen	Aurora, N. C.	40 acres
Hyman Lewis	Aurora, N. C.	50 acres
H. O. Paul	Aurora, N. C.	30 acres
John Wynne	Washington, N. C.	20 acres
C. F. Cowell	Washington, N. C.	30 acres
Lambert Van Wyck	Pantego, N. C.	20 acres
H. VanDorp	Pantego, N. C.	30 acres
C. Westerbeek	Pantego, N. C.	40 acres
Marvin Austin	Aurora, N. C.	40 acres
M. F. Thompson	Aurora, N. C.	60 acres

Deep wells are the source of water for all twelve of the irrigation systems, deep well water being necessary due to most of the creeks or the river water containing too much salt for the irrigation of crops.

A. D. Swindell of the Pantego area had an underground irrigation of approximately 200 acres. Parallel ditches were first cut with flood gates to control the height of water in the ditches. A four inch mole was run at forty foot intervals 2 to 2½ feet deep connecting the open ditches, allowing water to penetrate the openings made by the four inch mole, and

finally penetrating into the soil. The steel mole was pulled by a crawler type tractor.

All the irrigation systmes were used but very little due to the rainy weather which supplied ample moisture to the crop. Most of the Irish potato growers irrigated up to about two weeks before harvesting. Many of the growers have a tendency to irrigate too often, keeping the ground too wet, causing excess disease and decay of the potatoes.

3. Farm Machinery

With the assistance of a farm machinery specialist two tractor maintenance schools were held in the county at Pantego and Chocowinity with a total attendance of 91 tractor owners and operators. It has been found that many farmers need information on maintenance and care of farm machinery. The agents are encouraging farmers to construct farm machinery sheds to protect the machinery against the weather. Much of the farm equipment rusts out instead of wearing out by use.

B. Agronomy

1. Corn

a. Improving Corn Yields

A special effort was planned to increase the corn yields in the county. Recommendations were made to individual farmers by circular letters and holding meetings. The circular letters and news articles suggested the following. Apply 400 to 600 lbs. of high grade fertilizer 6-8-6 per acre before planting and use from 300 to 400 lbs. of nitrate of soda or its equivalent per acre at the last cultivation. Cultivate shallow and lay by when about thigh high. Also follow at least a two year rotation consisting of corn and soybeans or some other summer legume, and also follow corn behind a crop of Austrian winter peas or some other winter legumes when possible. Such a rotation is recommended to help control the various corn insects such as wireworms, bud worm and the Southern bill bug.

As a means to further the interest of increasing the average yield of corn in the county, a 100 Bushel Corn Club continued this year which was started in the early spring of 1948. Farmers producing 100 bushels or more of corn per acre would become members of the club. Farmers producing 75 bushels to 100 bushels would become associate members. In the spring of 1949 a total of 315 farmers entered the 100 Bushel Corn Club indicating that they would attempt to produce 100 bushels per acre. Thirty-four farmers reported their yields in the fall of 1949, their yields ranging from 46.5 bushels to 139.3 bushels per acre. A list of the growers who reported and their yields are given on the next page.

The farmers who entered the 100 Bushel Corn Club spaced their corn 12 to 16 inches in the drill and planted on three to three feet nine inch rows. Most of the rows were planted on 3½ foot rows. During the damp rainy season most all of the corn planted thick in the drill was badly diseased with Fusurium stalk rot and other stalk diseases resulting in a high percentage of the corn lodging before maturing. Many of the farmers contacted by the agents who did not report their yields gave the reason for not reporting the yield was because they did not make 75 bushels or more per acre. The average yield of those who did not report is estimated to be approximately 50 bushels per acre. The average corn yield for the county this year has been estimated to be 34 bushels per acre.

The 100 Bushel Corn Club in the county has stimulated a great deal of interest among the farmers to increase their corn yields. The long time goal set for the county is to increase the corn yield average to 45 bushels per acre.

b. Production of Hybrid Seed Corn

W. A. and J. C. Broome of Aurora are the largest hybrid seed corn producers in the county. Producing in 1949, 225 acres of N.C. 27 and 65 acres of Dixie 17. For handling and processing hybrid seed corn the Broome brothers have up-to-date equipment including a detasseling machine, seed corn husking machine, sheller, a portable dryer, gravity grader,

Corn Yields Reported by 100 Bushel Corn Club Members

L. E. Hodges	R-1, Washington, N. C.	139.3 bushels
Roland Hodges	R-1, Washington, N. C.	137.6 bushels
Lee Roy Smith	Pinetown, N. C.	135.3 bushels
James Lewis	Pinetown, N. C.	132.7 bushels
Glenn Carawan	Pantego, N. C.	130.5 bushels
A. A. Holidia	Aurora, N. C.	126.5 bushels
L. M. Dilday	Belhaven, N. C.	122.5 bushels
Leamon Woolard	R-1, Washington, N. C.	119.4 bushels
Archie Alligood	R-1, Washington, N. C.	118.0 bushels
O'Brien Edwards	Chocowinity, N. C.	117.5 bushels
Marvin Smith	Aurora, N. C.	115.4 bushels
Jesse T. Hodges	R-1, Washington, N. C.	112.3 bushels
E. H. Bishop	Pantego, N. C.	109.8 bushels
John H. Barr	Chocowinity, N. C.	108.8 bushels
Hallet H. Harris	Pinetown, N. C.	105.3 bushels
Noah F. Paul	Wenona, N. C.	104.7 bushels
James Hodges	R-1, Washington, N. C.	103.8 bushels
M. M. Gray, Sr.	Aurora, N. C.	101.6 bushels
Harvey Singleton	R-1, Washington, N. C.	99.2 bushels
L. V. Waters, Jr.	Pinetown, N. C.	98.7 bushels
R. H. Paul, Jr.	Edward, N. C.	97.4 bushels
Loyd Taylor	Chocowinity, N. C.	96.7 bushels
O. K. Midyette	Aurora, N. C.	94.1 bushels
S. A. Tuten	Edward, N. C.	83.4 bushels
A. E. Chandler	Blounts Creek, N. C.	80.5 bushels
Myron Elliott	Bath, N. C.	80.0 bushels
G. E. Harris	Aurora, N. C.	75.8 bushels
Levin Wallace	Pinetown, N. C.	68.2 bushels
Linwood Harrington	Bath, N. C.	66.0 bushels
J. L. Williams	Aurora, N. C.	62.5 bushels
Roswell Cooper	Pungo, N. C.	60.1 bushels
Fernie Laughinghouse	Pantego, N. C.	56.7 bushels
J. P. Bragg	Pinetown, N. C.	51.0 bushels
Brinson Paul	Bath, N. C.	46.5 bushels

Slur seed treater and an up-to-date curing and storage house equipped for handling seed corn. The storage and curing barn is well designed. The Broome brothers were one of the first growers of hybrid seed corn in North Carolina.

