NORTH CAROLINA

CABARRUS COUNTY COUNTY AGENT ANNUAL REPORT 1937

FCL-25

1937

NARRATIVE REPORT

OF

R. D. GOODMAN, COUNTY AGENT

AND

J. E. WILSON, ASS'T. COUNTY AGENT

CABARRUS COUNTY

CONCORD, NORTH CAROLINA

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I. SUMMARY OF ACTIVITIES AND ACCOMPLISHMENTS

The major activities and accomplishments of the County Agent and Assistant County Agent for the year just ended, may be briefly summarized as follows:

General:

Days spent in active extension work	606.5
Farm visits made	1973
Different farms visited	450
Number of office calls relating to extension work	7830
News articles published	48
Number of different circular letters (not copies) prepared and sent out	52
Training meetings held for local leaders	6
Method demonstration meetings held	21
Meetings held at result demonstrations	16
Tours conducted	2
Achievement days held	1
Other meetings of Extension nature held or attended	49

Terracing Program:

Acres of land terraced	915
Linear feet of terraces built	322,011
Acres sub-soiled	70.5
Acres disked	148.5
Linear feet of farm road built	58,460

Poultry:

Brooder houses built	19
Brick brooders built	6
Laying houses built	21
Day-Old chicks purchased	10,700
Flocks culled	30
a. Hens culled	5,030
Birds vaccinated	6,000

Dairying:

Barns constructed	2
Silos built	5
Pure bred animals placed	48

Field Crops:

Value of seed sold	$25,000.00
Value of seed purchased	2,295.48

Interest in pure bred seed and livestock continues on the income. Farmers in all section s of the county are coming more and more to realize the importance of improved farming practices.

The 1936 Agricultural Conservation Program was completed with the cooperating farmers receiving $106,110.04 in diversion and soil building payments. Approximately 98 % of the 1246 farmers signing work sheets qualified for some payment, Under the 1937 Agri. Conservation Program, 254 additional farms filed worksheets, bringing the total from 1246 in 1936 to 1500. Of this number approximately 95% will qualify for some payment this year.

II. COUNTY PROGRAM OF WORK

1. Factors Considered:

The factors to be considered in determining a county extension program of work are the existing agricultural conditions in the county, such as types of farming, cropping systems used, soil types, and marketing methods.

In order to achieve the desired accomplishments, a combination of individual farm planning and group activities was deemed necessary. Where possible, work was done through group activities; however, due to widely varied conditions in the county, it was necessary to do considerable individual work in the nature of helping the individual farmer (1) to select his seeds and fertilizers to suit the soil types of his farm. (2) to produce sufficient food and feed crops to meet the needs of the farm , and to adjust his farm operations so as to distribute farm labor throughout the year. (3) to dispose of surplus and cash crops to better advantages.

2. Project activities and results:

Some of the major project activities conducted together with results achieved are given more fully on the pages that follow under the headings--

A. Agronomy

1. Cotton
2. Corn
3. Wheat
4. Oats
5. Barley
6. Korean Lespedeza
7. Kobe Lespedeza
8. Sericea Lespedeza
9. Alfalfa
10. Winter Cover Crops
11. Pastures

B. Horticulture

1. Tree Fruits
2. Home Gardens
3. Truck Crops
4. Home Ground Beautification

C. Animal Husbandry

1. Dairying
2. 4-H Guernsey Calf Club
3. Swine
4. Workstock

D. Poultry

1. Breed Improvement
2. Flock Records
3. Broiler Production
   a. 4-H Broiler Project
4. Disease and Parasite Control
5. Buildings and Equipment

E. Agricultural Engineering

1. Soil Conservation
2. Buildings
3. Machinery and Equipment
4. Rural Electrification

F. Agricultural Conservation Program

G. Farm Management

H. Forestry

I. Rodents

J. Marketing

K. Tours

AGRONOMY

Cotton

Cotton is and will probably always be our greatest cash crop, and it should be, provided we first see to increasing the fertility of the soil and grow sufficient food and feed crops for home needs. At present approximately 16,000 acres are being used for the production of cotton in Cabarrus county yielding annually from 8,000 to 10,000 bales, depending on weather conditions.

Through the gradual reduction of acreage grown to cotton in the county, the past several years, interest in improved seed has steadily increased. This is evidenced by the fact that for the 1937 crop more than 11,000 lbs. of Farm Relief #4 was purchased direct from the breeder and grown by several farmers in each of the townships in the county, which will produce a supply of good seed for 1938 seeding.

Of the different varieties of cotton used, Coker's Farm Relief has proven one of the best for this section. We began using this variety as soon as Strain #1 became available, and have kept up with it from year to year as the newer strains were offered for sale. The acreage devoted to this variety of cotton has continued to increase until at present, about 75% of all the cotton grown in the county is a strain of Farm Relief. It has proven its merit by yielding a bale or more per acre on a great many farms and giving an average gin turn-out above 40% and staple length of 1 1/16 inch.

The 55 farmers growing Farm Relief #4 this year, have been well pleased with the results received. They say it is the best variety of cotton they have ever grown, With the exception of three, all used seed direct from the breeder. The results from a few farms are given below as follows:

Mr. C. M. Miller, Concord, R#4, on 4 acres produced 7930 lbs. of seed cotton that turned out 3225 lbs. of lint, or 806 lbs. per acre. This cotton was planted on "black jack" land and fertilized with 250# per acre of a mixture of 4-12-8 plus additional potash. Total value of cotton and seed amounted to $86.61 per acre. Total cost of production including seed, fertilizer, labor, and ginning amounted to $40.25, leaving a net profit of $46.56 per acre.

