

NORTH CAROLINA

DUPLIN COUNTY COUNTY AGENT ANNUAL REPORT 1940

Index	Page
* 1 a 1 Crop-Diversion and Soil-Building Practices(A.A.A.).....	3
1 e 3.1064 Marketing-Truck Crops-Standardisation	45-49
1 e 5 Marketing-Inspection and Grading.....	45-49
2 e 2 Electrification-Cooperative Assn.....	36-38
* 2 e 6 Electrification-Lines.....	36-38
2 f 1.4 Drainage-Tile Drains.....	39-41
8 a 2.41 Extension Office-Clerical Help.....	4-6
8 a 2.54 Junior Council.....	59
9 e 10 Lospedeza.....	28-29
17 b Cover and Green-Manure Crops.....	12-14, 25-29

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REPORT FILES
EXTENSION WORK

NORTH CAROLINA AGRICULTURAL EXTENSION
SERVICE

N. C. STATE COLLEGE OF AGRICULTURE AND ENGINEERING
AND
UNITED STATES DEPARTMENT OF AGRICULTURE

I. O. SCHAUB, DIRECTOR

NARRATIVE REPORT

DECEMBER 1, 1939 TO NOVEMBER 30, 1940

COUNTY AGENT ANNUAL REPORT

<u>DUPLIN</u>	COUNTY
<u>G. E. JONES</u>	COUNTY AGENT
<u>L. F. WEEKS</u>	ASSISTANT COUNTY AGENT

Renewable

TABLE OF CONTENTS

I.	INTRODUCTION	Page 2
II.	ORGANIZATION	Page 3-7
III.	AGRICULTURAL CONSERVATION PROGRAM	Page 7-15
IV.	EXTENSION PROGRAM - CHARTS AND MAPS	Page 16
V.	AGRONOMY	Page 17-35
VI.	AGRICULTURAL ENGINEERING	Page 36-44
VII.	GRADING, PACKING AND MARKETING OF STRAWBERRIES AND OTHER TRUCK CROPS	Page 45-49
VIII.	FARM MANAGEMENT	Page 50-53
IX.	PLANT PATHOLOGY	Page 54-55
X.	ANIMAL HUSBANDRY	Page 56-57
XI.	ENTOMOLOGY	Page 58
XII.	4-H CLUB WORK	Page 59-69
XIII.	FORESTRY	Page 70-72
XIV.	POULTRY	Page 73-75
XV.	SWINE	Page 76-77
XVI.	EXTENSION WORK WITH OTHER FEDERAL AGRICULTURAL AGENCIES	Page 78-79
XVII.	OUTLOOK AND RECOMMENDATIONS	Page 79-82

I. INTRODUCTION

The purpose of this report is to summarize and interpret the activities of the County Agent's work, the Assistant County Agent's work, the AAA committeemen's work, the offices of the AAA work, and the work of the AAA Program. The activities of these various groups include work carried out with individual farmers, groups of farmers, State Extension officials, AAA officials, and officials of other cooperating Federal Agencies such as Farm Security Administration.

The Extension Program for 1940, which plans were made for in the Fall of 1939, has been conducted as outlined in the program planning meeting. We have tried to cover every phase of work that effects our farmers. We were not able to give each individual line of work as much time as was planned due to the marketing quota provisions of the AAA being in effect during the crop year of 1940. This being the first year since 1938 that these provisions were in effect, both for our two major cash crops, tobacco and cotton, it naturally took more of the Agent's time than would have been the case had not this law been effected during 1940.

However, we were able to conduct the program of Extension work in the County that represents every line of Agricultural work that is carried on in the County, and due to the fact that the Assistant Agent, Mr. L. F. Weeks, had spent the previous year in the County as Assistant Agent, and naturally had the experience of working with the people the previous year, we feel like that a better balanced program of Extension work was carried out in 1940 than we have been able to do here-to-fore.

II. ORGANIZATION

1. To summarize the Extension Program alone it might be well to state at the beginning that both the County Agent and Assistant County Agent having been in the County in their respective positions the previous year, made it considerably easier to conduct the program of Extension work than it was for the preceding year when both Agents were new in their respective positions. The same thing might be said for the rest of the Extension organization, including the Secretary and the Home Agent, for they both held the same position the previous year. So the entire Extension organization was an experienced organization this year compared with an inexperienced organization the previous year.

2. Organization of the AAA part of the Extension Program

While the AAA work is classified separately, it is also a very vital part of the Extension program, and we feel like furnishes the best medium so far advanced for carrying out a real Extension program of work that has been advocated by Extension workers for many years in the past. To illustrate this point it is well to point out the Soil Conservation part of the AAA program, for soil conservation has long been a very vital part of a well balanced Extension program.

(a) Soil Conservation

The Soil Conservation program in this County, also the marketing quota programs for tobacco and cotton, were administered by the County committee with the help of the community committeemen. The County committee and the community committeemen for the year 1940 were elected in

the Fall of 1939. The County committee consisted of three farmers, namely G. H. Blanton, Chairman; Arthur Whitfield, Vice Chairman; and W. G. Jones, regular member. These farmers as committeemen have ably demonstrated their ability for carrying out the provisions of the conservation program and the marketing quota program. They have been very hard conscientious workers for the program, and have tried to administer it with fairness to all farmers, and as a result of their untiring efforts in this exceedingly hard task, the same three men have been elected for the year 1941. This is a tribute both to their ability and conscientious work performed by them during the year 1940.

In addition to the County committee, each township in the County was represented by a Community committee consisting of three farmers. This County is divided into thirteen townships, and each township has a committee of three farmers, this making a total of thirty-nine community committeemen for the County. These committeemen worked in cooperation with the County committee in carrying out the provisions of the AAA Program for the County.

The officers of the Soil Conservation Program for the year 1940 were the same as in the previous year, with the County Agent, G. E. Jones, as Secretary and Miss Mamie Kornegay as Treasurer.

(b) Office Personnel

The office personnel of the Soil Conservation Association remained about the same for this year as it was for the previous year, except that eight more office assistants were needed to do the work this year due to the marketing quota restrictions being in effect on both cotton

and tobacco. The same spirit of cooperation by the office assistants was evident this year as was the case in 1939. The new workers were not long in getting adjusted to the requirements and regulations governing office employees, and, therefore, fitted in the group just as the older and more experienced workers had been in the past. The problem of employing office assistants is probably about the same in this County as in other counties, but I would like to point out the system used in this County in employing office assistants.

In the first place, this year we had applications from approximately sixty young women in the County for work in the AAA office. Even at the busiest season which is during the summer during compliance work, the office would not need near this number of people as additional office assistants, so we used the following system in selecting:

1. It was necessary to be a farm girl. This requirement we felt like was necessary because the program is a farmers' program, and the daughter raised on the farm I felt like should have the first opportunity to do the work for the farmers of the County.

2. Only one girl in each family was employed. This system was followed because there were so many farm girls who needed employment, and I did not think it fair to employ more than one girl in each family.

3. Each applicant was given a written examination as required by the State office, and the ones making the highest grade were employed. In this way I felt like that it would be very little criticism about the Secretary employing girls in the County. Otherwise there might have been accusations that this office favored certain farm families in the County.

I believe this was the fairest method that could have been used in

employing office assistants, and in using this system I have not had any complaints from the farmers in the County about the personnel of the office force with one exception, and that was from a farmer whose daughter was employed but was later released because she did not do her work satisfactorily.

As a result of using this method of selecting employees in the AAA office I believe our County office will rate just as efficient as any office that is conducted in any County in the State. On numerous occasions the State AAA office has complimented the efficiency of the office of the Duplin County Agricultural Conservation Association.

At the present time the total number of office assistants in the AAA office is twenty-two. At times during the busiest season this number has been larger, but for most of the year this is the approximate number that has done the work of the AAA. The County Agricultural Conservation Committee, and myself as Secretary, are very grateful for the splendid cooperation and efficient work that these office assistants have done during the past year.

(c) Compliance Supervisors

The County committee for 1940 employed the same County Supervisor, Milton Whaley of Kenansville, N. C., to head up the compliance work in the County for the year. Mr. Whaley had during the peak or rush season a total of eighty-one compliance supervisors assisting him with this work. This was the most supervisors ever used in the County during one season, and it was necessary to have this many to do the compliance work that was necessary under the cotton and tobacco marketing quota provisions of the AAA Program. The compliance work of the AAA program is the biggest job that the County committee and Secretary had to do in connection with the

AAA program. For this work there were approximately 150 applications received by the County committee for work as supervisors.

The State office requires each supervisor to take a written examination, and those passing the examination are eligible to do the compliance work if they are approved by the County committee. These regulations were followed in this County, and the above mentioned number, 81, qualified for this work. Most of these supervisors did a pretty good job of compliance work. A few, however, did not, and consequently made the job of compliance lots worse to do. As a whole the compliance work for the County for this year was very good, and as a result the farmers seem to be pretty well pleased with the compliance work done on their farms.

Due to the marketing quota provisions of the AAA, all farms in the county were measured this year. This job, as stated previously, was a hard one to do, but this office feels that even though this was a difficult job, that it was well done, and at the present time late compliance work in connection with the program is being completed for the year 1940.

III. AAA - AGRICULTURAL CONSERVATION PROGRAM

The conservation program for the year 1940 covered a total of 4006 farms in the County. These farms either had cotton, tobacco, or both, or some other such allotment such as truck crops which made them eligible to work under the soil conservation program for this County. In connection with this program, marketing quotas for cotton and tobacco, as previously stated, were in effect for this year. Every farm in the

County had a farm plan worked out for his farm according to the regulations of the Agricultural Adjustment Administration. This plan was submitted to the farmers early in the year so that they could plan their crops according to their farm plan. Each farmer having some special allotment was contacted either by some member of the office force or a committeeman, and was given the opportunity to have the provisions of the Conservation program explained to him, in addition to the educational meetings held in each township in the county, so that he would be familiar with the provisions of the program, and that he would have an opportunity to comply with the conservation program. Consequently, every farmer in the county had an opportunity to know all the provisions of the program so that he could cooperate with the conservation program.

(a) Cotton Marketing Quotas

Under the provisions of the AAA cotton farmers were given an opportunity in December to vote in a referendum on the question of whether they wanted marketing quotas in effect for 1940, or whether they didn't want any restrictions on the cotton crop for 1940. As a result of this referendum, cotton farmers voted 90 percent in favor of marketing quotas for 1940 just as most of the cotton farmers in the nation did, so as a result of cotton marketing quotas being in effect during the year 1940, cotton farmers voted to restrict their acreage to about the same as it was in 1939. Consequently, each cotton farmer having an allotment under the Conservation Program was restricted to this acreage or either if he did not comply with the cotton program he was subject to 3/4 a pound tax. Cotton farmers of Duplin county having an allotment under the conservation

program complied with the marketing quota provisions 100 percent. In other words, every farmer in 1940 having a cotton allotment either planted within his acreage allotment or destroyed his excess acreage so that he was within his allotment when his farm was checked for compliance with the program. There were only five farmers in the County who planted cotton on their farm without a cotton allotment. Therefore, the cotton program for cotton farmers in the County was carried out very satisfactorily to all cotton farmers concerned.

In connection with the cotton quota provisions, the County office made every effort to get the cooperation of the various ginners in the County, for the ginners as well as the farmers play a very important part in carrying out the cotton quota provisions of the AAA.

I am glad to state in this report that we had the cooperation of every cotton ginner in the county this year in making their reports of the ginnings for the farmers of the county.

(b) TOBACCO

In the Fall of 1939, as everyone in this part of the country remembers that the tobacco farmers as a result of their decision in the Fall of 1938 not to have marketing quotas in effect for 1939, faced a very serious problem. As was given in this report for the year 1939, the acreage of tobacco planted in this county was an increase of 57.5 percent over the year 1938. This figure is about in line with what tobacco farmers planted all over the tobacco area, and as a result of the huge crop of tobacco - over a billion pounds produced in 1939 - the market was not open long before a collapse of prices resulted.

Due to this collapse of prices, tobacco warehouses closed, and as a result of their closing farmers voted in a referendum to have their crops reduced for the year 1940 in order to get aid from the Federal Government in helping to try to handle the surplus tobacco. The tobacco farmers in this County, just as they did in most counties, voted overwhelmingly in favor of marketing quotas being in effect for 1940. As a result of their decision, the crop was restricted in the year 1940.