The Farmers' Cooperative Exchange (FCX) contracted with several growers in the county to grow hybrid seed corn.

Other individual producers of hybrid seed corn are A. D. Swindell, Pantego, producing Dixie 17; S. A. Tuten, Edward, producing T-20; and D. W. Payne, Hansomville, producing N.C. 27.

c. Use of Hybrid Seed

More hybrid seed was planted in the county in 1949 than during any previous year. The planting of hybrid has been steadily increasing since it was first introduced, and especially for the past four years. NC 27 is the most popular variety of the hybrid corns and more extensively grown than any other hybrid.

The results of the 1948 100 Bushel Corn Club along with a few hybrid variety demonstrations for the past few years are responsible for the increased acreage planted to hybrid this year. It is estimated that approximately 15,000 acres were planted to hybrid corn in 1949 as compared with an estimated 6,000 acres in 1948. We have two open pollinated corns which originated in the county - Lathams Double and Wilkinsons Corn - which produce a yield of high quality corn about equal to the hybrid corns when planted on fertile soil.

d. Hybrid Varieties - Yield and Quality

For the past several years hybrid variety demonstrations of white and yellow hybrids have been planted in order to determine comparative yields, quality, soil and climatic adaptations. The results over a period of years indicate that NC 27 yellow and Dixie 17 are the best adapted varieties from a yield and quality standpoint, the NC 27 having better quality than Dixie 17 but with Dixie 17 outyielding NC 27.

e. 4-H Corn Projects

As planned, the 4-H meetings in March were devoted to corn production to help 4-H members in their corn projects. The agent made a short talk on the five recommended steps in corn production. Then the movie "More Corn Per Acre" was shown. 126 corn projects were started with 64 completing. Among the highest yields were Edgar Boyd with 85 bushels and James Lewis with 79 bushels.

2. Small Grains

a. Oats and Wheat

On a few farms in the county oats and wheat are the major crops planted. Generally for the county as a whole oats and wheat are planted on a large percent of the farm as a hay crop. The Victor grain and Fulgrain varieties of oats have proven to give the highest yield, the Victor grain withstanding

the cold and possibly having less rust than Fulgrain. Redhart wheat on the basis of its yield and quality seems to be the best variety of wheat although Hardired wheat some seasons seems to be less affected with rust. Farmers who plant sizable acreage of oats and wheat are encouraged to purchase sufficient quantities of certified seed direct from the breeder in order to produce the following year's seed stock and have some certified, or seed subject to certification, for sale.

b. Certified Seed

Farmers who planted certified seed direct from the breeder for the 1949 crop were: W. J. Midyette, Washington, oats; Ben Stowe, Washington, oats; William Hackett, Belhaven, oats; O. C. Jones, Pantego, oats; Ronda Ricks, Pantego, oats; Jimmie Hodges, Chocowinity, oats; and A. D. Swindell, Pantego, oats and wheat.

c. Small Grain Rotations

It is recommended to follow oats or wheat behind soybeans or some other legume crop. When this rotation is followed seldom do we get a poor oat or wheat yield. W. J. Midyette has gone a step further than a two year rotation for both soybeans and small grain. He plants a portion of his farm to Austrian winter peas in the fall, turns this crop under in early summer and follows with soybeans and wheat in the fall. By following this practice both the small grain yields and soybean yields have been greatly increased.

3. Soybeans

a. General

During the late winter and early spring of 1949 meetings were held with reference to soybean production to attempt in 1949 to increase soybean yields. Also circular letters giving the N. C. Experiment Station data on fertilization, lime, phosphate, and potash requirements, and recommendations for high yields of soybeans, were mailed to 300 farmers. As a result of the meeting held and the circular letters mailed more farmers used higher rates of 0-12-12 and 0-10-20 fertilizer under soybeans than in any previous year. The most popular variety of soybean is the Odgen. Approximately 85% of the soybeans planted in 1949 were of the Odgen variety.

b. Soybean Fertilizer, Lime and Variety Demonstrations

Soybean fertilization, lime and variety experiments and demonstrations were conducted in the county for the past six years to determine the possible yields of adapted varieties; also to determine the amount of lime, phosphoric acid and potash to apply for increased yields. Commercial soybean growers were asked to set up a field demonstration using one-half of a field to be given special treatment according to recommendations and the other half to be treated the usual way as a check plot. The recommendations were 500 lbs. of 0-12-12 or 400 lbs. of 0-10-20 and at least 2,000 lbs. of lime per acre. Twenty-one farmers reported and the results were as follows:

On the one-half of field which was treated with 500 lbs. of 0-12-12 or 400 lbs. of 0-10-20 and 2,000 lbs. of lime per acre, the average yield for the 21 reporting was 27 bushels per acre with a low yield of 20 bushels and a high yield of 41 bushels. On the one-half of field receiving the usual treatment of no lime to 2,000 lbs. of lime used and no fertilizer to 200 pounds of 0-10-10, the average yield was 18 bushels with a low of 12 bushels and a high of 26 bushels. Soil tests on the 21 farm plots showed a ph range of 4.8 to 5.9.

c. 4-H One Acre Soybean Projects

Twenty-three projects were started and fourteen completed. Steve Douglas of R-2, Washington, fertilized one-half of his soybeans at the rate of 400 lbs. of 0-12-12 per acre and put no fertilizer under the other half. Though the soybeans have not been harvested yet, the fertilized plot has grown larger stalks which appear to have many more and better filled out beans than the unfertilized plot.

Ralph Respess of Pantego won the county crop medal with his four acres of soybeans which yielded 133 bushels.

4. Soil Testing

A special effort was made during the year to get the farmers to take soil samples and have them analized in order to get the ph reading and the content of calcium, magnesium, phosphorus and potash, and to get recommendations for liming and fertilization of certain crops, especially soybeans. For the 150 soil samples submitted from Beaufort County the results were:

ph		Plant Food %					Organic Matter	
Range	%	Levels	Ca	Mg	P	K	Range	%
Below 5	41	Very Low	8	0	12	6	Below 1	10
5.0 - 5.5	65	Low	36	59	20	76	1.0 - 3.5	70
5.6 - 6.0	33	Medium	38	59	33	47	Above 3.5	68
6.1 - 6.5	9	High	69	30	52	15		
Above 6.5	2	Very High	0	0	30	3		
Total	150							

Quite a number of these soil samples were drawn by the agents in holding method demonstrations to show farmers the proper method for taking soil samples of a given field.