Mr. W. M. Morrison, Harrisburg, R#1, on 11½ acres produced 17,891 lbs of seed cotton that turned out 8052 lbs of lint, or 700 lbs. per acre with an average turn-out of 45%. This cotton was planted on sandy loam soil and fertilized with 300 # of 3-12-6 per acre. To 4 acres of it, a side dressing mixture composed of 50# nitrate of soda, 100# acid phosphate, and 100# of Kanit was applied, which greatly increased the yield on this portion of his cotton acreage. This cotton was from seed that had been grown in the county one year.

Mr. J. W. Davis, Harrisburg, #1, on 6 acres of Farm Relief #4 produced 11,440 lbs. of seed cotton that turned out 4,788 lbs. of lint, or 798 lbs. per acre.

Mr. J. H. Sossamon, Concord, R#1, produced 3655 lbs. of seed cotton on 3 acres and it gave him 1555 lbs. of lint or 518 lbs. per acre.

Similar production figures were reported by other growers of this variety of cotton.

Two 4-H Club projects were planted to Farm Relief #4 cotton. Both used seed direct from the breeder, these were Earl Goodman, Concord, R#2, and W. Gipson Rumple, Concord, R#2. Earl Goodman planted 100 lbs. of seed on 3 acres which produced 3700 lbs. of seed cotton that turned out 1595 lbs. of lint, or 532 lbs. per acre. Cost of production including seed, fertilizer, labor, and ginning amounted to $27.35 per acre. Total value of lint cotton and seed amounted to $60.25 per acre, leaving a net profit of $32.40 per acre.

W. Gipson Rumple also planted 3 acres which produced 4,400 lbs. of seed cotton. This cotton has not yet been ginned.

In an effort to determine the more profitable variety of cotton for Cabarrus county two variety tests were conducted this year on the farms of Mr. F. A. Barnhardt, Concord, R#3, and Mr. J. W. Davis, Harrisburg, R#1. Corresponding results were obtained from both tests. Results from the test conducted on the Davis farm are given below. These varieties were planted on small plots of equal size and results computed on per acre basis as follows:

(For Results of Cotton Variety Test, see next page)

RESULTS OF COTTON VARIETY TEST CONDUCTED ON FARM OF MR. J. W. DAVIS, HARRISBURG, #1, DURING THE YEAR 1937

Variety	Yield Per Acre		Percent Gin Turn-Out	Staple Length	Price per Lb. Based on Nov. 10, 1937, Average of 7.88¢ for M. 7/8"	Value of Lint Cotton Produced Per Acre
	Seed Cotton	Lint Cotton				
Farm Relief #4	1610.8 lbs	644.3 lbs	40%	1 1/8"	10.13¢	$65.27
Farm Relief #5	1519.0 lbs	622.8 lbs	41%	1 1/8"	10.13¢	63.09
Farm Relief #3	1494.5 lbs	597.8 lbs	40%	1 1/8"	10.13¢	60.56
Coker 100	1391.4 lbs	528.7 lbs	38%	1 5/32"	10.63¢	56.20
Mexican Bigboll	1235.9 lbs	457.3 lbs	37%	1 1/16"	8.98¢	41.07
Clevewilt #7	1187.1 lbs	451.1 lbs	38%	1"	8.68¢	39.16
Addison's Prolific	1128.8 lbs	462.8 lbs	41%	7/8"	7.88¢	36.47
Cook's Improved	1059.1 lbs	391.9 lbs	37%	15/16"	8.30¢	32.53

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Accompanying picture shows Farm Tour group inspecting Cotton variety test on J. W. Davis Farm on September 3, 1937.

While one cannot draw definite conclusions from an one-year test, these results bear out past experiences with some of the varieties of cotton grown in Cabarrus county. It has been the satisfactory results obtained from Farm Relief that has made it so popular among the farmers from the time they began using Strain #1 and has caused them to turn to Strains #2, #3, and #4 as rapidly as they became available from the breeder. Of the 50 farmers using Farm Relief #4 direct from the breeder this year, 12 are having it certified, while all are keeping it separate and having roll dropped at time of ginning in order to keep their seed pure.

Demonstrations on treatment of cotton seed with 2% Ceresan were conducted on the farms of Mr. W. P. Harry, Harrisburg, R#1, and Mr. Paul Barnhardt, Concord, R#4. Very beneficial results were shown in both cases. At Mr. Barnhardt's a check showed 448 plants per 100 feet of row where seed were treated and only 410 plants where seed were not treated. A similar check was made at Mr. Harry's after the cotton was chopped and 104 plants per

100 feet of row were found where seed were treated against 80 plants where seed were not treated. The plants where seed were treated also showed more resistance to disease than where not treated. These demonstrations were sufficient proof that seed treating pays and many farmers plan to treat seed for planting their entire cotton crop next year.

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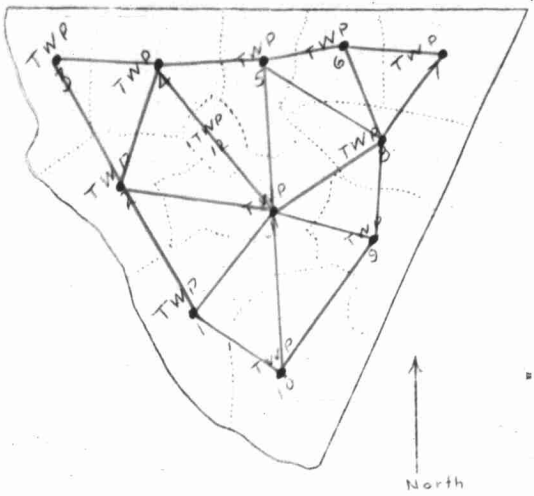
Red lines on map show distribution of Farm Relief #4 cotton direct from breeder grown in county this year.