As a comparison of the tobacco allotments for the year 1939 and 1940, I might state that the total tobacco allotments for this County were 17,829 acres for 1939 (planted acreage 57 percent in excess of this amount). In 1940 the total tobacco allotment for this County was 15,478 acres, and the planted acreage was just about the same figure, for most of the tobacco farmers complied with the marketing quota provisions on tobacco. As a result of the predicament that the tobacco farmers were in, they expected and received a reduction in their allotments for 1940, and out of a total of 4000 tobacco allotments, all but forty of these tobacco allotments were complied with under the provisions of the law. In other words, one percent or less of the tobacco farmers failed to comply with the marketing quota provisions of the law. Consequently, a great deal more of satisfactory work, especially in connection with the soil conservation program, was done with the tobacco farmers of this county than has ever been accomplished before.

This county is one of the large tobacco counties of the State. Most of our farmers are tobacco minded, consequently the tobacco program this year was the hardest of all the programs in the County to administer. However, the big majority of tobacco farmers requested

restricted acreage, and the program was less difficult to carry out than any previous one.

Tobacco farmers today as a whole in the County are better satisfied with the program as it now stands than they have ever been in the past.

(e) CONSERVATION

As previously stated in this report, cotton, tobacco and other special allotment farmers of the County were more interested this year in the conservation end of the program than they had ever been. In the very beginning they realized the necessity of restricting their so called cash crops to a minimum and manifested a great deal more interest in the conservation of the soil on their farm. More special emphasis was placed on this phase of the program by the county office than has ever been done before, not because the County office felt like it was any more important during 1940 than any previous year, but because of the attitude of the farmers themselves. Due to their interest in this part of the program, when the farm plan was explained to each individual farmer, the necessity of planting soil building crops was outlined to him and a number of soil building units that he could earn on his farm also was pointed out so that he would be eligible to earn his full conservation payment. The importance of planting one of or many of summer legume crops was explained to the farmers.

Farmers in this county had already learned the value of soybeans and Field peas as a soil building crop, and a few have learned the advantage of planting lespedeza and orotalaria, but only a few as compared

to the total number of farmers in the County. As a result of the emphasis placed on the latter two crops, the acreage of lespedeza was increased from approximately 125 acres in 1939 to approximately 1323.4 acres in 1940. All of this acreage, in fact the considerable part of this acreage, was not planted merely for soil building purposes alone, but also for a hay crop. However, a good soil building job was done when a man planted this crop.

Now for orotalaria as a soil building crop - In the educational meetings held throughout the county a great deal of emphasis was placed on the importance of planting this crop on farms that were not very well suited for soybeans or field peas. In other words, the necessity of planting this crop on poor, light soil was emphasized on this crop as a soil building crop in connection with the conservation program than any other one crop. 1. Because of its value as a soil building crop, and, 2. Because there were a comparatively few farmers in the County who knew anything about this crop.

As a result of this work the acreage of this crop increased from 125 acres in 1939 for the County to 500.2 acres in 1940. Every farmer contacted who grew this crop in 1940 is not only pleased with the growth that this crop made, but surprised at its growth. The same emphasis was placed on other summer legumes for soil building purposes, but due to the fact that farmers knew more about these crops such as soybeans and peas, it wasn't necessary to spend as much time on these crops as it was orotalaria and lespedeza.

A program for planting winter legumes was started in the early summer by the County office. Farmers were informed even in the late Spring that it was possible that they would get some winter legume

seed as a Grant of Aid under the Soil Conservation Program, and orders were taken for these seed during the Spring and summer, as well as Fall months.

The importance of planting winter legumes was not only emphasized because of the credit under the soil conservation program that farmers could earn for planting these crops, but also for the real soil building value that these crops would have on the farms of the County. Heretofore farmers have been earning most of their soil building practices by planting summer legumes, either planting them solid or inter-planting them with a soil depleting crop such as corn, and this same method of earning soil building practices was carried out this year, more than by planting winter legumes, but as a result of the program intended early in the year for planting winter legumes, more farmers earned soil building credit for planting winter legumes than has ever been the case heretofore.

A great many farmers who were not able to obtain these seed through the Grant of Aid Program of the AAA on account of already having purchased lime, and, therefore using up their 90 percent of their allowance permitted under the regulations, purchased these seed from seed dealers in addition to the seed that was purchased through the AAA as a Grant of Aid program. A total of 81,000 pounds of winter legume seed (65,000 pounds of Austrian Winter Peas, 16,000 pounds of Vetch) was purchased by the farmers of the County through the AAA as a Grant of aid. Payment to be made for these seed is taken out of the farmer's conservation check.

In addition to these seed, 10,000 pounds of Italian Rye grass was purchased by the farmers as a winter cover crop and grazing crop through the AAA. In addition to these seed purchased through the AAA, approximately 10,000 pounds of winter legume seed was purchased through local seed

dealers and planted by the farmers of this County. This makes a total of between 90,000 and 100,000 pounds of winter legume seed planted by the farmers of this county as soil building crops.

Due to the very dry season experienced this Fall, farmers were not able to plant these seed as early as they should have been, but at the time this report is being made these crops that have been observed look very promising, and it is safe to say at this time that in most cases they will be a success as soil building crops in this County. At this time we have not been able to get a complete check on every acre of winter legumes planted in the County, but according to the amount of seed purchased, the acreage planted to these Fall or winter legumes is approximately double that of any previous year.

(d) GRANTS OF AID FOR SOIL CONSERVATION UNDER AAA PROGRAM

In the beginning of the 1940 program year the County office was notified by the State AAA authorities that the farmers of this County would be able to purchase lime and phosphate as soil building materials as grants of aid through the AAA. The County office immediately wrote every farmer in the County, and in addition explained to all farmers attending educational meetings on the conservation program the provisions by which they could purchase these materials for soil building purposes on their farms. As a result of this work, a total of 1693 tons of limestone was purchased through the AAA by the farmers of Duplin county and applied to their farm land. The limestone furnished by the AAA was finely ground limestone and was very easy to spread on the farm. At first the farmers did not have a very good impression of this limestone.

Some of them even went so far as to say that this limestone was just a lot of sand, but by the end of the crop year many farmers had reported to the County office that this was the best limestone they had ever used, and immediately wanted to place an order for more for the coming year. When the farmers see the results obtained in just one year, when as we know that the best results from limestone is not secured until the second year due to it acting slowly, we expect that a great deal more limestone will be requested the coming year.

We were not able, however, to request any of the phosphate that was available to the AAA because the farmers did not realize the importance of using this material as a soil builder in connection with legume crops. More emphasis will be placed on the grant of aid program this year than was the case last year because we have many more winter legumes than have ever been planted, and then, too, farmers are planting more pastures than heretofore and are naturally seeing the results obtained from these materials being used, even though they have been used in a limited quantity in the past.

As previously stated in this report, a total of 81,000 pounds of winter legume seed were purchased through the AAA as a grant of aid, also 10,000 pounds of Italian Rye grass. We did not, even with this amount of seed being used, we did not have enough of these seed to supply the farmers who requested them.

A good many farmers waited until the last minute to put in a request for these seed, consequently, we did not have them because it was too late to order these seed from the Western coast and have them planted in time to be of much value this winter.

IV. EXTENSION PROGRAM - CHARTS AND MAPS

With the assistance of Mr. L. F. Weeks, Assistant County Agent, we have been able to carry out a better balanced program of extension work during the past year than has been done in the past. A great deal of the time of the Agent was taken by the AAA program during the year, but with a better organized office force and a County committee understanding better how to carry out the AAA program, it was possible for the Agent to devote a considerable part of his time to the Extension program. However, Mr. Weeks, Assistant Agent, devoted practically his full time to this phase of the work.

As stated in the introduction of this report, due to the fact that Mr. Weeks, Assistant Agent, and myself as Agent, having had the experience of dealing with the farmers of this County the previous year, we feel that we conducted a more extensive and better balanced program of Extension work than was possible to carry out during any previous years.

On the following pages the Agent and Assistant Agent have attempted to summarize the work done in various lines of Extension work during the year 1940.

V. AGRONOMY

(1) Crop Rotation

With the aid of Mr. E. C. Blair, Extension Agronomist, we have attempted this year to conduct eleven crop rotation demonstrations in this County. A few of these demonstrations were carried out as planned; however, the majority of them did not follow the recommended rotations as outlined by Mr. Blair. The reason a number of these demonstrations were not carried out as they should have been was due mainly to two reasons, we believe. 1. That the Agents did not have the proper time to spend with the individual demonstrator, and 2. That some of these particular farmers had never been accustomed to following a specific rotation practice of farming, and it was hard for them to get adjusted to the importance of carrying these demonstrations out as outlined.

Seven of these crop rotation demonstrators were farmers that were being assisted by the Farm Security Administration, which were low income farmers. Consequently, it is much harder to get these farmers to following a definite system. However, we hope for the coming year that we will be able to accomplish more with these same farmers with the aid and assistance of the Farm Security Administration.

On the other hand, one of the outstanding demonstrators of crop rotation practices is H. B. Kornegay of Calypso. This farmer learned the value of rotating crops years before he was included as one of the demonstrators. The wisdom of Mr. Kornegay in following the same system of rotating his crops is easily shown by the crops he produces and the fertility of the soil. Anyone visiting his farm can readily tell that this farmer has a definite plan in mind when he plans his crops for the

year. He is recognized as one of the leading and outstanding farmers of Duplin County. Farmers as a whole in the County this year are following a better system of rotation of crops than heretofore. This was due in part to the limitation of their tobacco and cotton crops, and also from the result of not rotating their crops in the previous years, consequently resulting in disease and losses to their crops. Everywhere we find farmers increasing the productivity of their soil by following a better system of crop rotation practices on their farms.

2. COTTON

The most emphasis on cotton work in the County was placed this year on the importance of improving cotton seed, the best varieties adapted to the farm, and the importance of treating cotton seed to reduce cotton wilt. In addition a program of boll weevil control was especially emphasized to all farmers. While this is a certain phase of cotton work, the educational part of this work was conducted in educational meetings of which we had six in the county on the importance of good seed, and other good practices related to the production of cotton. While most of the farmers haven't had any trouble with cotton wilt in this County, the best adapted variety of cotton to our soil has been found to be Cokers' Strain - 100. However, in a few cases where cotton wilt is prevalent, we recommended a wilt resistant variety.

In addition to the Agents advocating better varieties of cotton for our farms, we planned and conducted a variety test demonstration on the farm of Mr. Arthur Whitfield of Kenansville. We had hoped to be able to give the exact results at this demonstration in this report, but due

to the fact that Mr. Whitfield's tenants made the last picking of this cotton and mixed all varieties together, we are not able to give any definite results. However, it could be readily seen, not only but the growing of this cotton, but there was considerable difference in the results obtained from the first picking of this cotton. This farm happens to be a farm that had cotton wilt in the soil, and the wilt resistant varieties showed up to a good advantage over the non-resistant varieties.

Every cotton grower in the County was sent a letter on the importance of planting good seed, treated seed, and the importance of mopping their cotton for boll weevil control. In addition to this, six educational meetings were held in the cotton areas of the County, at which approximately 200 cotton farmers attended. In these meetings Mr. Shanklin, Extension cotton Specialist, emphasized the importance of good seed, also stressed the importance of one variety communities being established in this county, and Mr. J. O. Rowell, Extension Entomologist, gave a demonstration on the proper methods of boll weevil control work. While the cotton growers in the County did not take any definite action in any one community due to the lateness in the season on the one variety communities being established, a good many farmers recognized the importance of establishing one variety in their communities and indicated a willingness to start with this year's crop. Due mostly to the fact that boll weevil damage was practically negligible this year, also due to the fact that cotton growers did plant better seed as a whole, the production of cotton per acre was close to a bale per acre. We do not have the exact figures available at this time as to the per acre yield, but this

was the highest yield ever made in this County just as is the case in the other Counties in North Carolina.