Soil containers and history of land sheets were furnished to the farmer from the county agents' office. The majority of the farmers who sent in soil samples for recommendations for soybeans were surprised to learn that their soil needed as much lime as recommended, and the reverse applied to practically all of the tobacco farmers - they were surprised to learn that no lime was recommended for the production of tobacco. From the results obtained this year in determining the soil needs for producing a certain crop, it is anticipated that the number of soil samples to be sent in next year will be double.

5. Peanuts

A special effort on the part of the county agents was made to get as many of the peanut growers as possible to treat their peanut seed with Arasan before planting to prevent seed decay and to improve the stand of the plants. Also an effort was made to get the peanut growers to make at least three applications of dusting sulfur and/or copper sulfur to control leaf spot. In 1949 there were 1600 acres planted to peanuts and it is estimated that at least 60% of the growers treated their peanut seed before planting, and at least 10% of the acreage was dusted with sulfur to control leaf spot.

Mr. H. H. Dixon, R-3, Washington, had an outstanding demonstration on both seed treatment and dusting with sulfur to control leaf spot.

Most of the work done with peanuts was to get the grower to treat his seed to control damping off and dusting to control leaf spot. Due to the late spring and wet weather many of the growers had to plant their entire acreage the second time. The stands of peanuts were poor over the peanut area in general. The yields ranged from eight bags to as high as twenty-five bags per acre, an average of about 1200 pounds per acre.

6. Pastures

a. Ladino Clover

The goal set for the state was at least one acre of Ladino clover pasture be established on every farm. Beaufort County failed to meet this goal. But the acreage established in the county to Ladino pastures during the year in the fall of 1949 indicate that many of the farmers are pasture conscious. Much publicity was given to the establishment of permanent pastures. Circular letters were mailed to every farmer in the county giving the procedure in preparing the land, liming, fertilization and sowing the seed. Sufficient Ladino clover seed have been sold by dealers in the county to plant 2,000 acres at the rate of two pounds of Ladino seed per acre. Due to the hot dry spell the first week in October many of the seeded pastures resulted in poor stands of both Ladino clover and tall fescue grass.

b. 4-H Pasture Exhibit

Under supervision of the county agents the Pantego Senior 4-H Club boys prepared an exhibit on year round grazing. The exhibit was divided into 4 plots, two of them being Ladino clover and tall fescue; one, crimson clover, rye grass, rye, oats, and barley; and the other being lespedeza and dallis grass. Posters were placed on each plot giving approximate grazing dates. Samples of the seeds used in each plot were displayed on small pieces of cardboard with seeding rates and dates written on the pieces of cardboard. Small bags of dirt were placed on each plot with analysis and rates of fertilizer to be used at seeding and for maintenance. This exhibit won first prize.

7. Tobacco

a. Variety Demonstrations

Eleven tobacco variety demonstrations were planned in the beginning of the year 1949, and eleven demonstrations were completed.

Two of the eleven variety demonstrations planted consisted of the following Black Shank resistant varieties to determine the growth characteristics, yield, curing qualities and the resistant qualities of each variety. These demonstrations were conducted on Melvin Mills farm in the Chocowinity community and on Clarence Roberson's farm in the Old Ford community in cooperation with R. R. Bennett, Extension Tobacco Specialist. The results were as follows:

Name of Grower	Variety	Estimated Yield	Value	% Plants Died
Clarence Roberson R-3, Washington	W & B 8213	1300	$650	2
	W & B 8259	1100	$525	1
	Oxford 1	1205	$630	3
	Vesta 11	1250	$640	4
	Vesta 26	1200	$620	3
	Vesta 30	1300	$660	1
	Vesta 33	1400	$680	1
	Vesta 44	1450	$800	3
	Vesta 46	1350	$740	4
	Vesta 52	1300	$680	5
	Vesta 53	1200	$560	4
	Vesta 55	1200	$530	4
	Vesta 62	1350	$620	3
	Vesta 64	1250	$600	6
	Vesta 47	1200	$600	5

Name of Grower: Melvin Mills, Chocowinity, North Carolina

Hills Planted	Hills Died	Variety	Actual Yield	Actual Value
239	10	Oxford 1	1105.6 Lbs.	$627.21
239	1	W&B 8213	1198.9	$649.60
239	2	W&B 8259	970.3	$501.49
239	7	Vesta 11	1201.2	$630.71
239	0	Vesta 26	1103.3	$600.62
239	0	Vesta 30	1327.2	$668.49
239	0	Vesta 33	1350.5	$695.55
239	2	Vesta 44	1436.8	$800.51
239	1	Vesta 46	1348.2	$740.10
239	1	Vesta 47	1107.9	$614.61
239	0	Vesta 52	1401.8	$853.70
239	1	Vesta 53	1180.2	$567.03
239	4	Vesta 55	1212.9	$536.94
239	0	Vesta 62	1329.5	$689.49
239	2	Vesta 64	1226.9	$609.95

Of the above demonstrations each priming of each variety was cured, kept separate, and weighed and graded by Government graders. The value

of each grade of each priming of each variety was determined by the support price of the various grades.

The following tobacco variety demonstrations were conducted in 1949 to determine the growth characteristics, yield curing quality and comparative disease resistance.

Growers Name	Variety	Est. Yield	Hills Counted	Hills Diseased
Dennis Woolard	Vesta 47	1150	500	10
	Oxford 1	1250	500	8
Harry Gurganus	Vesta 44	1200	500	11
	Oxford 1	1300	500	7
Ralph Hodges	Vesta 44	1100	500	10
	Oxford 1	1050	500	12
W. B. Midyette	Vesta 44	1250	225	5
	Vesta 30	1200	225	4
	Vesta 47	1200	225	7
	Vesta 33	1250	225	4
	Oxford 1	1300	225	5
	402	1350	225	17
O. M. Edwards	402	126	300	270 - 90%
	Oxford 26	400	300	165 - 55%
	Oxford 1	1200	300	15 - 5%
	B&W 8259	1300	300	3 - 1%
H. C. Lollis	Oxford 26	1400	100	4 - 4%
	Wilt 70	1300	100	4 - 4%
	Wilt 32	1450	100	5 - 5%
	W-8225	1350	100	3 - 3%
	W-8229	1350	100	4 - 4%
	W-8238	1300	100	3 - 3%
	W-8243	1350	100	4 - 4%
	W-B-8259	1200	100	2 - 2%
H. A. Mills	Vesta 47	1250	500	20
	Oxford 1	1300	500	18
W. H. Whitley	Vesta 30	100	500	6
	Oxford 1	1250	500	13

b. Disease Control

1. Granville Wilt

For the past several years Granville Wilt has been found on 139 farms scattered over the county, with most of the Granville Wilt being found in Chocowinity and Richland Townships. A survey is planned each year to determine if there are any new outbreaks of Granville Wilt. It has been found that Granville Wilt is spreading very slowly to farms that have not previously had Wilt. Approximately 800 acres were planted to varieties resistant to Granville Wilt in 1949. The variety most commonly planted was Oxford 26. A few acres of Wilt 70 and Wilt 32 were planted in 1949. Before seed sowing time twenty-nine growers requested the county agent to secure Oxford 26 tobacco seed. A total of 46 ounces was secured and delivered from the county agents' office.