CABARRUS COUNTY

Corn

The interest of the livestock farmers of the county is shifting more and more to the production of yellow corn. This is evidenced by the fact that 23 bushels of registered certified Jarvis Golden Prolific was ordered direct from the breeder in addition to large quantities that was sold by farmers in the county who got this corn direct from the breeder last year. Several farmers after growing this in comparison with white corn have become convinced that yellow corn yields as much on our soils as white corn, and, because of the higher feeding value, keeps their livestock in better condition. Several of the poultry farmers are now planting their entire corn acreage to some variety of yellow corn.

While the average corn yield of Cabarrus for 1936 was estimated at only 19 bushels per acre, some of the better corn growers produce much higher yields than this as some of the 1937 production figures indicate. Mr. W. A. Brown, Concord #1, produced approximately 2500 bushels of corn from 40 acres, or an average of 62½ bushels per acre on his entire corn crop. This corn was grown on a farm that was sold 5 years ago by the previous owner who had practically robbed the soil of its fertility by a continuous one-cropping system, namely growing cotton. When the farm was purchased by Mr. Brown it would not produce the county average of 19 bushels of corn. This increase in production has been brought about by proper rotation of crops, turning under legumes, and applications of stable manure.

Mr. W. M. Morrison, Harrisburg #1, has been endeavoring for some time to reach a production of 100 bushels of corn per acre, and has at last practically reached his goal. Based on checks from various parts of a 5 acre field of bottom land corn the average yield was 99.6 bushels per acre. Mr. Morrison states that this field would not produce 25 bushels per acre 10 years ago when he started growing corn on it. Since that time he has grown nothing but corn on it but has used a practice of planting the corn 4 ft. apart with soybeans in the rows, then broadcasting cowpeas over the middles at time of laying it by. He broadcast 100 # per acre of Kanit over it at time of plowing then used 300#per acre of 3-12-6 when seeding and side dressed with 100# per acre of nitrate of soda.

In order to determine the varieties of corn best suited to Cabarrus County conditions, a corn variety test was conducted on the farm of Mr. H. E. Bonds, Concord #1. While the yields of this test are low due to the severe drought in this section this summer, the comparative results are an indication of what might be expected under normal conditions. Seed for the variety test were supplied by the Agronomy Department, State College, and comparative results are as follows:

Variety	Yield per acre
Jarvis Golden Prolific	28.50 bu.
Southern Beauty	28.00 bu.
Biggs Two Ear	27.50 bu.
Hybrid #6	27.50 bu.
Latham's Double	27.50 bu.
Mosby's Prolific	27.25 bu.
Weekly's Improved	26.75 bu.
Douthit's Prolific	26.75 bu.
Cooke's Prolific	26.50 bu.
Wood's Dixie	26.25 bu.
Indian Chief	26.00 bu.
Goode's Golden	25.75 bu.

(This test was conducted on 1/20 acre plots and the yields are computed on the per acre basis.)

While we realize that no definite conclusions can be drawn from a one-year test, we feel that these figures give valuable information to our farmers and we plan to continue this testing of varieties as a means of keeping our farmers informed as to the leading varieties best adapted to our conditions.

Wheat

Before the seeding of lespedeza in combination with small grain became a common practice, the growing of wheat practiced by the few was done principally as a means of crop rotation, assuming that they were letting their land rest and at the same time producing bread for the farm family. Now with the common practice of growing lespedeza with small grain, the majority of the farmers in the county are finding it profitable to grow wheat for the farm bread supply, and some of them are using it as feed for livestock as well.

The 2.1 acre continuous small grain and lespedeza demonstration being conducted on the farm of Mr. P. M. Krimminger, Concord #1, this year praduced 62½ bushels of wheat, or 29.6 bushels per acre. This is the 10th successive crop of small grain to be grown in combination with lespedeza on this plot. In preparing the plot for 1936 fall seeding the Korean Lespedeza was plowed under. At time forseeding 400# of 4-8-4 was applied per acre, and it was later top dressed with 100# of soda per acre. This demonstration is being conducted in answer to the question, "How long can one continuously grow small grain and lespedeza?" and is recognized by U.S. Department of Agriculture as the longest on record where accurate production records have been kept. For complete record on this demonstration turn to page 20.

The wheat demonstration carried on by Mr. J. W. Cress, Concord #3, showed fine results. This 1.4 acre plot had been worked in cotton for a period of years and was again planted to cotton in 1936 but due to the long drought the stand was very poor so it was plowed up and planted in corn. The corn was late in maturing but was cut and hauled off the field in time for fall seeding of wheat. The field was thoroughly disked and seeded to Leaps wheat, applying 265# of 2-10-6 fertilizer per acre. At the time of harvest this field was threshed separately and was found to produce 65 bushels or an average of 46.4 bushels per acre.

Interest in better wheat for seeding continues to increase, while many farmers are turning to certified seed. Quite a few ordered certified seed wheat of the following varieties for 1937 fall seeding, V. P. I. 131, Penn. Fulcaster, and Leaps Prolific, and plan to grow certified seed for growers in the county for another year.