3. TOBACCO

(a) As anyone familiar with County Agents work in Eastern Carolina knows, the chief work that the County Agent and Assistant County Agent has to do in regard to the tobacco production is in connection with the marketing quota provisions of the AAA and the Soil conservation Program. For tobacco growing is not merely an occupation - it is a disease as well. There are thousands and thousands of questions asked by producers and explanations made by the County Agent in connection with the AAA tobacco program, but even at that we have tried to further the production of tobacco along quality lines instead of quantity. As hard a problem as this is, more tobacco farmers are eager to learn and carry out more extension methods of cultivating tobacco than they do any other one crop that we know of. As has been the custom of the tobacco specialist, Mr. Lloyd Weeks, and his predecessor, Mr. E. Y. Floyd as Extension tobacco specialist, we are still advocating and encouraging tobacco farmers to use the ridge method of cultivation. This type of cultivation is generally followed throughout the County, with some farmers of course doing a better job of it than others.

Another point that has been stressed along the production of tobacco is the importance of using more potash than has been generally used. As the result of more emphasis being placed in the use of potash in the production of tobacco, including Experiment Station recommendations, Extension Service recommendations, and fertilizer company recommendations, tobacco

farmers are each year using more potash in the production of their tobacco, and as a result are getting better quality leaf from this increase in the use of potash in the production of their tobacco.

A ridge method demonstration of tobacco cultivation was planned this year with Mr. W. G. Jones of Beulaville, but due to the fact that these plans could not be carried out by the tenants of Mr. Jones, that is they did not follow them, we are not able to give any record of this demonstration. Even with the drouth which effected practically all tobacco producing counties in North Carolina, some farmers in this County made the highest yield and the best quality leaf they've ever made. However, in general the quality of leaf was not as good due to the extreme drouth suffered in this County this season.

(b) TOBACCO FERTILIZER DEMONSTRATION

A tobacco fertilizer demonstration was conducted with L. G. Simmons, Seven Springs. One thousand pounds of 3-10-6 fertilizer per acre was applied under the crop before transplanting. On the first five plots the potash was built up by side-dressing with sulphate of potash at the following rates:

The first plot was intended to be a check plot, but there were not enough plots available, so the check plot was eliminated. Second plot 10%, third plot 15%, fourth plot 20%, fifth plot 25%. Plot three where 15% potash was used returned \$360.27 per acre above all fertilizer cost. This was highest return per acre of any plot where sulphate of potash was used. On plot six a 6-10-15, plot seven a 6-0-15 and plot eight a 6-0-15 was used at the rate of 100 pounds per acre. The mixtures were mixed by L. T. Weeks, Extension tobacco specialist, who worked very closely with the Demonstrator and Agents. The ingredients of the mixtures are shown on page 22 which is an analysis of this demonstration.

RESULTS OF TOBACCO TOP DRESSING DEMONSTRATION IN NORTH CAROLINA FOR 1940 IN COOPERATION WITH MR. L. C. SIMMONS, SEVEN SPRINGS, N. C.
ON NORFOLK SANDY LOAM SOIL IN DUPLIN COUNTY

Rate of application - 1000 pounds of a 3-10-6 commercial fertilizer per acre.
Sulphate of Potash was used as a side dresser on the first 5 plots.

- Plot No. 1 - Check plot
2 - 10% Potash
3 - 15% Potash
4 - 20% Potash
5 - 25% Potash

Rate of application - Top Dressing for following plots - 100 pounds per acre.

	Nitrogen	Phosphate	Potash
6 - 6-10-15	2.5% Nitrate of Potash, 2.5% Cal-Nitro, 1% Blood	All Di-Calcium	2% Muriate of Potash, 4% Sulphate of Potash Magnesia, 6.5% Sulphate of Potash, 2.5% Nitrate of Potash
7 - 6-0-15	2.5% Nitrate of Potash, 2.5% Cal-Nitro, 1% Blood	None	2% Muriate of Potash, 4% Sulphate of Potash Magnesia, 6.5% Sulphate of Potash, 2.5% Nitrate of Potash
8 - 6-0-15	All Nitrate of Soda	None	All Sulphate of Potash

TABULATION OF ABOVE MIXTURES WITH NUMBERS CORRESPONDING

Plot No.	LUGS			LEAF				TIPS				Total Yield	Average Price per 100 Pounds	Value of Crop Less Cost of Fertilizer					
	Common	Medium	Best	Best	Medium	Common	Black	Green	Black	Green									
	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	Lbs. Value per acre	per acre	per 100 Pounds					
1	No figures available on this plot.																		
2	45	3.37	185	27.75	445	142.40	190	47.50	225	41.62	320	34.40	55	3.57	65	11.70	1530	20.41	299.01
3	90	6.75	240	36.00	565	180.80	190	47.50	300	55.50	130	13.97	40	2.60	190	34.20	1745	21.62	360.27
4	70	5.25	185	27.75	575	184.00	195	48.75	210	38.85	185	19.88	85	5.52	75	13.50	1580	21.74	323.70
5	80	6.00	200	30.00	490	156.80	150	37.50	345	63.80	170	18.27	130	8.45	150	27.00	1715	20.28	325.27
6	45	3.37	285	42.75	465	148.80	300	75.00	240	44.40	150	16.12	60	3.90	195	35.10	1740	21.23	355.49
7	110	8.25	160	24.00	515	164.80	325	81.25	510	94.35	200	21.50	65	4.22	140	25.20	2025	20.91	410.62
8	55	4.12	190	28.50	395	126.40	350	87.50	260	48.10	270	29.02	40	2.60	75	13.50	1635	20.77	326.79

5. Rye, Wheat And Barley

Most of the rye grown, in fact practically all of the rye grown, with few exceptions, is grown by farmers here as a cover crop and grazing crop rather than as a grain crop. Rye has proven in the past and is still being recommended as the best cover crop to be used on land that is to be followed with tobacco.

Approximately 2800 farmers planted rye on their farms during the past year. Rye is also used to a great extent for winter pastures in this County. In addition to the use of straight rye as pasture crops, the farmers of this County this Fall planted 10,000 pounds of rye grass to be used as pasture crop.

Wheat

Wheat was grown by only a few farmers this year. Those farmers are located mostly in one township, namely Wolfsrape in the northern end of the County. Wheat is planted by these farmers for home use and there are no commercial wheat farms in the County. With the addition of harvesters being used this year for the first time in most every township of the County, more people did plant this Fall more wheat for home use than has ever been planted in the County before. While we have no accurate figures on the number of acres of wheat planted this Fall, we do know there was considerable increase in the wheat acreage. This increase has been due in part to the Agents advocating the production of wheat for home use. The yield of wheat per acre in this County is considerably more than the State average. Two farmers in the County this year that we know of produced about double the wheat per acre

that is produced on the State average. Mr. J. M. Holland of Mt. Olive, Route 5, made an average of 32.5 bushels per acre on about four acres of wheat, and Mr. L. P. Wells of the Mt. Olive section of this County, made a yield of 34 bushels per acre on three acres of wheat.

The greatest handicap we now have in the production of wheat in this County is the absence of the flour mill. At the present time farmers of this County have to haul their wheat to Lee County, a distance of about sixty miles, to get it ground. It is possible, however, with more interest being shown by farmers in growing their wheat for home use that within the next year or two we will have a flour mill, and in that case we will be able to get more wheat produced by farmers for home use than we have been able to do in the past.

Barley

Only a few farmers in this County have been interested in the past in the production of barley, but due to the results obtained by these few farmers of growing barley as feed for livestock, a considerable number of farmers have shown more interest in growing barley this past year than has ever been indicated before. Many of them are growing it as a pasture for hogs and cattle, while a large number of them are growing barley as a hay crop along with oats. They have found it to be one of the best feed crops they have ever grown for livestock. Even with the large increase in acreage of this crop in 1940, the Agents are still spending considerable time in encouraging more farmers to plant barley because of its value as one of the best feed crops for livestock.

6. WINTER LEGUMES

As reported previously in the AAA part of this report, 80,000 lbs. of winter legume seed, 85,000 lbs. Austrian Winter Peas, and 15,000 lbs. of Vetch was obtained by the farmers of this County as a Grant of Aid through the AAA program. In addition to these seed, we estimate between ten and fifteen thousand pounds more winter legume seed were planted by the farmers during this Fall, making a total of between eighty-five and ninety thousand pounds of winter legume seed being planted by the farmers. This is more than double the amount of winter legume seed than has ever been planted in this County.

While we had a very dry season to plant these seed to get them properly inoculated, at the present time the majority of these crops look very good, and with favorable season through the winter, we expect to have the most winter legumes turned under as cover crops than has ever been practiced before. More farmers each year are learning the value of planting these crops, not only as a cover crop in the winter time, but as a green manure crop in the Spring when they turn it under.

Several farmers this year commented on the increased yield of their corn crop as a result of planting a winter legume prior to planting their corn crop. While we do not have any definite demonstrations to report at this time, we are at the present time conducting four demonstrations in the County with farmers on winter legumes. We will be able to give the results of these demonstrations in next year's report.

This year with the aid of the AAA being able to furnish these winter legume seed, the Agent and Assistant Agent, as well as the office force, spent considerable time from the beginning of the summer on through this

Fall in helping farmers to plan on planting a winter legume crop this Fall. Meetings were held in each township in the County in helping the farmers plan these crops, and in addition to this the Agent and Assistant Agent spent approximately two weeks this Fall in conducting demonstrations on inoculating these seed.

We realize that without the proper inoculation farmers would not only be throwing away their money and seed, but would become so discouraged by making a failure of these crops without the proper inoculation that it would be hard in the future to get farmers to realize the value of these winter legumes; so with the delivery of these 80,000 pounds of seed we attempted to show a demonstration to the grower on how to inoculate these seed and the importance of inoculating them. In a County this size consisting of 233,000 acres of cropland, we feel like that instead of 80,000 pounds of these seed being planted, we should have at least a quarter of a million pounds of these seed planted each Fall, and this is the goal that we are working towards.

7. SUMMER LEGUMES

(a) Soybeans and Cowpeas

It has been a general practice of most farmers in the County for farmers to plant soybeans and cowpeas for soil improvement. However, the practice has been in the past to interplant these beans and peas with corn. This is a good soil building practice, and we still recommend it, but we spent considerably more time in urging farmers to plant these crops solid and turn them under for soil improvement for we know by past experiences that this is a much better practice than interplanting them with some soil depleting crop. This past year more farmers planted them

solid or alone than ever before, but we are still encouraging farmers to plant more of these crops solid. Soybeans are still the most popular hay crop that we have, and practically every farmer in the County either plants soybeans or cowpeas for this purpose.

In connection with soybeans for hay there are two main points that we have been stressing more, for we believe that these two points are weaknesses characteristic of farmers not only in this County, but of Eastern North Carolina. The first is that farmers as a general practice plant the cheapest bean for hay whether it is the best variety for hay purposes or not, and the other point is that as a general practice we find that soybeans for hay are usually cut from one to four weeks later than they should be, and as a result stock usually eats the beans and leaves the foliage and the foliage is the main purpose for which we should grow soybeans for hay, for usually most farmers have corn in their beans to use for grain. We expect to continue to place more emphasis on these two points about soybeans for hay than has been done in the past.

(b) Crotalaria

In all of the educational meetings in the County which were conducted in every community in the county, the Agent and Assistant Agent placed special emphasis on the value of crotalaria as a soil building crop. The few farmers who have grown crotalaria as a soil building crop in the past have been more than satisfied with the results obtained by this crop and point out that this is the best summer legume that they have ever planted for soil building purposes on light, sandy soil. Only recently a farmer was in the office who planted four acres of crotalaria on his farm.

and stated that the crotalaria grew about shoulder high, while an adjoining acre of the same type land was planted to soybeans and that did not grow much more than ankle high. Both of these crops were planted on very light, poor soil. This is just one illustration of what the farmers who have planted crotalaria think of it as a soil building crop.

Up until this year only about ten or twelve farmers in the County had grown this crop, but with the results obtained by these few farmers and the importance of this crop being emphasized and stressed, not only at the educational meetings, but in the office as individual farmers came in, considerable interest was shown by many more farmers in growing this crop. As a result of this interest, the acreage of this crop increased from approximately 125 acres in 1939 to 500.2 acres in 1940. We expect to continue to emphasize the value of this crop as a soil builder, for past experience has shown us that this crop is well adapted to this section and the results obtained are very good.