2. Black Shank

The first case of Black Shank in Beaufort County was found five years ago. Since that time Black Shnak has spread at a very rapid rate. On an average the spread has been about 100 new farms per year. For the year 1949 it was estimated that at least 500 tobacco farms were infested ranging from slight to severe. It has been planned each year to make a survey of all farms having a disease outbreak, or that show signs of Black Shank disease, for the first time so that the farmer may be advised as to the disease found in his tobacco. Just before seed sowing time, 131 farmers requested the county agents' office to secure Oxford 1 tobacco seed. A total of 236 ounces was secured for the farmers requesting seed. Also during the same time 31 farmers ordered 49 ounces of Vesta 47, 3 farmers requested 10 ounces of Vesta 30 and 6 farmers ordered 14 ounces of Vesta 44.

c. Tobacco Beds - Chemical Weed Control

During the fall of 1949 approximately 225 tons of Cyanamid were used by 800 farmers in treating their tobacco plant beds to control weeds and grass. Also approximately 450 tobacco growers used the special plant bed fertilizer and weed control, 16-8-2, for the first time on a portion of their plant beds for observation and to compare with the Cyanamid treatment. During late summer a circular letter was mailed out to 1,000 tobacco farmers calling their attention to the new special plant bed fertilizer, 16-8-2, that supplies a complete fertilizer for the plant bed as well as controls weeds. As a result of the letter, talking to individual farmers and through the news and radio, the 450 farmers decided to treat a small portion of their plant beds with 16-8-2 as a trial.

Plans were made in the fall of 1948 to conduct five tobacco weed control demonstrations using Cyanamid along, Uramon and Cyanamid, Uramon alone and a fertilizer containing Uramon, Cyanamid, phosphate and potash, analyzing 16-8-2. The average results obtained were as follows: time required to pick grass and weeds on twenty square yards of plant bed treated with Uramon, 16 minutes; Cyanamid treated, 12 minutes; Cyanamid and Uramon mixed, 13 minutes; Cyanamid, Uramon, phosphate and potash (16-8-2), 12 minutes; Check plots, 240 minutes. The weed control for all plots were about the same though there were a little better stands on the Cyanamid plots as

compared with the Uramon plots, and the plants were slower to grow off on the Uramon plots than on the Cyanamid plots. The 16-8-2 plots showed less fertilizer injury and more uniform plants than either of the other treated plots.

One pound of Uramon, Cyanamid and Cyanamed-Uramon mixed was used to one square yard, and two pounds of plant bed fertilizer per square yard was used on the plots at the time the seed were planted. On the 16-8-2 plot, three pounds of the material were used in October and no fertilizer was applied at seed planting time.

More farmers treated their plant beds to control weeds and grass in the fall of 1948 than any previous year. Approximately 1,000 farmers treated their plant beds with October saving in picking plant beds of approximately 15,000 ten hour days. The women folks on the tobacco farms are thorcughly sold on the program of plant bed treatment.

The following farmers started a tobacco plant bed weed control demonstration in October 1949 using Cyanamid, Uramon and 16-8-2: Harry Adams, Bath; Johnnie Boyd, Edward; W. L. Johnson, Belhaven; Melvin Mills, Chocowinity; John H. Singleton, R-2, Washington; and Handy Woolard, R-1, Washington.

d. Tobacco Insurance

For the past two seasons quite a few tobacco farmers have been inquiring about all-risk Government tobacco insurance, asking why Beaufort County was not included along with other counties for the insurance. There being such a demand for this insurance a representative of the Federal Crop Insurance Corporation was invited to come to the county in September 1949 to explain the tobacco insurance. In November the State Director of the FCIC advised that eight counties including Beaufort County were actively seeking tobacco insurance for 1950 and only five new counties could secure the insurance for 1950. The selection of the five counties would be based on the highest percentage of eligible tobacco farmers requesting tobacco insurance by signing a petition. Petitions were placed at 52 places in Beaufort County for the convenience of the farmers in signing the petitions. As a result 48.6 percent of the eligible tobacco growers signed the petitions thus the county agents were responsible for securing tobacco Government insurance for Beaufort County for 1950.

e. 4-H Tobacco Projects

No 4-H tobacco projects were planned but thirty were started with 3 completed. In most cases the 4-H'ers tobacco was in the same field with his father's and the practices used were that of his father and no accurate records could be kept. In November 4-H meetings slides were shown on the different phases of tobacco production including weed and Blue Mold control in plant beds, fertilization and placement of fertilizer, cultivation and identification and control of diseases.

8. Cotton

a. Use of Coker Wilt 100 Seed

In the early spring of 1949 approximately 1800 bushels of certified Coker Wilt 100 cotton seed one to two years from the breeder were brought into the county. Coker Wilt 100 is the only variety being recommended and grown in the county. Most of the seed were handled by the ginners of the county.

b. Cotton Classing

Under the Smith-Doxey Cotton Act arrangements were made to get free cotton classification as to grade and staple for the cotton growers of the county.

The Beaufort County Cotton Improvement Association was organized several years ago to make cotton classing available without cost to the farmers. During the summer of 1949 a renewal application for classification and market news service and a record sheet giving the names and addresses of all farmers planting cotton in 1949 was prepared and sent to the Atlanta office. The ginners were bonded to draw samples and mail to the Cotton Classification Board in Raleigh. Arrangements were made with one of the local banks to handle the Government loan papers. It is estimated that at least 95% of the cotton growers secured a Government loan on their cotton this year. The Government loan in many cases was equal to or more than the market value. The county agents were responsible for securing and making available this service for the cotton growers.

A majority of the cotton graded SLM with a staple of 1 1/32 inch. Below is a summary of the grades, preparation and staple.

No. of samples submitted	Grade				Preparation				
					Redc.	Redc.			
	M	SLM	LM	SGO	Norm:	1 Gr.	2 Gr.	1-1-1/32	1-1/16-1-3/32
1229	20	758	414	36	998	226	4	22	599	544	63

c. 4-H Cotton Projects

Five 4-H cotton projects were started with three completed. Boll weevils and wet weather kept yields down.