Oats

Since the introduction of the cold, smut-resistant varieties of oats a few years ago, the acreage devoted to this crop has steadily increased. It continues to be one of our leading feed crops for grain and hay despite the fact that for two successive years it has suffered from unfavorable weather conditions and insects. That part of the 1936 crop of oats that was seeded late in the fall of 1935 was damaged greatly due to the fact that it did not have sufficient root growth to withstand the heavy winter rains and severe freezes. Last fall the farmers tried to sow earlier in order to avoid this, with the result that due to the mild winter the early seeded oats was seriously damaged by plant lice, A striking illustration of this was observed on the farm of Mr. William P. Glass, Kannapolis, R#1. There were two fields about 100 yards apart, the one had been seeded the first of October, 1935 and the other, the latter part of November. The early seeded field, with the exception of a few spots, was sucked to death, while the later seeded field showed no indication of plant lice.

Similar effects of plant lice on the early seeded oats was observed throughout the county. Pictured here is a field at the Jackson Training School, Concord, R#1, where a fine stand of Oats came up, but was almost completely wiped out by plant lice as may be observed in the picture.

Coker's 33-47 forage type oats is appealing to the farmers of the county both from a forage and grain standpoint. It was brought into the county two years ago and has been found to run about 20% taller than the other oats we have been growing and the yield can be determined from the following demonstrations: Mr. H. E. Bonds, Concord, R#1, averaged 60 bushels per acre on 4 acres, while the Jackson Training School, Concord, R#1, averaged 54 bushels per acre on a 4½ acre field and 75.8 bushels per acre on a 3 acre field. The 3 acre field was an exceptionally fine demonstration. In 1933, this was an old field that was later cleared and used for growing garden crops as follows: Tomatoes in 1934, melons with peas in the middles in 1935, and Irish potatoes and snap beans in 1936. In the fall of 1936, it was seeded with 33-47 oats at the rate of 1½ bushels per acre with 250# of 5-10-5 fertilizer per acre. This spring it was top dressed with 100# of a mixture consisting of 2/3 nitrate of soda, and 1/3 potash. The Jackson Training School is interested in this type of oats as it meets their need by furnishing a quantity of straw as well as being heavy with grain. Pictured here may be seen the Jackson Training School harvesting this 3 acre field of Oats and the same field in shock, may be seen on the following page.

Jackson Training School 3 acre demonstration field of Coker 33-47 Oats.

Coker's Fulgrain 33-19 Oats that was brought into the county two years ago along with the 33-47 oats is, also, meeting with favor among the farmers of the county as demonstration results will show.

Cannondale Farm, Concord, R#1, managed by the Spencer Bros., produced 936 bushels (weighed) on a 21 acre field, or a little more than 44 bushels per acre. This was the second crop of small grain grown on this field within a period of 50 years. It had previously been planted to cotton alone. In preparing this field for the 1936 fall seeding the crop of lespedeza was allowed to ripen sufficiently for re-seeding then it was disked under along with approximately 4 tons of stable manure per acre. At the time of seeding, 200# of 4-12-4 fertilizer per acre was applied and it was later top dressed with 100# of soda per acre.

The Coker Fulgrain 33-19 Oat demonstration at Mr. C. H. Barrier's, Mt. Pleasant, R#1, consisting of 14 acres, produced 48.5 bushels per acre. On t is field wheat was grown in combination with lespedeza in 1936 but due to the long drought the lespedeza on it was vey poor. In preparing the field for oats in the fall of 1936, Mr. Barrier applied a ton of damp lime per acre then seeded 1½ bushels of oats with 300# of 0-10-6 fertilizer per acre.

This spring he top dressed it with 150# per acre of a mixture consisting of 3/4 nitrate of Soda and ¼ potash, leaving a check plot for demonstration purposes. At the time of harvesting there was cut from the field by hand a plot 6 feet square (36 sq.ft.) which weighed 5 lbs. 15 oz. From the check plot a similar area was also cut which weighed 2 lbs. 10 oz. On a per acre basis, this is 48.5 bushels where top dressed as compared with 22.5 where top dressing was not applied. The cost for top dressing was $2.50 per acre and figuring the 26 bushel increase at 50¢ per bushel the value of the increased yield was $13.00 per acre.

Picture shows Mr. Barrier with results from checks made.

Coker's 33-47 forage type oats and 33-19 Fulgrain, sister strains, promise to become the leading oats in the county.

Barley

In searching for a small grain early enough to be used in combination with Crimson Clover as a hay crop, a practically cold, smut-resistant, beardless, barley, developed by Morett Seed Farm, Westminster, S. C., was tried this year and found to meet the need. In addition to this, it was found to be equal to corn in production yields. Woodside Farm, Concord, R#2, purchased 2½ bushels of this variety of barley and seeded it on 1½ acres and produced 73 bushels, or an average of 48.6 bushels per acre. It was found to be practically free of smut, while on the farm of Mr. W. A. Brown, Concord, R#1, the Tennessee #6 barley seeded in combination with Crimson Clover for hay, in addition to being too late to mow, with the clover for hay, showed 20% smut by actual count and was badly mixed with bearded barley.

This new variety of barley attracted the attention of many farmers, and as a result of this a dozen or more have seeded it for another year. Three of whom ordered 5 bushels each direct from the breeder and expect to grow certified seed.

KOREAN LESPEDEZA

Cabarrus County has long been one of the leading counties growing Korean lespedeza as a soil building, hay and seed crop. A survey of the 1937 Compliance farms under the Agricultural Conservation Program shows that 85% or more of the small grain in the county was in combination with lespedeza, with a large acreage seeded alone. Aside from this many farmers use lespedeza every year to improve their permanent pastures.