(c) Lespedeza

This is another one of the most important legume crops that we have, and the value of this crop both for soil building and for hay crop has been known for a long time, but due to the nature of its growth it has been a crop that has been slow to be developed or planted by the farmers of this County. However, in the last few years it has gained in popularity every year, and this year with the same emphasis being placed on this crop as to its value as a soil builder and for a hay crop, as was placed on some of the other legumes, we find that considerably more lespedeza was planted in this County than has ever been planted before. The

Most recommended practice followed by farmers in planting lespedezas at the present time is to plant it with oats. The farmers planting this crop are very well pleased with it, especially as one of the best hay crops they have ever grown. Without a single exception that we know of, any farmer who has planted lespedezas for hay and has harvested it as such, is continuing to do so, and usually most of the farmers increase their acreage for they like it better than any other hay crop they have grown.

In 1940 considerably more lespedezas was planted than has been planted heretofore. The acreage as compiled by the AAA office is 1325.4 acres, which is more than double the acreage that has been planted in any previous year that we have record of.

We have two result demonstrations on this crop for this year. On page 30 can be found the results of these demonstrations.

RESULTS OF LESPEDEZA HAY DEMONSTRATIONS
 IN DUPLIN COUNTY - 1940

NAME	ADDRESS	NO. OF ACRES IN DEMON- STRATION	METHOD OF SEEDING	VARIETY PLANTED	YIELD OF HAY IN POUNDS PER ACRE
ARTHUR WHITFIELD	KENANSVILLE, N. C.	4	ON TOP OF SPRING OATS	TENN. 76	4,471
L. G. WILLIAMS	PINK HILL, N. C.	4	ON TOP OF SPRING OATS	TENN. 76	3,100
COUNTY AVERAGE					3,786

PASTURES

Pastures have been emphasized this year, and as a result farmers are improving their pastures by reseeded, fertilizing and liming.

Five demonstrations were planned with L. P. Wells, Mt. Olive; James Faison, Faison; Myra Carlton, Warsaw; Richard Boyce, Wallace; and J. F. Landem, Chincapin.

Mr. L. P. Gullledge, Director of the Plant Food Institute, furnished 400 lbs. of phosphate on these demonstrations. Two acre plots were selected and 400 lbs. of phosphate was applied per acre. The soil was tested for acidity and the recommended amount of lime was applied.

A check plot thirty feet wide was left untreated through the middle of the plot. Two clippings were made from these demonstrations, one July 25th and one on September 23rd. A plot 3' X 7'3" was clipped from the check plot and from the treated area from each demonstration. The same area was clipped when the second clipping was made. After weighing and recording the clipping, they were sent to the Agronomy Department for analysis to determine the food and mineral content from both treated and check plots. No report on this has been received to date.

On the four demonstrations from which results were secured, the green grazing was increased 22%. The table on page 32 shows results of these demonstrations.

RESULTS OF PERMANENT PASTURE PHOSPHATE DEMONSTRATION - 1940

NAME	ADDRESS	ACRES IN DEMONSTRATION	SEEDINGS		LIME TREATMENT		LBS. OF PHOSPHATE APPLIED	YIELD OF GREEN GRAZING IN POUNDS PER ACRE	
			OLD SODS	NEW SODS	OF SOIL	LBS. OF LIME APPLIED PER ACRE		CHECK PLOT (NO LIME, NO PHOSPHATE)	TREATED PLOT
L. P. WELLS	MT. OLIVE, N.C.	2		10# Lespedeza 10# Red Top 4# Ky. Blue 6# W. Clover 10# Dallis	5.1	5000	400	4000	7125
JAMES FAISON	FAISON, N. C.	2	Old sod reseeded with Lespedeza		6.4	none	400	4875	7375
MYRA CARLTON	Warsaw, N. C.	2		10# Lespedeza 10# Red Top 4# Ky. blue 6# W. Clover 10# Dallis	6.0	none	400	4750	4125
RICHARD BOYCE	WALLACE, N. C.	2	Carpet grass reseeded with Lespedeza		4.5	3000	400	6625	7375
(Died - No results)			Carpet grass reseeded with Lespedeza and Dallis		5.3	2000	400		
J. F. LANDEN	CHINQUAPIN	2							
COUNTY AVERAGE (22% Increased Yield)								5062	6500

* Two clippings were made, one on July 25th and one on Sept. 23rd.

1
24
23
1

CORN

In general corn yields were out short in Duplin County this year due to a drouth during the maturing season; however, with an increased acreage and more time to cultivate corn with a smaller tobacco crop this year, sufficient corn was produced to supply the farm needs.

A. Variety Test

Two corn variety tests were conducted this year, one by Richard Boyce, Wallace; and one by Jack Jennett, a 4-H club boy of Calypso. On each demonstration a uniform piece of land was selected and sixteen one-twentieth acre plots staked off. Each plot was planted to a different variety of corn. The fertilizer and cultivation practices were the same on all plots. When the corn was mature the corn was gathered and weighed, and recorded from each plot from Mr. Boyce's demonstration. Twenty-five pounds of corn in the shuck was weighed and shelled from each plot to determine the yield of shelled corn per acre from each plot. On page 34 is a table showing the varieties tested and yields of each variety from Mr. Boyce's demonstration. Jack Jennett is off at college and results have not yet been obtained from this demonstration.

B. Fertilizer Test

Robert Lanier, Kenansville, and Billie Register, Rose Hill, 4-H club boys, received a bag of nitrate of soda from Mr. A. G. Floyd, Director of the Chilean Nitrate Educational Bureau. Robert left one-tenth of an acre as a check plot and applied his soda to corn and checked the yields. Billie went a little further, leaving a check plot, then dividing the balance of his project and applying soda to these two plots at different stages of growth. The results of the demonstration is shown in a table on page 35.

(C-1) CORN VARIETY DEMONSTRATION, COASTAL PLAIN, NORTH CAROLINA
STATE COLLEGE DEPARTMENT OF AGRONOMY, RALEIGH, NORTH CAROLINA - 1940

Name Richard Boyce P. O. Wallace N. C. County Duplin
200 # 3-8-3
 Date Planted April 12, 1940 Fertilizer per Acre 175# Nitrate of Soda
 Date Harvested November 12, 1940 Soil Type Norfolk Sandy Loam

Variety	Pounds in Ear Corn ^{Shuck} per Plat	* Pounds Shelled Corn per Plat	Bushels Shelled Corn per Acre
1. Latham's Double	204	155.0	55.4
2. Biggs' Two-Ear	199	151.0	53.9
3. Highland Horsetooth	195	140.4	50.1
4. Cocks' Prolific	204	151.0	53.9
5. Boschen's Special	197	141.8	50.6
6. Latham's Yellow Cross	192	145.9	52.1
7. Golden Makequick	195	148.2	52.9
8. Local	193	142.8	51.0
9. Jarvis' Prolific	174	132.2	47.2
10. Indian Chief	166	126.2	45.1
11. Mallard's Yellow	171	126.6	45.2
12. Golden Prolific	181	141.2	50.4
13. Golden Dent	180	133.2	47.6
14. Cob Prolific	184	132.5	47.3
15. White Prolific	188	142.6	50.9
16. White Dent	170	125.8	44.9

1st row

252 ft.

64th row

136 ft.

*Pounds of shelled corn per plot was calculated by weighing and shelling out 25 pounds of corn in shuck per plot.

RESULTS OF 4-H CLUB BOYS SIDE-DRESSING DEMONSTRATIONS
WITH NITRATE OF SODA

NAME	ADDRESS	DATE PLANTED	SIZE OF PLOT	FERTILIZER TREATMENT	TIME AND RATE OF APPLICATION OF SODA PER ACRE	YIELD OF CORN IN BU. PER ACRE
Billie Register	Rose Hill	Apr. 26	1/10 acre	200 lbs. 4-8-4	No soda	12.4
			4/10 acre	200 lbs. 4-8-4	200 lbs. on May 30th	37.0
			5/10 acre	200 lbs. 4-8-4	200 lbs. on June 19th	43.6
Robert Lanier	Kenansville	?	1/10 acre	200 lbs. 4-8-4	No Soda	27.4
			9/10 acre	200 lbs. 4-8-4	200 lbs. when corn was 18 inches high	46.0

NOTE: The soda used was donated by Mr. A. G. Floyd, Director
Chilean Nitrate Educational Bureau.

VI. AGRICULTURAL ENGINEERING (a) Rural Electrification

In 1940 more progress has been made with Rural Electrification in this County than has been possible in the past. This has been possible as a result of the continued appropriations by the Congress of the United States to provide more rural families with electric current. With the two Rural Electrification projects already operating in this County, namely the four-county Electric Membership Corporation and the Jones-Onslow Electric Membership Corporation, they both found it possible to expand and extend their lines in this County. The extension of both of these Corporations amounted to sixty-six miles serving 162 farm families. Even with the expansion of these two R. E. A. projects serving the rural families in the Southwestern and Southeastern part of this County, we saw the need of such a project in other sections of the County, and with the aid of the Extension Agents in Wayne and Lenoir Counties we started to work last December on an organization of another R. E. A. project to serve many more farm families in the County and the adjoining counties of Wayne and Lenoir. Considerable interest by the farmers of these sections had been manifested from time to time in the possibility of obtaining electric current. So with the cooperation of the Extension Agents from Wayne and Lenoir counties and of Mr. J. J. Ausen of Washington, D. C., with the Examining Division of the Rural Electrification Adm., we held the first meeting of the farmers in these sections in Seven Springs of Wayne county about the middle of January, 1940. This location was the most centrally located place of the three counties. Mr. Ausen explained to the farmers present the purposed and possibilities of R.E.A. and how the rural families of this area could organize an Electric Membership corporation which would be able to secure funds from the Federal Gov. with which to construct rural power lines. These farm people had only dreamed of the possibility of ever getting electric power in their homes and on their farms, but after Mr. Ausen's explanation they could visualize the possibility of their being able to obtain electric current in their communities. They left this meeting with the determination that they would do all in their power possible to get such a membership organization started. Following this meeting, which was a joint meeting of farmers from the three counties, the Agents in this County held several community meetings in the County and explained this program to the people.

Immediately farmers in the various communities elected committees in each section to solicit membership for such an organization. These committee-men went to work in their various communities with more enthusiasm and determination to put this project across than we have ever seen evidenced by farmers in any one project. As the result of their untiring efforts each committee in the various communities in this and the two adjoining counties of Wayne and Lenoir, also with the proposed members, met again in Seven Springs in the month of March, 1940 with the purpose of organizing an electric membership corporation. In the meantime, Mr. Ausen had worked with the Agents in each of these counties and explained this program to the farmers and exploring the possibility of such an organization, and at this meeting at Seven Springs Mr. Ausen returned, and the committee in each County made a report of their work, and immediately Mr. Ausen recommended that they organize an electric membership corporation, electing directors from each section who would in turn elect an engineer and an attorney for such organization to carry out the engineering and legal work necessary in such an organization.

It was a privilege of this Agent to act as Chairman of that meeting, and I have never seen more loyal cooperation of farmers between each community in the three counties than was shown in this meeting. A record of the number of miles proposed in each County was reported to the Chairman from each of the counties. As soon as this was done, the farmers present elected directors on the basis of the proposed mileage and farm families concerned in each County. It was decided that a total of nine directors would be elected for this organization, with four coming from Duplin County, three from Wayne, and two from Lenoir. As stated previously, the number of directors from each county elected was according to the

mileage and proposed membership in each County.

In electing the directors for this organization there was not the slightest bit of selfishness on the part of the people in any one county with respect to their number of directors.

With the directors elected, the general meeting was adjourned, and immediately the directors elected an engineer for the project and an attorney. Within about ninety days of that date the engineer had a map plotted covering the entire territory to be covered by the proposed rural electrification project, and the attorney had the incorporation papers all legally signed and charter obtained. Following this, application was made to the rural Electrification Administration in Washington, D. C. for a loan with which to construct the proposed project.

About the first of August this loan was granted by the R. E. A., and as soon as this was done the directors immediately met and selected a project superintendent. At the present time all the contracts have been let for constructing such line, and the line is being constructed at this time. When completed, this original project will cover approximately 138 miles in this County, serving about 600 farm families.

With the proposed extensions that are being contemplated at the present time many more miles of line will probably be constructed, serving many more farm families. At the present time the farm families in the area to be served by this project are very much pleased and gratified over the prospects of being able to have electric power in their homes within the next sixty days. It's a life dream of theirs that has about come true at the present time - something that they had always dreamed and hoped for, but never expected to see come true.