C. ANIMAL HUSBANDRY

1. General

a. 4-H Livestock Judging Team

A 4-H judging team coached by the assistant agent began training in April. On May 4 they competed in a judging contest at the Rocky Mount Fat Stock Show judging two classes each of fat steers and fat barrows. The Beaufort County 4-H'ers placed third out of nine 4-H and 7 FFA teams. On August 5 the team entered the State 4-H Livestock Judging contest where they placed sixth out of ten teams. The boys were hampered by the lack of proper classes to work out on in the county and also by a very mediocre coach as far as workstock was concerned. Members of the Beaufort County team were: Fred Williams, Philip Williams, Maynard Waters and James Lewis, alternate.

b. 4-H Livestock Exhibit

The Bath Senior 4-H boys put on an exhibit at the county fair showing the difference in loss in fertility to a farm by selling 100 bushels of corn as a cash crop as compared to marketing it through livestock.

2. Beef Cattle

a. General

Beef cattle herds are confined to the larger farms in the county. There are 12 herds totaling approximately 1400 head. The size of the herds range from 30 up to 300.

b. Pastures

Up to 1946 most of the herd owners depended on lespedeza, carpet grass and native grass for summer grazing, and small grains and Italian rye grass for winter grazing. In the fall of 1947 and 48 several farmers seeded Ladino clover, alta fescue and/pr orchard grass for the first time. The pastures seeded in the fall of 1948 were ready for heavy grazing by the first of April 1949. The growers owning beef cattle assisted in establishing pastures in the fall of 1948 were D. M. Windley, Aurora, 5 acres; C. C. Snow, Washington, 50 acres; W. H. Hudnell, Royal, 8 acres; A. D. Swindell, Pantego, 30 acres; W. B. Rodman, Washington, 20 acres and William M. Hackett, Belhaven, 5 acres. The Ladino clover-fescue grass pastures have furnished an abundance of grazing since established in the fall of 1947. With a mild the winter of 1948-49 being very favorable for the growth of pastures, most of the permanent pastures have furnished an abundance of grazing at least 11 months of the year.

It is being recommended to sow small grains and Italian grass as supplementary grazing in cultivated land. Many growers are planting crimson clover in addition to small grains and Italian rye grass. Three tours were scheduled in the summer of 1949 to observe the growth of the Ladino clover pastures and they created a great deal of interest. The two big trefoil plantings in the fall of 1948 were a complete failure.

c. 4-H Baby Beef Projects

Beaufort County entered no baby beeves in fat stock shows in 1949.

On September 13, 1949, nine 4-H boys purchased feeder calves from A. D. Swindell of Pantego at $22 per hundred. The calves averaged weighing 542.8 lbs. They will be entered in the fat stock show in Rocky Mount in May 1950.

3. Swine

a. General

The production of hogs in Beaufort County has been on a decline since 1944. It was planned for the year to interest farmers in increasing the number of brood sows and in practicing better feeding and management practices. A purebred hog sale was held in Washington March 25th. A total of 24 purebred hogs were offered for sale, 12 gilts and 12 boars. The breeds represented were Duroc Jersey, Poland China, Hampshire and Spotted Poland China.

b. Purebred Stock

During the year a total of 48 purebred gilts and 19 boars were brought into the county. W. M. Hackett of Belhaven is the largest producer of purebreds in the county. His herd consists of twenty brood sows and he sells quite a number for breeding purposes each year in the county.

c. Temporary Pastures

During the temporary pastures for hogs were stressed - such crops as rape, soybeans, lespedeza, rye, crimson clover, ryegrass, oats and wheat. Due to this special effort on the part of the agents more temporary pastures were provided for hogs than any previous year. Results indicate that where ample grazing is provided for growing hogs it requires about 10% less protein supplement and about 2 1/2 bushels less corn to produce 100 pounds of pork.

d. Diseases

A serious outbreak of hog cholera broke out in the county in August and lasted until late October. Most of the hog cholera was confined to three townships, mainly Bath, Pantego and Richland Townships. During this outbreak of cholera a total of 1250 hogs were vaccinated with serum only, by the agents. The time spent in vaccinating hogs was not anticipated when the plan of work was made out.

e. 4-H Pig Chain

Three gilts were placed in the 4-H pig chain during the year. It is expected that two more will be placed with boys in January as one boy who is to return two gilts had a sow to farrow eight in November.

f. 4-H Pig and Brood Sow Projects

A total of 133 pig and brood sow projects were started and 75 were completed. As planned the April 4-H meetings had as their topic "Swine Production." One method demonstration was given on swine feeding and another on the A-type farrowing house.

4. Work Stock Clinics

With the cooperation of the local veterinarian seventy-two work stock clinics were held in the county. Horses and mules were vaccinated for the prevention of encephalomylitis. Two visits were made seven days apart. Four hundred seventy-one horses and mules were vaccinated.

5. Dairying

a. General

During the past few years there has been very little change in the number of milk cows in the county. There are approximately 4900 farm families and 2400 milk cows. There are five dairies in the county with herds ranging from 15 to 150. A total of 330 cows constitute the five dairy herds. Efforts are being made to get the number of dairy cows increased to at least two cows per farm family and to reach this objective farmers are encouraged to save all heifer calves and provide ample permanent pastures.

b. Pastures

Since 1947 all of the dairymen have established Ladino clover pastures and the feed costs have been reduced greatly. One dairyman said that his milk flow has increased 1/3 since establishing Ladino clover-fescue pasture. Many of the farmers having carpet grass pasture have destroyed the carpet grass in the past year or so and seeded to Ladino clover and tall fescue.

Recommendations for establishing a permanent pasture are: Seed mixture, two pounds of Ladino clover and ten pounds of Alta fescue or Ky. 31 fescue. Fertilization: 600 to 800 lbs. of 2-12-12. Liming: One to four tons of agricultural limestone per acre, depending on the ph reading of the soil.

For the first time in the history of the county cattle are enjoying a twelve-month grazing period where Ladino clover pastures have been established and supplementary pastures have been provided.

c. 4-H Dairy Calf Projects

Fifteen dairy calf projects were reported as started but only three were completed.

D. ENTOMOLOGY

1. General

During the year insects appeared in unusually large numbers and practically all crops grown in the county were damaged to an appreciable extent by various insects. Some crops were damaged to a larger extent than others. Definite plans were not made in the beginning of the year to control insects although general plans were made in case insects threatened certain crops during the growing seasons. Meetings were held and circular letters were mailed to growers giving recommendations to control various insects and how to be prepared to act in case an outbreak should occur. Below is a list of insecticides and the estimated amounts used by farmers in 1949.