The benefits derived from the excellent qualities of lespedeza as a soil building and soil conserving crop are not all that the farmers have realized from it, as it has become a major cash crop as well. This is evidenced by the fact that from the 1936 crop more than 450,000 pounds of seed were sold to buyers from outside of the county bringing the farmers an income of approximately $55,000.00 in cash. Due to the shortage of this crop in some sections and to the increased demand for legume seed as brought about by the Agricultural Conservation Program, the market for this seed opened earlier than usual and the majority of it moved in December or early in January.

Due to the fact that lespedeza is soil building and soil conserving, it fitted in perfectly with the Federal Agricultural Conservation Program. With it grown so widely in the county, a great many farmers were qualified to participate in the program without making any material change in farming practices. In the majority of cases, these farmers were already doing in part what the Government is now paying farmers to do to conserve the soil.

The heavy freeze on February 26, 1937, when the mercury dropped to 20° F. killed all the good stand of lespedeza then up, and many farmers who had plowed under lespedeza in the fall, expecting a reseeding of it were fearful of the results. However, after the weather warmed up, they realized that another stand was coming up. When the mercury again dropped to 18°F. on March 16 and killed the unprotected lespedeza, they felt certain the crop was gone. But with favorable weather conditions, the volunteer and reseeded lespedeza came back a fine stand, and with the exception of those sections of the county that suffered drought, a good crop of seed has been harvested again this year.

Two farmers in the county, namely, Mr. P. M. Krimminger, Concord, R#1, and Mr. H. E. Cline, Concord, R#3, are conducting demonstrations in answer to the question, "How long can one continously grow lespedeza in combination with small grain?" The demonstration on Mr. Krimminger's farm is recognized by the U. S. Department of Agriculture as the longest on record where accurate production records have been kept.

The following picture shows the County Farm Tour group inspecting the Krimminger demonstration on September 8, It was being disked following subsoiling in preparation for re-seeding to wheat.

The results from these demonstrations follow in repective order.

P. M. KRIMMINGER
CONTINUOUS SMALL GRAIN DEMONSTRATION
10 years Korean on same land
2.1 acre test plot

	Yield per A. Small Grain	Yield per A. Korean Seed	Per A. Preparation	Remarks
1928	Oats 67 2/3 bu.	1241 lbs.	1 ton lime 300# 8-4-4 200# slag 70# soda	Spring Oats Good oat year Seeded 16 2/3 lbs. Korean on Mar. 1st.
1929	Wheat 30 bu.	790 lbs.	1195# lime 300# 8-4-4 476# slag	Volunteer Korean
1930	Oats 45 bu.	810 lbs.	300# 9-2-4	Volunteer Korean
1931	Wheat 41½ bu.	1171 lbs.	300# 8-4-4	Seeded 20 lbs. Korean per Acre
1932	Wheat 21 bu.	Korean plowed under	200# 8-4-4	Heavy Freeze Volunteer Korean
1933	Wheat 27.9 bu.	Korean plowed under	300# 8-4-4	Poor stand Wheat Volunteer Korean
1934	Wheat 37 bu.	1195 lbs.	300# 8-4-4	Seeded 30 lbs. Korean per Acre
1935	Oats 60 bu. & 30 lbs.	Mowed for hay 3.37 tons per Acre	300# 12-4-4 100# soda	Seeded 25 lbs. Korean per ACre
1936	Wheat 26.6 bu.	Korean plowed under	300# 4-16-7	Heavy freeze Seeded 25 lbs. Korean per Acre
1937	Wheat 29.6 bu.	Korean subsoiled & Disked under	400# 4-8-4 100# soda	Heavy freeze Seeded 25 lbs. Korean per acre

Mr. P. M. Krimminger
Cabarrus County
Concord, N. C. R#4

R. D. Goodman,
Cabarrus County Agent
Concord, N. C.

December 9, 1937

H. E. CLINE
CONTINUOUS SMALL GRAIN DEMONSTRATION
7 years Koreas on same land
4 acre test plot

	Yield Per A. Small Grain	Yield Per A. Korean Seed	Per A. Preparation	Remarks
1931	Oats 25 bu.	675 lbs	200# 8-2-2	Seeded 27½ lbs Korean perAcre
1932	Wheat 19 bu.	700 lbs.	150 # 10-0-4	Seeded 25 lbs Korean per Acre
1933	Oats 31 bu.	700 lbs.		Volunteer Korean No fertilizer
1934	Oats 12½ bu.	500 lbs.	250# 0-10-4	Heavy freeze Wiped out oats Seeded 25 lbs. Korean perA.
1935	Wheat 16 bu.	650 lbs.	200# 0-10-4	Seeded 25 lbs. Korean per A.
1936	Oats 20 bu.	500 lbs.	200# 2-10-6 100# Phosphate	Seeded 25lbs.K.per A. Heavy freeze Lesp. killed by drought.
1937	Wheat 18 bu.	750 lbs.	250# 2-10-6	Heavy freeze Seeded 25 lbs. Korean per Acre

Mr. H. E. Cline
Cabarrus County
Concord, N. C. R#3

R. D. Goodman,
Cabarrus County Agent
Concord, N. C.

December 9, 1937

KOBE LESPEDEZA

Kobe lespedeza is being grown by quite a few farmers of the county chiefly as a hay crop.