(b) FARM DRAIN TILE

The importance of (the advantage of) farm drain tile (for drainage purposes) is continued to be emphasized by the Agents in this County, for a considerable part of this County consists of flat land that is necessary to be drained, and from the results obtained by the farmers (in the County) using farm drain tile it has proven to be a distinct advantage in many instances over the open ditch. We are encouraging the use of more farm drain tile each year. While less (farm drain tile) was used in 1940, due mainly to the low income of the farmers in the County in 1939, there is about the same interest (shown and) manifested by the farmers (in this flat section of the County) as has been shown in the past.

(To illustrate this point,) several farmers have already inquired this fall and winter at the County Agent's office as to where they can purchase this farm drain tile, and the price of it. One farmer has already placed an order for 4000 ft. of (this) tile. (This farmer) has been using some (tile) each year for the last few years, and is so well pleased with the results obtained that he is continuing to use some each year until he has most of his farm tile drained. Even though the cost of farm drain tile is a little high (and expensive for a farmer to use a whole lot of it at one time,) it has proven to be a cheaper (form of drainage) than the open ditch, where it is possible to use this form of drainage.

(Mr. I. J. Sandlin of Beulaville, who has used about 15,000 ft. of farm drain tile, says that if he were able at the present time that he would not have an open ditch on his farm, except where it was not to the best advantage to use farm drain tile. He also states that, in addition to the advantage of this form of drainage, that it has been less expensive to him than the open ditch. He states that the expense of cleaning out

the open ditches and shrubbing them each year amounts to a considerable sum, and year by year he intends to eliminate these open ditches by using tile, thereby ~~eliminating~~ ^{avoiding} this expense of cleaning out the ditches and shrubbing the ditchbanks, ^{of the same time} and also having the use of this land that is at the present time taken up by open ditches. (Mr. Sandlin is one of the most enthusiastic farmers in the County about using farm drain tile.)

Another farmer in the lower end of the County who is also enthusiastic about the advantages of farm drain tile is Mr. J. W. Horne of the Deep Bottom section of the County. The interest of Mr. Horne in using farm drain tile is evidenced by the fact that he has used between fifteen and twenty thousand feet of tile on his farm of about sixty-five acres. Mr. Horne estimates that he first tried using farm drain tile twenty-one years ago. Mr. Horne says that prior to the time that he started using this tile that he was using boxed tile made of boards, and in some instances used pine poles. He says that this form of drainage was fairly satisfactory, but did not last very long for the wood would soon rot out.

He said that he went to see a man in Rose Hill of this County who was at that time manufacturing concrete tile, and after talking to him and obtaining the price on this tile he and a neighbor of his bought a carload consisting of 5,000 feet - each one of them using one-half of this amount on their farms. Mr. Horne says that he has been very well pleased with the results obtained by using this tile, and soon became interested in clay tile and inquired from Mr. McLendon, who was at that time County Agent in this County, about using clay tile. He said that Mr. McLendon started ordering this tile for him and other farmers of his community, and up until the present time he continues to use some on his farm each year until he has his whole farm drained with this form of drainage. Mr. Horne states that

hardly a year passes without him using some tile on his farm.

Recently the County Agent asked Mr. Horne what he thought had been the value of him using tile for drainage purposes on his farm, and his reply was "It has just made my farm what it is".

The interest as illustrated shown by Mr. Horne is characteristic of most of the farmers who have used tile drainage in this County.

(c) Cooperative Dynamite Orders

Last year a good many farmers in the County, as reported in last year's report, requested the County Agent's office to assist them in obtaining cooperative orders of dynamite for stumping purposes. There were enough requests for dynamite that it was possible to make cooperative orders of dynamite, thereby saving the farmers practically half the cost of dynamite. This work was attempted because there was no one in the County handling dynamite.

This year requests were made along the same line, but after receiving only a few requests for this dynamite it was impossible to make a cooperative order. The same request was started to be made for such a shipment this year.

(d) Home Water Systems

More convenient and pure water for the home has been emphasized this year. One community at which Mr. H. E. Ellis, Extension Agricultural Engineer exhibited and discussed electric and simple hand water

systems was held in Albertson township. Twenty men and women attended this meeting and expressed their interest by saying they were going to install better water systems in their homes.

A method demonstration meeting was held on the farm of Mr. W. D. Rouse at Magnolia, at which Mr. Ellis was present and helped install a hydraulic ram. As a result, another ram was installed by John R. Croon in the same community.

Mr. Rouse is pumping water 700 hundred feet from an overflow well to his house, barn and poultry house. Mr. and Mrs. Rouse state that they would not take anything for their water system.

1. TERRACING

In the North and Eastern part of the County soil erosion is a problem on many of the farms, especially those bordering Northeast River, Goshen Swamp and other creeks. The farmers in these areas are realizing more and more each year the amount of fertility and soil that is lost. The County Agents have spent a considerable amount of time during the year discussing Soil Conservation with these farmers. Proper tillage, cropping systems, contour cultivation and terracing have been discussed.

As a result of this work, the Agents have surveyed and staked 36,750 feet of terraces in the County during this year on sixteen farms. Others have terraces as a result of these demonstrations. Most of these terraces were built with eight terracing drags built at home.

These farmers are well pleased with the results that they are getting from their terraces. Several have come to the office to report that their terraces are working fine. One has reported that his terraces broke at one place on a clay hill where he did not get them built large enough.

As we discuss terracing with farmers, we emphasize the importance of building wide and strong terraces, and that a field is in better condition without terraces unless they are built and maintained properly.

On the following page is a list of farmers directly assisted by staking their terraces.

FARMS TERRACED, 1940

<u>NAME</u>	<u>ADDRESS</u>	<u>FT. OF TERRACES BUILT</u>
W. L. Usher	Rose Hill, N. C.	1800
E. B. Hales	Warsaw, N. C.	1900
C. C. Ivey	Mt. Olive, N. C.	1800
W. L. Bostic	Magnolia, N. C.	2500
B. F. Outlaw	Seven Springs, N. C.	3900
Malcolm Malpass	Calypso, N. C.	2200
Lewis Outlaw	Seven Springs, N. C.	7000
Walter Bostic	Warsaw, N. C.	1200
O. W. Wood	Warsaw, N. C.	1250
Rodolph Simmons	Seven Springs, N. C.	5000
I. W. Jones	Mt. Olive, N. C.	450
W. D. Rouse	Magnolia, N. C.	300
Morris King	Mt. Olive, N. C.	2200
H. C. Rackley	Mt. Olive, N. C.	4400
L. F. Bird, Jr.	Magnolia, N. C.	500
E. W. Black	Mt. Olive, N. C.	600

TOTAL ---- 36,750

VII. GRADING, PACKING AND MARKETING OF STRAWBERRIES AND
OTHER TRUCK CROPS

The County Agent and Assistant Agent each year spend a great deal of time assisting the farmers with the grading and packing of their truck crops. The most time and effort has been spent with these farmers on the grading and packing of strawberries, not that we felt like it was more important than proper grading and packing of other truck crops such as beans, potatoes, etc., but due to the fact that it was evident that the strawberry farmers needed more help along this line of work, also because of the fact that strawberries are grown more extensively in this County than the other crops. This year the acreage of strawberries was between 2000 and 2500 acres. This acreage is gradually increasing because of the limited acreage of cotton and tobacco. However, this increase in acreage of strawberries is occurring among 98% of the farmers in the County who originally grew more strawberries, but during the years when tobacco sold for high prices reduced their strawberry acreage. We do not find the acreage of strawberries increasing among tobacco and cotton farmers to any extent. This County is the largest strawberry producing County in the State - in fact the Wallace strawberry market in the lower end of this County claims to be the largest strawberry market in the world.

The origin of the production of strawberries in this County dates back many years, and until the present day ranks as one of the County's most important cash crops. Many thousands of dollars worth of strawberries are sold by the farmers in this County each year. Since the beginning of the production of strawberries by the farmers in this section, there probably have been fewer years that growers have lost money on their crop than on any other cash crop that is produced in the County. There have been a good many years that growers have either made very little or broke even. This has been principally from poor quality crops, and keen competition from growers of other sections of the County.

With this being the background of the production of strawberries in this County, the present County Agent and Assistant Agent will attempt to briefly outline some of the work that was done to improve the grading and packaging of this all important crop during 1940.

For the past few years the Agricultural Agents of the County have been putting special emphasis on the grading and proper packing of strawberries, until the market has begun to recognize the efforts of the Agents as a real worthwhile work. This was far from true in the beginning of this work, for it was customary for buyers to pay for strawberries according to the quality of berries a man produced, his standing with the local brokers, and his ability to convince the buyer that he was so and so, and should receive more for his berries than his neighbor. But gradually with the emphasis being placed on quality instead of quantity, until growers are generally paid according to the quality of their berries instead of by the number of crates they have for sale.

The Federal-State market inspectors have been very instrumental in this change of system of buying strawberries. With the beginning of the 1940 season we held educational meetings in each strawberry section of the County on the importance of proper grading and packing of strawberries. For the first year, the Agents in the County were assisted in this by the appointment of a Marketing Specialist by the State office to assist the Agents in the truck growing counties of the State with the educational work of the marketing problems of truck growers. Heretofore the Agents have been assisted in this work only by the Extension Horticulturist, and naturally his time was limited in each County due to the fact that his

work was confined principally to the production end of truck crops. Consequently, he had very little time to spend on marketing work in each County. But with the appointment of Mr. H. W. Taylor as Extension Marketing Specialist, it was possible for Mr. Lewis Watson, Extension Horticulturist, and Mr. Taylor to work together on this work.

Mr. Watson and Mr. Taylor both assisted the Agents in this County with the educational meetings held in the various communities in which strawberries are produced.

Mr. Watson showed movies taken in Florida in packing houses and fields in which definite marketing recommendations were followed in grading and packing and in all lines of produce, and Mr. Taylor emphasized the importance of the necessity of proper grading and packing methods to be followed if we expected to cooperate with other strawberry producing sections of the County.

Mr. Joe Gurley, Assistant County Agent in Harnett County who had several years experience working with strawberry growers in other sections also assisted with some of the Educational meetings.

Following these educational meetings on grading and packing, Mr. Taylor, Extension Marketing Specialist, assisted the County Agent and Assistant County Agent in the field work with the individual growers, also with the buyers in assisting them with their marketing problems.

With so much emphasis being placed on this work, more interest was shown by the growers in trying to pack better quality berries, and they did a considerably better job than they have done before.

This year, the quality of berries produced was the best some of the oldest producers say that they ever produced since they have been growing

strawberries. The winter season preceding the picking season in the Spring seemed to have been ideal for the production of quality strawberries, and during the harvesting season the weather was again ideal for good quality berries.

So as a result of ideal seasons and the work of Extension Service workers, Federal-State Inspectors, with the cooperation of strawberry growers themselves, the market for strawberries this season was the best in the history of the strawberry industry in this County.

The value and the profit received by following the proper methods of grading and packing of strawberries can be seen by the results of two packing and grading demonstrations as illustrated on the following page.

RESULTS OF STRAWBERRY GRADING AND PACKING DEMONSTRATIONS

1940

NAME	ADDRESS	ACRES IN DEMON- STRATION	24 qt. CRATES PRODUCED PER ACRE	AVERAGE LOCAL MARKET PRICE PER CRATE	AVERAGE PRICE RECEIVED PER CRATE	NET RE- TURN PER CRATE ABOVE LOCAL MARKET AVERAGE	NET RETURN PER A. ABOVE LOCAL MKT. AV.	NET RETURN ABOVE LOCAL MARKET AVERAGE
J. E. JOHNSON	ROSE HILL,	7	186	\$3.49	\$4.65	\$1.16	\$215.76	\$1,510.32
B. G. TEACHEY	ROSE HILL	3	101	3.49	4.45	.96	96.96	290.88
AVERAGE PER DEMONSTRATION		5	143.5	\$3.49	\$4.65	\$1.06	\$156.36	\$900.60

VIII. FARM MANAGEMENT

During recent years farmers of this County are realizing more and more that farming is a business and not just a place for existence. With any business records are essential. During 1940 four farmers have undertaken to keep accurate farm records. E. J. Costin, Warsaw, E. B. Hales, Warsaw, Warren Bostic, Magnolia, and Edd Kornegay, Mt. Olive. These records are not complete and will not be until January 1st, but visits with these farmers indicate that complete records will be available January 1st or soon after.

One of these men, Mr. Costin, kept a farm record last year, 1939, a summary of which is found on page 51. Mr. Costin said he had no idea his total farm income was as large as it was until he kept his record and that his record had surprised him in many other ways.