Insecticide	Amount used
Cryolite	18,000 lbs.
Benezene Hexacholride	4,000 lbs.
Toxaphene	10,000 lbs.
Parathion	3,000 lbs.
Calcium Arsenate	10,000 lbs.
Lead Arsenate	30,000 lbs.
5% DDT	235,000 lbs.
Rotenone	9,000 lbs.
Dusting Sulfur	20,000 lbs.
TEEP	1,000 lbs.
Nicotine Sulphate	475 lbs.
Carbon Disulfide	500 lbs.
Tear gas	580 lbs.

2. Soybean Insects

Insects doing major damage to soybeans were green clover worms, twelve spotted cucumber beetles, corn ear worms, army worms, blister beetles and velvet bean caterpillars. Most prevalent were the green clover worms and the twelve spotted cucumber beetles. The twelve spotted cucumber beetles and other leaf beetles were credited with doing the most damage by eating tender leaves, cutting off blossoms and young beans.

Control of all insects attacking the soybeans was with 5% DDT dust. Some liquid DDT spray was used. More farmers started dusting the soybeans earlier this year than last year.

Approximately 85% of the acreage was dusted or sprayed by airplane. 15% was applied by tractor and horse drawn equipment. An estimated 80% of the entire soybean acreage was dusted and/or sprayed with DDT.

3. Tobacco Insects

a. General

The most common insects attacking tobacco were tobacco bud worms, cut worms, horn worms, flea beetles, green peach aphids and grasshoppers.

Recommendations as to the control of each of these tobacco insects were made by making use of the news articles, radio, circular letters, farmer meetings and contacting the farmers in person. Also bulletins were mailed and handed out to the farmers.

b. Cutworms

For the control of tobacco cutworms poisoned corn meal was recommended, using a mixture of one pound of arsenic of lead to 30 pounds of bolted corn meal. A few growers used 5% DDT dust and got good results.

c. Hornworms

For the control of hornworms Cryolite was recommended at the rate of 20 pounds per acre when applied as a dust by airplane and ground dusting equipment, and 10 pounds per acre as a wet spray. Toxaphene was used by several farmers, they reported good results.

d. Flea beetle

For the control of flea beetles in the plant bed 5% DDT was recommended which gave good results. For controlling flea beetles in the field, toxaphene gave better control than did Cryolite or arsenic of lead.

e. Green Paach Aphid

For the control of the green peach aphid, 1% Parathion dust gave better control in the plant bed than did any other material used. Also one pound of 15% wettable Parathion or 20 to 30 pounds of 1% Parathion dust per acre gave splended results. Some TEEP was used both in the field and on plant beds with good results.

4. Corn Insects

a. General

The stand of corn in some areas in the county was greatly damaged by the wire worms, the Southern root worms and Southern bill bug.

b. Corn Insect Control Demonstrations

A demonstration was arranged and carried out on the farm of W. A. Broome, Aurora, in cooperation with J. T. Conner, Jr., Extension Entomologist, to determine the best control of the above mentioned insects and especially the wire worm.

An outline of the demonstration follows:

I. Broadcast prior to planting

Plot (1) 20% DDT at 50 pounds per acre
Plot (2) Check
Plot (3) 0.4% BHC at 50 pounds per acre
Plot (4) Check
Plot (5) Combination 20% DDT plus 0.4% BHC at 50 Lbs. per acre

II. In furrow at time of planting

Plot (1) 20% DDT at 50 pounds per acre
Plot (2) Check
Plot (3) 0.4% BHC at 50 pounds per acre
Plot (4) Check
Plot (5) Combination - 20% DDT plus 0.4% BHC at rate of 50# per acre

III. Broadcast followed by furrow treatment

Plot (1) 20% DDT broadcast followed by 20% DDT, both applications at rate of 50 pounds per acre
Plot (2) Check
Plot (3) BHC broadcast followed by BHC in furrow, both at rate of 50 lbs. per acre.
Plot (4) Check
Plot (5) Combination BHC plus DDT broadcast followed with combination in furrow, both at rate of 50 pounds per acre
Plot (6) Check
Plot (7) 20% DDT broadcast followed with BHC in furrow, both at rate of 50 pounds per acre.
Plot (8) Check

5. Cotton Insects - Boll Weevils

The 3-5-50 mixture that is 3% Gamma Isomer BHC, 5% DDT and 50% sulfur was used by the larger cotton growers; also a few farmers used Toxaphene. Due to the extremely rainy season in July the boll weevils played havoc with the cotton although the fields that were treated with the above materials, generally speaking, had an increased yield of seed cotton of approximately 250 pounds per acre as compared to non-treatment. Some fields that were not treated yielded as much or more than some of the fields that were treated. Weather conditions in July seemed to be the determing factor in cotton production.

E. FORESTRY

1. 4-H Forestry Planting

Three 4-H boys started forestry planting projects and three were completed.

2. 4-H Tree Study

Eighty-five boys started tree study projects and thirty-four completed.

3. 4-H Forestry Exhibit

The Pinetown Junior Club boys prepared an exhibit at the Beaufort County Fair on management of forests under the supervision of the county agents. On the unmanaged plot poor practices were shown and on the managed plot recommended practices were shown.

F. HORTICULTURE

1. Acreage of Truck Crops

An estimated acreage of truck crops planted in Beaufort County for commercial purposes in 1949 follows:

Sweet potatoes	1,000 acres
Irish potatoes	4,600 acres
Cabbage	50 acres
May peas	25 acres
Radishes	10 acres
String beans	60 acres
Sweet corn	70 acres
Peppers	10 acres
Other vegetables	20 acres

2. Irish Potatoes

a. Varieties.

The varieties of Irish potatoes planted in the county follows - Cobbler, Red Bliss, Red Warba and Sabago, with at least 90% planted to Cobbler. Only certified seed are recommended, with at least 95% of the seed coming from Maine and Canada.

b. Irrigation

Due to better moisture conditions of the soil during the growing season less irrigation was done this year than in prior years. However all of the growers having irrigation systems did some irrigation.

c. Fertilizer Placement

At least 95% of the potatoes were planted with combination fertilizer distributor and planter which placed the fertilizer in bands about two inches wide, two inches on each side and below the seed piece. This method of side placing the fertilizer has proven in past years to prevent seed rot, fertilizer injury and to give better stands and increased yields.

d. Size of Seed Piece

The size of seed pieces to plant were found by repeated experiments to range from one to one and one-fourth ounces for best results.

e. Fertilizer Recommendations

The amount of fertilizer recommended per acre under potatoes is 2,000 pounds of a 6-8-6. It has been found by demonstrations and experiments for the past three years that a fertilizer high in potash as 6-8-9 or 6-8-12 should be used for higher yields. A 7-7-7 fertilizer is becoming very popular with many of the growers.