Mr. J. F. Barringer, Gold Hill, R#2, harvested 13,500 pounds of cured hay from 4 acres of Kobe lespedeza this year, or an average of 1.7 tons per acre. Mr. Barringer is selling this hay at $18.00 per ton, realizing a return of $30.60 per acre from it, and says this is better than growing cotton in his section.

Woodside Farm, Concord, R#2, seeded 50# of Kobe per acre on 6.5 acres and harvested from it 19 loads of good hay estimated at approximately a ton per load. The field is pictured here as the lespedeza was being cut.

SERICEA LESPEDEZA

There are a few enthusiastic growers of Sericea in the county. Several of them harvest the seed but others use it solely as a hay crop and say their stock like it. It is also being used to prevent erosion and as a game protection plant.

Mr. S. P. Smith, Davidson, R#2, has been very successful in growing Sericea. He is substituting it for cotton as a money crop. This year he threshed 300 bushels from his 12 acres and expects to sell it at a fair price. Mr. Smith says Sericea makes a fine hay crop when cut at the proper time, and that practically no soil washes from a field where it is growing.

Alfalfa

Interest among the farmers of the county in the growing of Alfalfa continues to increase. Even though our soils in general are not suitable to growing alfalfa, yet the dairy farmers, realizing the value of this crop as a source of good hay, are selecting the soil on their farms most suitable and by heavy applications of lime, proper fertilization and thorough preparation of seed bed before sowing, are being able to grow it successfully. While the county average for 1937 cuttings of alfalfa was only about 2½ tons per acre, several of the growers, in sections where weather conditions were more favorable, realized yields better than 4 tons per acre.

Mr. W. L. Overcash, Kannapolis #1, averaged approximatley 4 tons per acre from his entire crop of 30 acres of Alfalfa this year. This was made possible by having a soil type well adapted to alfalfa, then giving it a heavy application of stable manure, lime and commercial fertilizer. Mr. Overcash follows a practice of cultivating his alfalfa following the first and last cuttings.

Seeding oats as a nurse crop with alfalfa was tried by Mr. J. L. Patterson, Concord, #3. He sowed practically a bushel of oats per acre on 3 acres with the idea of making of it a hay crop along with the alfalfa. However the oats made such a fine growth and crowded out the alfalfa to the extent that he decided to harvest the oats for seed instead. From the 3 acres he harvested 150 bushels of oats. The alfalfa had been so retarded due to the heavy growth of oats that the first cutting after harvesting oats yielded only a half ton per acre, and the second cutting a little more than a ton per acre. For sometime there has been doubt in our minds as to the advisability of using a nurse crop with alfalfa in this section. This demonstration bears out our belief that it is not a wise practice. Even though the crop of 80 bushels per acre of oats was harvested, the value of the first two cuttings of alfalfa were reduced more than the value of the oats. However the last cutting came along and made a little more than a ton per acre, but the stand is poor.

(See next page for illustration)

-2-

J. L. Patterson's oats and alfalfa mentioned on preceding page.

Along with the alfalfa acreage that has been gradually increasing in the county from year to year, 1430 # of choice alfalfa seed was ordered for 9 farmers for 1937 fall seeding. While some of this was used in reseeding old alfalfa acreage, the most of it was used for new seedings. The majority of these farmers applied from 2 to 4 tons of lime per acre before seeding.

Winter Cover Crops

This year we have seen a large increase in the acreage sown in winter cover crops in Cabarrus County. Figures at hand show that 16,790 lbs. of winter legumes have been sown on approximately 925 acres this fall. This consists of 8610 lbs. of Crimson Clover, 3420 lbs. of vetch and 4760 lbs. of Austrian Winter peas. This does not include many acres sown of which we have no accurate record.

Farmers over the county are showing considerably more interest in controlling erosion and in improving the fertility of their soils by the use of winter cover crops. Atpresent, most of the winter legumes are up to a good stand and if weather permits holding a stand, green vegetative growth will be seen growing on fields this winter that were formerly left bare and exposed to severe erosion during the winter months. Most of the winter legumes have been sown on land that is to be planted to corn or cotton next spring.

Evidence that turning under Crimson Clover for cotton is a profitable practice was shown on the farm of Mr. F. A. Barnhardt, Concord, R#3, this year. A two acre field was used in this demonstration, one-half being sown to Crimson Clover in the fall of 1936, and the other half being left bare. The Crimson Clover was disked under in the spring and the entire field plowed and planted to cotton. Based on actual weights of seed cotton produced, the Crimson Clover plot produced 28% more cotton than where no clover was turned under. In addition to this, the ground was in better physical condition and the cotton on the Crimson Clover plot suffered much less from the drought during the summer than the check plot.

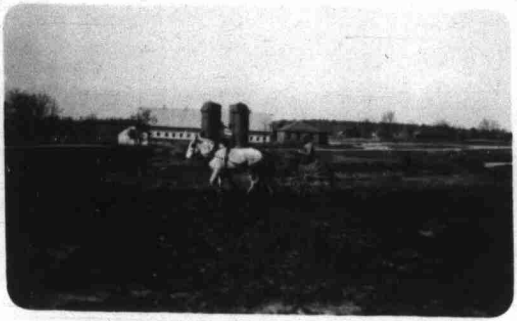
Pastures

Realizing that good pasture is one of the most important things in the economical production of livestock and livestock products, a movement was started in the early spring to increase the acreage devoted to improved pastures in the county. As a result of this movement, 61 acres of new permanent pasture were seeded and 136 acres of old permanent pasture were improved by re-seedings. In all cases the base of the mixture used for seeding was Kentucky Blue Grass and White Dutch Clover while some included Rye Grass, Alsike Clover, and Herds Grass.