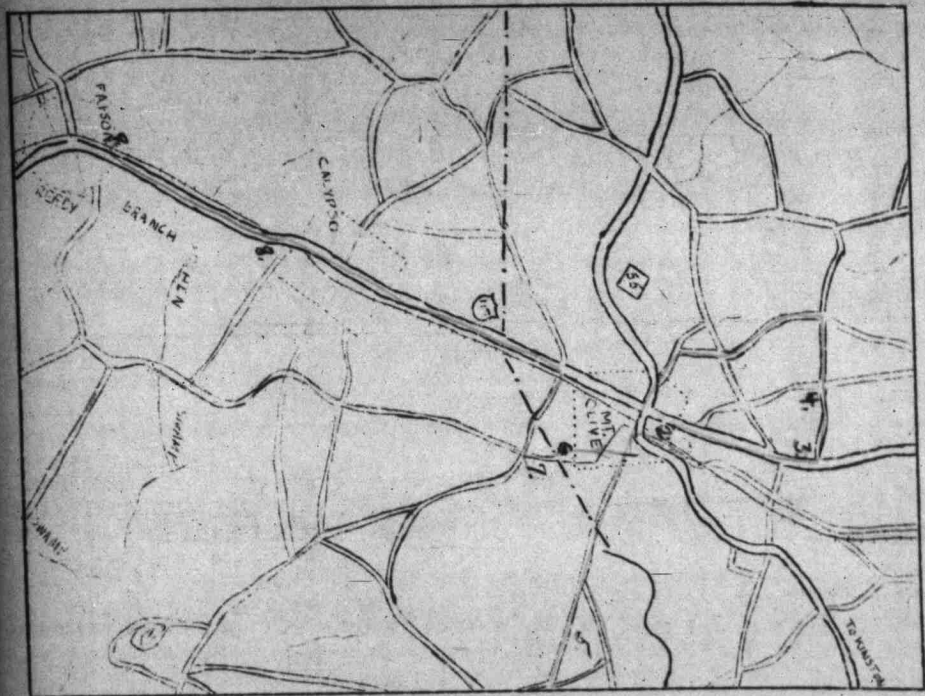
On December 4th a meeting of farmers and bankers from Sampson, Wayne, and Duplin county was held in Mt. Olive. The Bankers put on a barbecue supper. Approximately 110 people were present, including twenty-three farmers from Duplin County.

Mr. C. D. Thomas, Extension Farm Management Specialist, was present and discussed farm records with the group. Practically every farmer present indicated that they wanted to keep a record of their farming operations next year and received a book.

In the Spring a farm tour was organized and conducted jointly between Wayne and Duplin counties. This tour covered potato farms principally, and outline and map of this tour is shown on pages 52 & 53.

SUMMARY OF FARM RECORD OF B. J. COSTIN, WARSAW, N. C.
FROM JANUARY 1st TO DECEMBER 30th, 1939

Item		
Cash receipts	\$ 3844	
Net inventory increase		
Total farm receipts	\$ XXXXXXXXXXXXXXXX	\$ 3844
Cash expenses	\$ 908	
Cost of cropper labor	364	
Unpaid family labor	150	
Net inventory decrease	140	
Total farm expenses	\$ XXXXXXXXXXXXXXXX	\$ 1562
Farm income		\$ 2282
Average investment	\$ 8223	
Interest on investment (5%)		\$ 411
Labor income		\$ 1871
Farm Products used in the home	\$ 400	
Labor earnings		\$ 2271
Value of operator's labor	\$ 250	
Return on investment		\$ 2032
Percent return on investment		24.7
Productive animal units		13.6
Livestock returns per animal unit		\$ 38.97
Crop returns per acre		\$ 49.35
Cash receipts per dollar of cash expenses		\$ 4.25
Cash receipts per dollar invested		\$ 1.47
Acres of crops per head of workstock		22.7



TRUCK TOUR BY STOPS FOR WAYNE AND DUPLIN COUNTIES

Meet At Mount Olive Auction Shed 9:00 a.m.
Friday, May 31

Stop No. 1--9:00 a.m.--Mount Olive Auction Shed
Farmers of Wayne, Duplin, and adjoining counties sell approximately fifteen different kinds of truck and vegetable crops on this market. Purpose of stop is to observe conditions of produce appearing on the market.

Stop No. 2--9:17--Mount Olive Pickling Company
Observe pickle plant.

Stop No. 3--9:39--Mrs. T. M. Merritt's Farm, Willie Price, Farm Mgr.
This stop is for the purpose of studying potato and bean varieties.

Stop No. 4--9:56--B. E. Martin's, Landscaping
The tour does not adhere strictly to truck crops alone. The public will be interested in observing Mr. Martin's flower garden, which is one of the best planned gardens in the Mount Olive area.

Stop No. 5--10:33--L. P. Wells' Strawberry Demonstration
This farmer is one of the outstanding producers of Blakemore Strawberries, both for quality and yield. Mr. Wells not only produces quality strawberries, but by proper grading, packing, and labeling he receives the top prices paid for strawberries on the Mount Olive market.

Stop No. 6--10:55--Albritton Brothers' Farm
At the Albritton Brothers' Farm, you will observe the largest individual strawberry farm in North Carolina and how the work is conducted on this farm, as well as their large acreage of potatoes.

Stop No. 7--11:26--S. L. Warren's Farm
On Mr. Warren's Farm, we will study four different varieties of potatoes, fertilization and cultivation practices.

Stop No. 8--11:48--Herby Kornegay's Farm
The purpose of this stop is to study care and management of pecan orchards, with special emphasis on disease control. However, pecan production is only incidental on this farm. Here, we can observe skillful farm management. Mr. Kornegay is one of the most successful cotton and truck producers in Duplin County.

Stop No. 9--12:14--Cates' Pickling Company, Faison, N. C.
The last stop on the tour will be the Cates' Pickling Company where we will again observe the many processes carried on in the preparation of pickles for the market.

IX. PLANT PATHOLOGY

Assistance has been rendered to the farmers on plant disease problems by the Agents and Mr. Howard R. Garriss and Don Ellis, Plant Pathologist. The disease work conducted dealt with diseases of strawberries, tobacco, cotton, commercial vegetables, potatoes and others.

Four demonstration meetings were held on leaf spot and scorch diseases of strawberries. As a result, more farmers sprayed their berries this year than ever before.

One result demonstration was conducted by Mr. M. L. Lanier, Chinquapin, N. C. Mr. Lanier said "I expect to spray all of my berries every year from now on because I get more and much finer berries".

A county-wide meeting was held last Spring at which Mr. Garriss discussed tobacco diseases and their control. The Agents have been recommending rotations of crops to avoid diseases, especially with tobacco.

Potato diseases were discussed and examined on a farm tour last Spring at which time farmers of Duplin and Wayne counties visited five different farms and studied potato diseases and their control. On the Extension Potato train that spent a day in Mount Olive last Spring, many farmers of Duplin County visited the potato disease exhibit and discussed the diseases with the Extension Plant Pathologist.

Wilt resistant varieties of cotton were discussed at six cotton meetings at which about two hundred cotton farmers attended. One cotton variety test with Mr. Arthur Whitfield was valuable in emphasizing wilt resistant varieties for wilt infested soils for farmers of that community.

Disease free seed and crop rotations has been discussed to the commercial vegetable growers.

Four blue mold demonstrations were planned, using paradichlorobenzene fumigation. On the beds where the instructions were followed closely good results were obtained. These demonstrations were placed with Reid Fussell, Rose Hill; W. E. Jones, Beulaville, W. L. Bostic, Magnolia, and Lawton Whaley, Beulaville. Blue mold never appeared on Mr. Fussell's or Mr. Jones' bed until they had finished setting tobacco. Mr. Whaley's bed definitely responded to the treatment even though blue mold had been present about eight days when treatments were started. Results of Mr. Bostic's demonstration were very accurately kept, the date blue mold appeared, number, dates and rate of application of P. D. B. and the number of plants pulled from the check area of his bed as compared with the number of plants pulled from the treated area; also the dates the plants were pulled from each plot.

X. ANIMAL HUSBANDRY

1. Beef Cattle

With the decreased acreage of cash crops there is a gradual increased interest in producing more beef cattle. Several farmers are starting beef herds with a few native heifers and a beef type bull. These farmers are being advised by the Agents to make preparations by preparing pastures and producing plenty of home grown feed before they advance too far with increasing their herds. This is being done.

Approximately six or eight farmers have been assisted in purchasing beef type bulls. Farmers who have already started herds of beef cattle are, C. A. Ledford, Warsaw; W. R. Jennett, Calypso; James Faison, Faison; Deane Clifton, Faison; W. D. Rouse, Magnolia; E. S. Williams, Kenansville; Herman Taylor, Faison; Lewis Outlaw, Seven Springs.

Mr. C. A. Ledford, Warsaw, N. C. made an inventory of his beef cattle project at the beginning of the year, and at the close of the year and kept an account of the expenses and income. Part of his feed value had to be estimated. This herd is practically all pure bred animals. Five pure bred bull yearlings have been sold to farmers and club boys of the County from this herd.

A summary of Mr. Ledford's herd management demonstration is found on page 87.

SUMMARY OF BEEF CATTLE HERD MANAGEMENT DEMONSTRATION OF C. A. LEDFORD,

WARSAW, N. C. - 1940

Item	Income	Expenses	Inventory			
			Beginning of year		End of year	
			No.	Value	No.	Value
Cattle on Hand			16	\$1200.00		
Hay (200 bales)		\$140.00				
Cotton seed meal (2 tons)		60.00				
Corn (100 bu.)		60.00				
Pastures, Repairing, moving fences		60.00				
Veterinarian		20.00				
Disinfectant		10.00				
Cattle bought 22 (yearlings)		1100.00				
Cattle sold (5 yearlings)	250.00					
Lot manure (30 truck loads)	120.00					
Cattle on Hand						
Bull					1	\$ 150.00
Bull yearlings					3	150.00
Heifers					25	1650.00
Heifer calves					6	275.00
Calves					7	475.00
Total	\$370.00	\$1450.00	16	\$1200.00	42	2700.00

Income / inventory at end of year, - Expenses / inventory at beginning of year = \$420.00 labor income or increased valuation.

XI. ENTOMOLOGY

With the assistance of J. O. Rowell, Extension Entomologist, farmers were assisted with the control of insects of cotton, strawberries, tobacco and commercial vegetables. Six method meetings were held throughout the County last Spring on boll weevil control. As a result of these meetings, circular letters, and newspaper articles, many farmers throughout the cotton producing area of the County mopped their cotton with arsenic and molasses for boll weevil control. More farmers followed these recommendations this year than ever before.

Due to the fact that the boll weevil infestation was very light, practically none, little results were seen from the mopping. Farmers throughout the County reported the best yield of cotton that they have ever made.

The strawberry weevil was combated by dusting. More farmers are adopting this practice each year. The weevil is becoming a more serious problem each year and the farmers are realizing that something must be done to control him.

Insect tight tobacco plant beds are being introduced along with the blue mold fumigation. Both blue mold and insect can be controlled to a better advantage with the tight narrow bed which is recommended by the Extension Entomologist and Extension Plant Pathologist.

XII. 4-H CLUB WORK

4-H club work was conducted in seven communities of the County this year - the same communities in which there were organized clubs in 1939. Calypso, Faison, Wallace, Chinquapin, Beulaville, B. F. Grady and Kenansville are the schools in which active club work is being carried out. The geographic location of these clubs is shown on the Duplin County map on Page 4a.

There is one club in each community or school district except Wallace, in which there is a Junior and Senior club. This gives a total of eight clubs in the County. One-hundred and ninety-seven (197) boys and three-hundred and twenty-seven (327) girls, a total of five-hundred and twenty-four (524) members enrolled in the eight clubs.

More interest was shown by the club members in their club meeting and local activities than during the previous year. In most clubs the officers assume full responsibility for arrangement for meeting, announcing meeting, seeing that programs are prepared, etc.