3. Sweet Potatoes

During the year approximately 180 farmers produced sweet potatoes for marketing. The number of acres per farm ranged from 2 to 60 acres, the Porto Rica being the only variety of potato planted. It has been found that vine cuttings produce higher yields of better quality than plants. Several vine cuttings vs. plants were made this year and in every case the vene cuttings produced a higher quality of potatoes than the slip drawn plants, and in every case higher yields where vine cuttings were set out from May 10 to June 10.

It is estimated that at least 95% of the potatoes marketed are house cured. There are four potato curing houses in the county with a capacity of approximately 70,000 bushels. Remodeled tobacco barns are in common use in curing sweet potatoes and they have been found to be very satisfactory. Quite a number of plans for remodeling tobacco barns to convert into potato curing barns were made available to sweet potato growers. All growers were cautioned to handle sweet potatoes at harvesting with great care. Three sweet potato harvesting demonstrations were held using the middle buster turn plow and the Howard rotary digger. In every case the Howard rotary digger did a much better job turning out better yields than the other methods. It is estimated that at least twenty bushels or more could be expected by the use of the Howard rotary digger.

4. 4-H Cooperative Fruit Tree Order

The 4-H cooperative fruit tree order sponsored by the 4-H Club resulted in the purchase of the following fruit trees: peaches 26, apples 14, pecans 7, pears 3, grapes 3, plums 2, figs 2, and cherries 1.

5. 4-H Home Garden Projects

One hundred and fifty-two 4-H home garden projects were started and one hundred and twenty were completed. Gilbert Alligood of the Pinetown 4-H Club started out his first year by winning the county gardening medal. He had about two tenths of an acre in his garden and did all the work in it except breaking the ground. When the agent visited his project in July he saw that Gilbert's list of vegetables in his garden covered just about all vegetables. Gilbert kept an accurate record on his garden and showed that he saved his family many dollars on the food bill.

As planned the February 4-H meetings were devoted to gardening. Slides on various phases of gardening were shown at a joint meeting.

6. 4-H Home Beautification

As planned the January meeting was devoted to Home Beautification in a joint meeting. A demonstration was given with material supplied by the Horticultural Extension Department at State College. A short talk on establishment of lawns was made after the demonstration.

G. MARKETING

1. Cotton

Through the Beaufort County Cotton Improvement Association, all cotton growers in the county qualified to get their cotton classified as to grade and staple under the Smith-Doxey Cotton Law, and to be in line to get the Government loan. The farmers' attention was called to the fact that the 1949 loan price was about equal to or higher than the open market price.

Ginners in the county were contacted and asked for their cooperation in securing Government loans and free classification for the farmers. The ginners were qualified to draw samples of cotton and transmit to the Cotton Classing Board, Raleigh, N. C. The grade and staple of cotton produced in the county in 1949 can be determined by the classification of 1228 bales submitted to the Classing Board by all areas of the county. Grades were 20 bales middling, 758 bales SLM, 414 bales LM, and 36 bales SGO. Of the 1228 samples submitted to the Classing Board 998 bales had normal preparation, 226 bales preparation reduced 1 grade and 4 bales preparation reduced 2 grades. 22 bales had a staple of 1 inch, 599 bales had a staple of 1 1/32 inches, 541 bales had a staple of 1 1/16 inches, and 63 bales had a staple of 1 3/32 inches.

2. Irish Potatoes and Other Truck Crops

Early in 1949, assisted a group of growers in the Aurora area in setting up and organizing a daily auction market, later known as the Aurora Auction Market. This organization was organized primarily to find a market for the truck crops being produced in the area and to stimulate prices by offering more competitive buying. The new organization had a rather successful season. After the organization was set up several new truck and vegetable crops were planted by the members.

3. Corn, Small Grains and Soybeans

In the past years due to lack of having facilities for the storage of corn, small grain and soybeans, growers have had no alternative to marketing such crops immediately after harvesting. With a glutted market farmers usually received prices which were less than the actual market value. This condition was remedied to some degree this fall as during the summer Blount-Midyette Company constructed a grain elevator with a capacity of approximately 80,000 bushels with drying equipment installed. This was a much needed storage facility. The agents for the past several years have placed ample storage of such crops as the number one problem facing the farmers in the county.

Early in the harvesting season this year many of the corn growers could not get the support price on their corn due to not having drying and storage facilities. Plans have been made to create enough interest among the farmers to get something done to provide ample storage for their crops in the county.

4. 4-H Poultry Chain Show and Sale

At the 4-H Poultry Chain Show and Sale one hundred twenty pullets were sold for an average of $2.59 per bird. The ten 4-H'ers entering birds in the sale and prices received were:

Name	Club	Price for 12 Pullets
Betty Sue Woolard	Old Ford	$27.60
Doris Wallace	Pinetown	$48.00
David Burbage	Belhaven	$30.00
Ellen Griffin	Old Ford	$48.00
Bill Jones	Aurora	$24.00
Guy Whitley	Bath	$30.00
Shelby Walker	Old Ford	$25.20
Billy Hill	Chocowinity	$27.00
R. H. Allen	Pantego	$24.00
Elsie Lewis	Aurora	$27.00

H. PLANT PATHOLOGY

1. Tobacco

a. General

A good bit of time was spent working with farmers on their tobacco disease problems such as Blue Mold, Black Shank, Granville Wilt, Southern stem rot and sore skin and many others. Plans were made to get a larger percentage of the farmers to use Fermate or some other recommended material to control tobacco Blue Mold, and to get farmers to plant disease resistant varieties. Plans were made to conduct ten Blue Mold control demonstrations and twelve tobacco variety demonstrations. Rotation of crops is being stressed as much as any one remedy to control diseases.

b. Blue Mold Control Demonstrations

During the year ten Blue Mold control demonstrations were conducted. A summary of the results follows:

Number of plants pulled per 100 sq. yds.:

Treated Bed, First pulling - - - - - -	8,250 plants
Non-treated Bed, First pulling - - - -	2,840 plants
During Season (treated) - - - - - - -	15,700 plants
During Season (Not treated)- - - - - -	6,150 plants

For tobacco disease resistant demonstrations see Agronomy, Tobacco, Page 13.

2. Peanuts

Peanut growers were urged to treat their seed peanuts with Arasan to prevent seed decay and damping off, also to dust their peanuts with dusting sulfur to control leaf spot.

It was estimated that 60% of the seed were treated as recommended and at least 20% of the peanut acreage was dusted with sulfur and/or copper sulfur dust to control leaf spot. H. H. Dixon, Route 5, Washington, had very outstanding results on both seed treatment and dusting to control leaf spot. Mr. Dixon reported that the dusted area yielded approximately twice as much peanut hay and about one-fourth more peanuts than did the area not dusted.