Mr. F. R. Farnham, Dairy Extension Specialist, assisted us in several meetings held at result demonstrations and discussed the importance of a good permanent pasture on each farm. Four meetings were held in different sections of the county and were well attended, in spite of the bad weather. Mr. Farnham emphasized very strongly the need for pasture as a source of cheap feed and as a means of controlling erosion. He pointed out that Blue Grass and White Dutch Clover is one of the best pasture mixtures for this section, and that the requirements for growing this are plenty of stable manure, lime and acid phosphate. Mr. W. L. Overcash, Kannapolis, R#1, had a fine example of what Blue Grass will do when given a top dressing of manure. He top dressed part of his pasture with manure and seeded additional Blue Grass this spring, and reported that it made so much pasture he did not know he had other pasture.

The permanent pasture seeded last spring to Blue Grass and White Dutch Clover on the Green Hill Dairy farm, Mt. Pleasant, R#1, showed fine growth during the summer. Even though it was grazed pretty close, it came back nicely with good season. After holding the calves off for about 6 or 8 weeks they were put back on and kept there until the first of November and were furnished with plenty of grazing.

Mr. W. J. Flowe, Concord, R#4, is convinced that pasture grasses can be grown on his farm if they are given a chance. He manured well one acre of old permanent pasture last spring and seeded it to Blue Grass and White Dutch Clover. He fenced the cattle off this until it had time to get a start. Mr. Flowe was so well pleased with the results that he plans to seed additional acres in the near future. This will add much grazing for his small herd of pure bred Guernsey cattle.



The above picture shows an old permanent pasture of 40 acres at the Jackson Training School being prepared for re-seeding. The old Blue Grass sod was top dressed with stable manure, which was thrown roughly from wagons by the boys from the institution. In the picture you see this manure being evenly distributed by use of a tedder. The pasture was limed and acid phosphate applied then reseeded to Blue Grass and White Dutch Clover, using 5# of Blue Grass and 3# of Clover, to thicken up the old sod.

-2-

The following picture shows the same pasture mentioned on preceeding page being inspected by members of the County Farm Tour on September 3, after being heavily grazed throughout the summer by their large herd of Holsteins.

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Pictured here may be seen a herd of pure bred Guernsey heifers on Clear Springs Dairy farm grazing on a native pasture said to be 38 years old. This pasture consists mainly of volunteer Bermuda and Blue Grass. In order to increase the carrying capacity this pasture has been lightly disked and seeded with a mixture of Blue Grass and White Dutch Clover. A ton of lime per acre has been applied. This 45 acre pasture has been refenced this year with #9 American wire fence, 42 inches high with 2 barbed wire on top.

HORTICULTURE

Tree Fruits

Mr. J. P. Cox, Stanfield, R#2, is the largest commercial apple and peach grower in the county. His orchard consists of 10 acres of apples with 500 trees ranging in age from 1 year to 25 years, and 5 acres of peacheswith 450 trees. This season 100 of his oldest apple trees yielded approximately 1000 bushels of fruit. Altogether he produced 1500 bushels of No. 1 marketable apples. Mr. Cox found a ready market at his house not only for the No. 1 apples, but for the culls as well. The latter were used by his neighbors for vinegar and apple butter. His peach crop this year was good and the demand was much greater than the supply.

Mr. Cox has followed pruning and spraying practices recommended by the Extension Horticulturist and has received very satisfactory results as his fruit is practically free from disease and worms. The orchard was plowed in the winter and seeded to lespedeza early in the spring in order to conserve moisture and prevent erosion.

Apple Orchard J.P.Cox. 1937

Peach Orchard J.P.Cox. 1937

Mr. B. C. Dry, Gold Hill, R#2, had a fine crop of apples this year as a result of proper spraying. Mr. Dry had failed to spray for several years and a large per cent of his apples rotted and fell off before ripening. However, this year he has followed a regular spraying schedule and very few of the apples fell off and there was practically no rot in his orchard.

-3-

The young orchard consisting of approximately 1400 apple and peach trees planted in 1936 at the Jackson Training School, Concord, R#1, has made exceptionally good growth. Many of the branches have attained a growth of two feet. The lespedeza sod on it kept erosion down to a minimum during the heavy winter rains. This fall the alternate spaces between rows have been sowed to small grain while the other spaces have been disked and will be planted to row crops in the spring.

Young Orchard J.T. School, 1937

On the 11th., of February, Mr. H. R. Neiswonger, Extension Horticulturist was with us in the interest of home orchards. Pruning demonstrations were held on the farms of Mr. J. P. Cox, Stanfield, R#2, and Mr. D. W. Barringer, Gold Hill, R#2. In spite of the bad weather, 65 men and boys were present at these meetings. Mr. Neiswonger stressed the importance of proper pruning, spraying, and cultivation of the home orchard. He complimented Mr. Cox and Mr. Barringer on the fine condition of thier orchards.

Home Gardens

Farmers over the county are urged to plan and grow a year-round garden to produce sufficient food for table use. Several farm families do this and are able to gather vegetables from their gardens practically every month in the year.