COUNTY COUNCIL

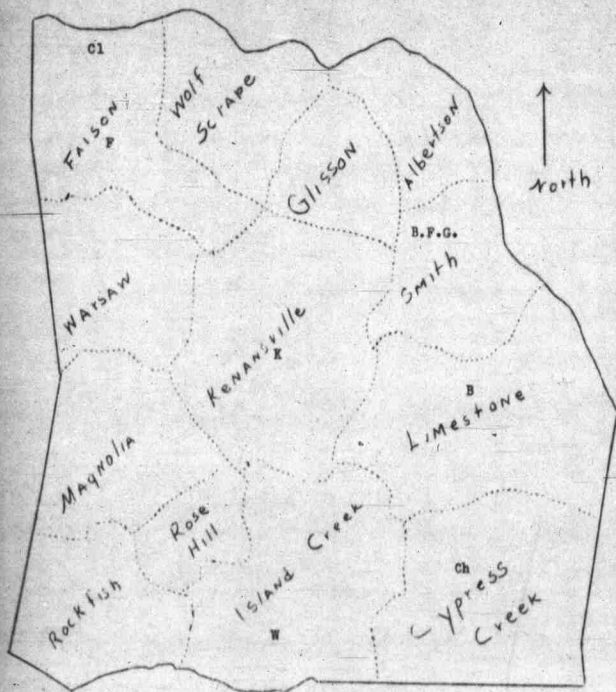
The Duplin County 4-H club council consists of the four local officers from each club in addition to the local leaders from each club. A meeting is held every two months unless business arises that requires additional meeting. Some of the activities of the County Council is to work out plans of work, goals, ways and means of accomplishing goals and decide on date, arrangements for County-wide activities, etc. The Council meeting serves as a clearing house for ideas. Members are enthusiastic in discussing how various club activities are carried on in their respective clubs.

ENCAMPMENT

During the last week in June 41 4-H members, 6 Adult leaders attended the Bladen County 4-H Club camp at White Lake. The Duplin group shared the

DUPLIN COUNTY

LOCATION OF 4-H CLUBS



Cl. - Calypso
F. - Faison
W. - Warsaw
Ch. - Chinquapin

B. - Beulaville
B.P.G. - B. P. Grady
K. - Kenansville

camp with about eighteen 4-H members and leaders from Columbus County. Very fine discipline was maintained considering a joint encampment. A definite daily camp schedule was worked out and followed. This, we feel, is at least partly responsible for the fine discipline.

Mr. "Wig" Waller, Camp Director, devoted one hour each day teaching the camper how to make home-made games. Practically every 4-H member who attended came home with from one to ten games which they were very proud of. Mr. Waller is an efficient camp director and wins the admiration of every club member attending the White Lake camp.

Mr. Lee who was borrowed from the Soil Conservation Program by the Extension Forestry Department, attended camp one day and taught the group tree identification and leaf printing.

FEDERATION DAY

On April 27th a County-wide Federation Program was held at the Kenansville School Building. The highlight of this program was the presence and inspiring talk by our State 4-H Club Leader, Mr. L. R. Harrill. Many of the club members have referred to Mr. Harrill's talk, especially about what Duplin County 4-H club members can accomplish if they will. I feel sure many of the members present at this program resolved to take Mr. Harrill's advice and do all they can to bring Duplin to the front in club work.

Mr. Dan Holler, who came down to this meeting with Mr. Harrill, also made some inspiring comments.

Each club put on a short program. The boys at this time of year did not have exhibits to display, but the girls exhibited dresses that they had made.

After the program a picnic lunch was spread on a table provided by the boys on the school grounds.

ACHIEVEMENT DAY

On Wednesday night, November 16th, approximately 225 4-H club members, parents and guests assembled in Kenansville at the School House for the annual Achievement Day Program. Short demonstrations and plays were presented by individual clubs. Reports of activities of local clubs were given, after which attendance counts were recorded. The B. F. Grady club won the four major club awards, the attendance banner, the award for presenting the best program for this Achievement Day, the best club exhibit award, and the award for having the best club in the County during this closing year.

Billie Register of the Kenansville club won the award for being the outstanding boy club member in the County. Franklin Quimm of the B. F. Grady club was declared the champion tobacco club member. Frank Cavanaugh of Chinquapin was the champion corn club member, and Billie Register the champion pig club member.

After the awards were presented by L. F. Weeks, Assistant County Agent, Mr. G. E. Jones, County Agent, introduced Mr. Jack Criswell who took the group, including young and old, to the gymnasium where he led them through an hour of recreation, including games, dances, marches and songs that everyone thoroughly enjoyed. He had sixty year old men playing with ten year old 4-H club members in the same games and marches. Many compliments have been paid Mr. Criswell for being a great recreational leader as a result of his presence at our Achievement Day Program.

In the gymnasium where the recreational program was conducted, Exhibit booths were built for each club to display what their individual members had done in the way of project activity during the year. Most of these booths were attractive, well arranged, and had a fine variety of project exhibits. This is a new feature of the Duplin County Achievement Program that many of the members look forward to showing what they have done during the year in project work. Since this County does not have an Agricultural Fair, we ex-

pect to see the exhibit phase of our Achievement Program grow year by year.

A copy of the Achievement Program is shown on Page 64, and a copy of the score card used in judging the County-wide activities is shown on Page 65.

SHORT COURSE

Three boys and three girls attended the State 4-H club Short Course at State College in July. Mr. Jones, County Agent accompanied these members to the Short Course. Each member returned with an inspiring report to their respective local clubs. At the present time, several clubs are working to earn money to send delegates to the Short Course next summer.

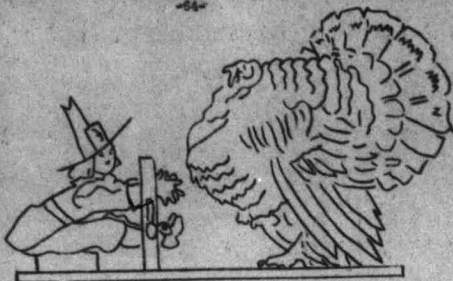
JUDGING TEAM

In October, a County-wide Livestock Judging contest was held in Kenansville. After the club members had studied livestock judging in their local club meeting and at home, they were all invited to participate in the County-wide contest. The five highest scoring boys were taken to the 4-H Livestock judging contest at the State Fair, and the three making the highest score in the County contest entered the State contest, representing Duplin County. The five highest scorers in order of their ranking are as follows: Billie Register, Kenansville club; Robert Lanier, Kenansville club; James Parker, B. F. Grady club; Paul Edward Dail, Kenansville club; and Ralph Parker, Calypso club.

The Duplin team did not win any awards in the State contest, but each member agreed that he had gained much valuable experience and training that would be valuable to him in the future.

PROJECTS

Completion of projects has been weaker than any other phase of the 4-H club program in Duplin County. The local leaders, local club officers,



ANNUAL 4-H ACHIEVEMENT PROGRAM OF DUPLIN COUNTY

KEMANSVILLE SCHOOL - NOVEMBER 20, 1940 - 7:30 P. M.

ROBERT LANIER, PRESIDENT OF 4-H COUNTY COUNCIL, PRESIDING

- Song - - - - - "Come Ye Thankful People Come"
- Invocation - - - - - Rev. Gustav Ulrich
Adult Leader of B. F. Grady 4-H Club
- Welcome - - - - - Wilma Quinn, President of Kemansville
4-H Club
- Roll Call and Special Feature by Clubs - - - - - B. F. Grady
Kemansville
Faison
Wallace
Chinquapin
Beulaville
Calypso
- Recognition of Guests - - - - - Mr. G. E. Jones,
County Agent
- Presentation of Awards and Banners, Mr. L. F. Weeks, Ass't. Co. Agent
- Announcements - - - - - Hattie Pearl Mallard,
Home Dem. Agent
- Song - - - - - 4-H Club Pledge
- Recreation in Gymnasium - - - - - Mr. Jack Criswell,
State Extension Leader In
Land Use Planning

"COME YE THANKFUL PEOPLE COME"

(1)
 Come, ye thankful people, come
 Raise the song of harvest home;
 All is safely gathered in,
 Ere the winter storms begin.
 God our Maker, doth provide,
 For our wants to be supplied;
 Come to God's own temple, come;
 Raise the song of harvest home.

(2)
 All the world is God's own field,
 Fruit unto His Praise to yield;
 Wheat and tares together sown,
 Unto Joy or sorrow grown,
 First the blade, and then the ear;
 Then the full corn shall appear,
 Lord of harvest, grant that we,
 Wholesome grain and pure may be.

Agents in charge of club work, and the individual club members have resolved to make 1941 the best year in recent years in 4-H projects as well as general activities.

On the following page is a summary of 4-H boys' projects for the year 1940.

4-H CLUB BOYS PROJECT SUMMARY

Project	No. Enrolled	No. completing	Percentage completed	*Scope of all Projects	Production	Value	Profit
Corn	64	34	53	41	1558 bu.	\$934.80	\$523.20
Cotton	3	2	67	2	4130 lbs.	147.55	32.70
Tobacco	12	9	75	9	10,170 "	2134.00	1320.40
Gardens	10	4	40	1.6	138 bu.	71.00	49.80
Pepper	1	1	100	1	80 "	51.00	29.10
Strawberries	1	1	100	1	90 crates	361.00	242.00
Wildlife Conservation	5	0	0	0	0	0	0
Poultry	34	16	47	640	1410 lbs.	239.70	76.60
Dairy Calves	4	3	75	3	3 head	105.00	42.35
Beef Calves	2	1	50	1	210 lbs.	23.00	7.50
Swine	71	31	44	47	10,400 "	624.10	114.10
TOTAL	197	102	52			\$4691.15	\$2438.35

SERVICE CLUB

A definite increase in interest of Service club work is evident in this County this year. It was organized in March, 1939, and the membership has increased from 37 at this time last year to 62 at the present time, with 26 boys and 36 girls.

Monthly meetings are held in Kenansville on the second Thursday night of each month. We have had an average attendance of about thirty-five members.

During the annual Older Youth Conference at State College in July our County President, Miss Violette Kornegay, was elected State President of the Service club. Miss Kornegay deserves much credit for growth of the Duplin county club. Her interest has been constant and untiring.

Twenty members spent the last week in August at White Lake on a house party. The group express themselves as having a splendid time during their week at the Lake.

As a group project, the Service club selected the lawn in front of the County Agriculture Building. A cover crop has been grown, the grounds fertilized, prepared, and seed to grass this Fall. Several members spent a full day working on this project. In addition to preparing and planting the lawn, the club has worked out the shrubbery and pruned it two times.

The climax of the years activities came on Friday night, November 15th, when the Duplin club was host to other clubs of the twelfth district at the annual banquet in Kenansville. One-hundred and six Service club members, and twenty-two guests were present from Columbus, New Hanover, Pender, Wayne and Duplin Counties. Mr. C. M. Briskhouse, District Farm Agent,

and Mr. O. P. Johnson, Superintendent of Duplin County Schools, made interesting talks which were enjoyed very much. Miss Kornegay, our State President, presided at the banquet.

The members, both boys and girls, furnished the food and prepared it for the banquet, then payed for their own plates. Therefore, they cleared \$34.60.

XIII. FORESTRY

With the cooperation of Mr. R. W. Graeber, Extension Forester, and Mr. W. J. Barker, Assistant Forester, we have been able to stimulate more interest in better forestry practices during this year. More farmers have reported thinning young pines than ever before. They realize the need for protection of their young timber as it is evident that the timber and wood supply is gradually being exhausted. The Agents are recommending thinning rather than clean cutting for pulpwood and tobacco barn wood.

A few farmers planted young trees during the year. Mr. H. B. Kornegay, Calypso, planted 5,000 young Cypress trees on ten acres of swamp land. Mr. Kornegay said that he did not expect to reap any benefit for planting these trees during his life time, but his boy would probably find them of great value to him during his life. Page 71 shows a summary of the results of two planting demonstrations. On page 72 is the results of a thinning demonstration conducted by Dewey Potts, Warsaw, N. C.

Four method meetings on timber thinning were held with approximately ninety present.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NORTH CAROLINA

EXTENSION SERVICE

REPORT 1940

FARM FOREST MANAGEMENT

DEMONSTRATION: Thinning Loblolly Pine

COUNTY: Duplin

COOPERATION: G. E. Jones, County Agent
L. F. Weeks, Ass't, County Agent

Owner of Timber: Dewey Potts, Route 1, Warsaw, N. C.

Soil Type: Norfolk sandy loam

Purpose of Demonstration: To show improved methods of growing and utilizing a timber crop.