3. Soybeans - Seed Treatment

Due to the wet weather during the harvesting season much of the soybean seed stock was of poor quality. A special effort was made to get all of the commercial soybean growers to treat their seed beans with Arasan before planting. The DuPont Company made available twenty-four one-half pound cans of Arasan to be used for demonstrational work. Twenty-four soybean treatment demonstrations were started and eighteen were completed. On approximately

85% of the commercial soybean acreage the seed were treated with Arasan. Treating of soybeans is becoming a common farm practice from the results obtained for the past three years.

A summary of the soybean seed treatment demonstrations that were carried out follows. Note: The stand count for both the treated and non-treated seed beans were made on ten twelve and one-half foot sections of rows scattered over the demonstration plots.

Average number of plants	Treated	Untreated
On 12½ foot rows	1056	788
Per plot	84.5	62.6

4. Potatoes

During the year 1947 late blight did considerable damage to Irish potatoes. Many growers waited until late blight struck their potatoes before they began to use recommended control measures. During the growing season of 1949 less damage was done to Irish potatoes than in 1947 due mostly to the fact that the growers began to apply tribasic copper dust and wet spray early and continued the treatment until the potatoes had matured. Most of the tribasic copper dust was applied by air plane, however ground dusting and wet spray equipment were also used.

I. POULTRY

1. General

There has been a considerable reduction in the number of laying hens in the county for the past five years. There was a slight increase in 1949 over 1948. Many flock owners failed to replace their flocks with young pullets in the fall of 1947 and 1948. More day old chicks were purchased in the spring of 1949 than in 1948.

Flock owners were encouraged to cull close and follow a good management program. They were also encouraged to buy day old chicks and brood out and develop good pullets to replace their old hens.

2. Production Records

Production records were kept by Mrs. Hope L. Tuten, Edward; C. S. Windley, Pinetown; and S. J. Tripp, Blounts Creek. The flock records of the above flock owners were:

C. S. Windley

No. of months reported	12
Total birds kept during year	959
Average number of birds kept during year	80
Total number of eggs produced per bird	131.37
Total feed cost, twelve months	$281.33
Total value of eggs produced	$418.92
Return above feed costs	$137.59
Total return above feed costs per bird for year	$2.33

Mrs. Hope L. Tuten

No. of months reported	8
Total no. of birds kept during 8 months	1533
Average no. of birds kept during 8 months	192
Total number eggs produced per bird	104.71
Total feed costs for 8 months	$793.65
Total Value of eggs produced	$1148.55
Return above feed costs	$354.90
Total return above feed costs per bird	$1.55

S. J. Tripp

No. of months reported	7
Total no. birds kept during 7 months	3584
Average no. birds kept during 7 months	512
Total no. eggs produced per bird	80.74
Total value of eggs produced	$2490.17
Total feed costs for 7 months	$1277.95
Total return above feed costs	$1212.22
Total returns above feed cost per bird	$3.11

3. 4-H Poultry Chain

The 4-H Poultry Chain enjoyed a successful year making a profit of $30. 1,020 New Hampshire U. S. Certified Pullorum clean baby chicks were purchased in March and 102 each were placed with five 4-H boys and five 4-H girls. The chicks were purchased from T. A. Jones, Polkton, North Carolina. Out of the 1,020 pullets placed, 923 were raised to six months. The pullets were judged by C. F. Parrish and Thomas Morris at the show and sale. The coops of twelve placed as follows: two blue, four red and four white.

4. 4-H Poultry Projects

Forty 4-H poultry projects were started and fifteen were completed.

J. OTHER WORK

1. Christian Rural Overseas Program

During the campaign to collect farm produce for the Friendship Train, Beaufort County collected a total of 700 bushels of corn. The county agent was appointed county chairman, and in turn he appointed township chairmen, and township canvassers were appointed by the township chairmen.

The Friendship Train Program was fairly successful.

IV. MAJOR ACTIVITIES AND ACCOMPLISHMENTS

We consider these to be our major accomplishments during 1949.

A. Agricultural Engineering

Through ditch blasting and tile laying demonstrations farmers have been greatly aided in solving Beaufort County's number one need - drainage. Along with these demonstrations many farmers were assisted in laying out ditches and tile lines. The report give the amount of ditching done in the last four years.

B. Corn Production

Through the 100 Bushel Corn Club program, circular letters, news articles, winter meetings and personal contact, we feel that farmers are learning to use recommended practices in gorwing corn. We have seen evidences of this on the individual farms in the county and the fact that the corn yield average in Beaufort County has been raised to an estimated 34 bushels per acre.

C. Tobacco Production

Our tobacco educational program has probably received more response than any other one program in the county. This was accomplished through demonstrations, personal contacts, holding meetings, circular letters, news articles and through the radio. We have proof of the success of the program by the widespread acceptance of recommended practices as described in the report.

D. Pastures and Livestock

The work described in the report on Ladino clover pastures, we believe, has caused an all time record number of acres of permanent pastures to be seeded in Beaufort County during the report year. (Estimated 2,000 acres.) We feel that this is doing more to encourage the raising of livestock than any other one thing that we have done.

E. Entomology

Probably one of our most important accomplishments from a monetary standpoint to the farmers is the assistance given farmers in controlling various insects. The amount of insecticides used in Beaufort County and the kind of materials used leads us to believe that our recommendations were followed.

F. Marketing

Through meetings at which Extension specialists and the county agents assisted, this office was instrumental in setting up the Aurora Auction Market. Through this market farmers were able to receive higher prices for truck crops especially cabbage.

G. Plant Pathology

Work was described under tobacco diseases has meant much to farmers in Beaufort County in raising their number one crop.

H. Poultry

The 4-H Poultry Chain had its most successful year in 1949.

I. 4-H Club Work

Though no one outstanding accomplishment was made in 4-H Club work, we feel that over-all improvement was made. We base this belief on the increase in number of members and the increase in the number of project record books turned in. Also we notice more public interest in 4-H.

V. HOW NEXT YEAR'S WORK, IN THE LIGHT OF THIS YEAR'S ACCOMPLISHMENTS, CAN BE STRENGTHENED AND IMPROVED.

We feel that by more efficient use of neighborhood leaders, by putting on more method and result demonstrations, by conducting more farm tours and probably more efficient use of the press and radio that our Extension program can be improved.

Especially do we realize our opportunity in improving our 4-H program by building up a 4-H neighborhood leader organization. Other ways of improving 4-H work are more home visits, more 4-H community projects and by allowing 4-H members to take a more active part in the monthly meetings.