Area in Demonstration Plots: .6 acre

Data on Demonstration: (Figures given on a per acre basis)

Age of timber - years - - - - -	18
Volume of wood cut - cords - - - - -	12
Number of trees after thinning - - - - -	380
Average D.B.H.* of standing trees - inches - - - - -	5.0
Average height of standing trees - feet - - - - -	33.6
Volume of trees standing - cords - - - - -	13.7
Total growth for 18 year period - cords - - - - -	29.7
Average yearly growth from seed to present - cords - - - - -	1.42

Mr. Potts Reports - Cost of harvest, 4 ft. lengths, 40¢ per cord. Value of wood at farm - \$2.00 per cord. Net value of stumpage cut \$1.60 per cord. Tax value of land - \$30.00 per acre. Tax rate (1939) \$1.65 per hundred. Annual tax per acre - 49¢.

The Harvest - 12 cords per acre - was sufficient to pay taxes (average of 1939 for life of timber (18 years) - \$8.91 - and leave a cash dividend of \$10.29 per acre.

The Standing Crop - 380 trees per acre, averaging 5 inches D.B.H. and a height of 33.6 feet, scale a total of 13.7 cords per acre. This added to the thinning harvest and calculated at the same value per cord after deducting cost of harvest and taxes, gives a net annual return of \$1.77 per acre, or 6 per cent on land valued at \$30.00 per acre.

Labor Income - from harvest - \$4.80 per acre.

IN SPITE OF HIGH TAXES - PINES PAY

*D.B.H. - Diameter Breast High.
Data collected and analyzed by
W. J. Barker, Assistant Extension
Forester

R. W. Graeber
Extension Forester

XIV. POULTRY

A few farmers have added or increased their farm flock during the year. Those with foresight realize the need of supplementing their farm income. Cotton and tobacco have been the principal cash crops in this County in the past. The acreage of these crops having necessarily been reduced, makes it important that additional sources of income be found. Realizing these facts, the County and Assistant County Agent have assisted farmers and 4-H members with culling, building houses, buying baby chicks, and offered advice on grazing crops, disease and parasite control, proper feeding, marketing, and other phases of poultry work.

Approximately thirty-five farmers are producing eggs from blood-tested flocks and selling them to hatcheries in Raleigh, Goldsboro, Clinton, Kinston, Faison and Wallace. A premium of about ten cents per dozen above local market price is paid for these eggs.

Three flock demonstrations were conducted this year by W. D. Rouse, Magnolia; J. H. Carr, Magnolia; and Durham Grady, Seven Springs. Considerable time has been spent with these demonstrators by the Agents, encouraging proper housing, sanitary houses and yards, proper feeding and general care of the flocks.

A summary of individual flock records is on the following page. On page 75 there is a summary of all flock records for the County.

SUMMARY OF INDIVIDUAL FLOCK RECORDS

Name	Address	Average No. Birds Kept During the Year	Total No. of eggs Produced During the Year	Av. No. of eggs Produced Per Bird	Tot. feed cost for the Year	Av. Price Received Per Dozen Eggs	Total Value of eggs Produced	Total Return Above Feed Cost	Total Return Above Feed Cost Per Bird For The Year
Mrs. W. D. Rouse	Magnolia	99	20,015	202	\$236.33	\$.205	\$542.62	\$106.29	\$1.07
J. H. Carr	Magnolia	221	38,319	173	366.20	.239	763.83	407.63	1.84
Durham Grady	Seven Springs	107	15,796	148	173.95	.276	363.99	190.04	1.77

Explos

Pounds Feed per bird		Pounds Grain and mash to produce doz. eggs	Highest price per doz. eggs	Lowest price per doz. eggs	Average sale price per doz. eggs	Value of eggs produced		Return Above Food Cost			
Grain	Mash					Total	Per farm	Per bird	Total	Per farm	Per bird
3.6	3.1	13.2	.305	.253	.260	31.10	25.55	.332	2.72	1.36	.087
2.8	4.0	8.6	.301	.272	.285	82.36	41.18	.277	31.36	15.68	.087
3.1	4.4	5.9	.280	.290	.263	113.58	56.79	.336	64.68	32.34	.192
4.2	4.0	7.2	.332	.200	.256	176.02	58.67	.293	83.62	27.87	.139
4.0	3.8	6.6	.342	.158	.289	203.21	67.73	.343	115.76	38.98	.196
4.7	4.2	5.2	.280	.180	.254	250.91	83.63	.432	151.66	50.55	.261
4.2	4.1	4.4	.260	.150	.228	134.62	67.31	.430	80.02	40.01	.256
3.3	4.1	5.1	.232	.162	.186	190.45	50.15	.273	64.25	21.42	.117
2.3	4.1	4.9	.180	.165	.170	97.39	32.46	.225	39.12	13.04	.081
2.4	3.8	7.2	.200	.180	.186	67.78	22.59	.161	7.70	2.57	.018
2.7	4.5	7.5	.230	.219	.225	62.07	31.03	.216	20.62	10.31	.072
3.0	4.6	6.9	.288	.274	.282	79.95	39.97	.307	41.45	20.72	.159
42.0	44.8	6.3			.277	1461.44	587.77	3.44	702.96	281.18	1.45

XV. SWINE

With the declining prices the number of hogs has naturally decreased in the County during this year. Realizing the importance of supplemental farm income the Agents have encouraged and recommended that the farmers grow ample feed on their farm for their hogs. Temporary pastures have been emphasized. Soybeans for green grazing during the Spring and early summer is gaining in popularity. Rye, Vetch, Rye grass and crimson clover was planted for winter grazing. Then several thousand acres of the old carpet grass pastures are still being used during the summer months.

With the increased acreage of soybeans, peanuts and corn along with the temporary pastures, a smaller amount of commercial hog has been used. With the exception of protein supplement and minerals very little commercial feed has been used.

Internal parasites is our major problem in producing thrifty hogs. We feel that the temporary pasture program is going to help solve this problem. We have recommended to practically every farmer that we have discussed hogs production with, the importance of placing his sows on clean grounds where hogs have not been for at least one year, to farrow. We also recommend that these clean lots or fields be cultivated and planted to a grazing crop before the sows are placed on them. Several farmers have reported that their pigs grow about twice as fast when they handle their sows this way. One farmer kept an accurate record on a sow and litter which was managed this way.

(See next page)

RESULTS OF W. M. BRINSON'S THRIFTY PIG DEMONSTRATION, 1940

Name	Address	No. Pigs Farrowed	Date Farrowed	Weight of Pigs at 8 wks. old	Average wt. of pigs at 8 weeks old
W. M. Brinson	Kenansville	7	Jan. 24	533 lbs.	47.6 lbs.

The marketing of hogs has fallen off in the County during the year on account of low prices. The Agents are still scheduling regular shipments of hogs through the Duplin-Sampson Livestock Marketing Association. Even though about eighteen cars of hogs were shipped during 1940, the farmers had the convenience of marketing hogs by cooperative shipments.

As a result of the low prices paid this Fall many farmers are killing and curing meat, and as a result most of the meat houses in the County will have an ample supply of meat to last during the coming year.

Seven outbreaks of cholera has been stopped by the Agents cooperating with the State Veterinarian, Dr. C. E. Cox, located at Burgaw. As soon as an outbreak was reported Dr. Cox was notified. Approximately 400 hogs were vaccinated by Dr. Cox with the Agents assisting in stamping out these outbreaks.

XVI. EXTENSION WORK WITH OTHER FEDERAL
AGENCIES

Ever since the beginning of the organization of the local unit of the Production Credit Association, Emergency Crop and Seed Loan, and the Farm Security Administration, the County Agent's office has closely cooperated in the activities of these organizations. In fact, it was due largely to the efforts of one of the former County Agents, Mr. L. L. McLendon, that this County has such well organized organizations in the County.

Now that each one of these governmental organizations has its own set up and has been organized long enough that the County Agent's office is only requested to assist in an advisory capacity.

The County Agent's office is little closer associated with the Farm Security Administration than any other of these government agencies.

The County Agent, Assistant County Agent, and Home Agent were called in to a conference with the County Farm Security Supervisors and District Supervisor. In this meeting each phase of work that the F. S. A. has to do was discussed and planned for the year. The Extension Agents were requested to make suggestions about this work and the place of work as adopted was signed by Farm Security Supervisors and approved by County Agent, a copy of which is in our files.

The County Agent's office is only too glad to cooperate with these Agencies in their work with farm families.

XVII. OUTLOOK AND RECOMMENDATIONS

(a) OUTLOOK

In October of this year the Agents met with the Specialists and the District Agent in Raleigh on a Program Planning Conference. At this conference each specialist discussed the different lines of work available and plans were made by the Agents at this conference for each line of work that was needed in their respective counties. In this County we tried to plan a program of Extension work which was needed to be done in the County, and we think it is a well balanced program for the coming year.

In July of this year tobacco farmers voted in a referendum by an overwhelming majority to limit their production to present allotments for a three-year period, at least for 1941 and the other two years for

a further reduction in allotments or an upward adjustment of allotments, as may be determined necessary by the Department of Agriculture and the conditions that exists at that time. Due to a large surplus of tobacco now on hand and the fact that the European countries are at war, thereby eliminating them from our market, it seems that the farmers made a very wise choice in deciding to limit their production for the next three years. This three-year program is the longest program farmers have yet voted for in connection with limiting their production of tobacco.

On December 7, 1940, the cotton growers voted for the same restrictions by an over-whelming majority for a period of one year. So with the Government subsidizing these two cash crops as a result of the tobacco and cotton farmers decision to limit their production, it seems possible that the farmers in producing these two crops are at least assured of a price which will cover the cost of production with a small margin of profit.

This year cotton and tobacco farmers both received a little higher prices for their crops as was the case in 1939. It is true that their total income from these crops is somewhat limited due to the conditions as mentioned above, but if this year, the year 1940, can be used as a measurement for what farmers can look forward to in the future, it is also true that their net income for their year's work will probably amount to more than it would with an unlimited production of these two crops. With very few exceptions this has been true in this County for 1940. Most all farmers producing these two crops have considerably more money left after paying their expenses for this year's crop than they had for producing the huge crop of tobacco in 1939.

We believe the outlook for our farmers producing these crops in this County is not only good as a result of the decisions they have made to limit their production, but is also promising because of the fact that through necessity the farmers will gradually learn to produce other crops on their farm, which in turn will leave them with more net profit at the end of the year than they would have by producing unlimited quantities of tobacco and cotton.

The effort of not only the Agricultural Extension Service, but also of every other Agricultural Agency in the South, is advocating a more diversified program of Agriculture for this section of the Country and they are not only advocating this, but they are showing more interest in trying to help to do something about it, as illustrated by the fact that the Southern Governors' Council has appointed committees in each State to head up such a program.

Committeemen for this work have already been appointed in this County and work has already started by these committeemen in an effort for us to better balance our system of agriculture. So with this thought in mind by most everyone connected with agriculture, it is our opinion that the year 1941 will be a year of continued progress by the farmers of our County.

(b) Recommendations

As for the recommendations for our work in this County, we are repeating the same recommendations as were made in last year's report.

The first recommendation of the Extension Department of Duplin County is the need of a 4-H Club Agent. This Agent should be able

devote his entire time to the boys and girls on the farms of Duplin County. At the present time the Assistant Agricultural Agent devotes part of his time to 4-H club work, and is doing a great piece of work in the time that he has to do this work.

The County Agricultural Agent will have to of necessity devote almost his entire time to the A. A. A. program during 1941 on account of the control program on both cotton and tobacco. This will put the burden of most of the Extension program on the Assistant County Agent.

Therefore, we do not believe that it will be possible to accomplish nearly as much with 4-H club work as if we had a 4-H club agent to devote his full time to club work.

The size of the County, the number of boys and girls on the farms of this County, together with the fact that we all realize from past experience that before any great change in our present system of Agriculture takes place, we will have to educate the farm girls and boys on the necessity of scientific agriculture. We think that our crop of boys and girls on the farms is about as important a crop as we have, therefore, should receive additional appropriations from both County and Federal governments for their training whenever additional funds are available.

We also recommend an addition to our Agricultural Building. At the present time we do not have space enough for all the people employed by the A. A. A. and the Extension Service. This County is strictly an Agricultural county; therefore, it is our desire to render a greater service to the farmers of the County at all times. Therefore, more adequate facilities for handling the farmers' work will aid us in rendering this service.