The Jackson Training School, Concord #1, enjoyed a very good Christmas dinner (Dec. 1936) from their winter garden. They had Chinese cabbage, kale, rape and carrots fresh from the garden which added to the dried and stored vegetables supplied their needs. By making successive plantings they were able to get a stand of fall vegetables in spite of the dry weather, which many of the gardeners did not overcome in planting their fall gardens last year. They have an unusually good looking fall garden now, consisting chiefly of collards, kale, Chinese cabbage, lettuce, turnips and onions, and prospects are that they will again enjoy fresh vegetables from their own garden for their Christmas dinner.

Truck Crops

Twenty-three bushels of certified Porto Rico sweet potatoes were purchased for bedding this year by 3 growers in the county; namely, Mr. F. A. Barnhardt, Concord, R#3, Mr. M. L. Barnhardt, Concord, R#4, and Jackson Training School, Concord, R#1. From this beginning, we hope to have a supply of this improved strain for distribution in the county next year.

From 5 acres of potatoes this year, Mr. M. L. Barnhardt, Concord, R#4, produced approximately 1200 bushels. He stored 900 bushels in his potato curing house and will begin selling them as soon as the market opens up. From his 1936 crop, he sold wholesale an average of 50 bushels per week @ 75¢ per bushel before Christmas and increased that amount after Christmas until he sold his entire supply of 1300 bushels. He reported only about 3% loss in storage. He is finding sweet potato growing a profitable source of income.

Mr. M. L. Barnhardt has solved the problem of watering his sweet potato bed which ordinarily is a big task. Mr. Barnhardt plants several acres in sweet potatoes each year and this requires a large seed bed for producing the plants, and incidentally lots of water for sprouting the potatoes. He has a spring about 400 ft. from the beds and after checking the fall, we found that by building a small dam below the spring the water can be piped to the plant beds. This means that one man can now water the beds in an hour's time whereas before it required two men two hours with a team to haul the water needed.

Home Ground Beautification

As progress is made in the operations of the farm it is being reflected in the home and home grounds. This is evidenced by the number of farm homes that are starting to beautify their lawns.

Mrs. F. A. Barnhardt, Concord #3, made a fine start this year in a program of home ground beautification. Assistance was given her in mapping her grounds and getting the shrubbery ordered and set out. The summer was very dry but the shrubbery was protected with approximately 6 in. of straw mulch, and is in good condition. It adds much to the appearance of the farm home and plans are underway for additional plantings this winter.

Beautification of grounds has not stopped with the homes, but has spread to the churches. From year to year we find several of our rural churches putting on a grounds beautification program. This year we have three typical cases of the interest being manifested along this line.

Mt. Olivet Church, Concord #2, improved their grounds by clearing the undergrowth from their grove, leveling the uneven places on the grounds, working and pruning the shrubbery around the church building and putting a rod fence around the adjacent cemetery.

St. Stephen's Church, Gold Hill #2, started a ground beautification program by making a foundation planting of shrubbery around the church. This adds greatly to the attractiveness of the repainted modern rural church.

The Hahn Lutheran Church, Mt. Pleasant #1, was turned 90° in order to give it a more attractive approach from the highway. After being repainted a complete foundation shrubbery planting was made.

The effects of these church grounds beautification will be reflected in many homes in their respective communities.

ANIMAL HUSBANDRY

Dairying

Dairying is the leading livestock industry in the county with a total of 35 dairies producing graded whole milk, and a large number of others who supply cream routes and butter and buttermilk to regular customers. The principal dairy breeds are Guernsey, Jersey and Holstein. Interest in pure bred cattle continues to increase especially among the dairymen. During the year, 10 sires and 30 females, all purebred, were placed in the county. Of this number all were Guernseys except one Jersey sire.

Some of the outstanding Guernsey cattle in the State are to be found in Cabarrus county herds. Clear Springs Dairy, owned by Mr. A. L. Brown, Concord, Rt1, is recognized as one of the leading Guernsey herds in the south, and during the past year purchased 15 of the top animals sold in southern sales. At the N. C. State Guernsey Sale last year, Mr. Brown bought the top cow for $1,000, the highest price paid for an animal at public auction in North Carolina to that date. This year's State sale put two above that price with a third as close runner, namely, Gertie Rose consigned by Mr. M. F. Shore, sold for $1,600, Klondike Hope consigned by Mr. Thurmond Chatham, for $1,300, and Quail Roost's Maxim's Janet consigned by Mr. Geo. W. Hill, for $950. All three of these were purchased by Mr. Brown and are shown below along with three other outstanding animals in his herd.

GertieRose-Grace-QR.Jane-QR.Primrose-Inez-Klond.Hope- 1951

According to official record Klondike Japonica, of the Clear Springs herd, led all cows in the State which were on advanced registry test by producing 81.2 pounds of butterfat in October.

The Jackson Training School, Concord, R#1, is carrying on herd improvement work under the supervision of the Dairy Extension Division, State College. For the month of October, their 64 Holsteins marked up a record as the leading herd in milk production by producing 940 pounds of milk and 35.4 pounds of butterfat per cow.

Realizing that silage is the cheapest succulent feed for economical milk production, the dairymen have been encouraged to grow enough to feed throughout the year. As a result of this Quay Bros. Dairy, Harrisburg, R#1, and Green Hill Dairy, Mt. Pleasant, R#1, fed silage the entire year with some left over, while Clear Springs Dairy, Concord, R#1, and E. A. Morrison Dairy, Harrisburg, R#1, fed silage eleven months of the year. This is the second time that Green Hill Dairy has fed silage the year round with some left. The accompanying picture shows a group of farmers inspecting two-year old silage in perfect condition in their trench silo.

In an effort to feed silage the entire year, Woodside Farm after the corn silage was all fed out of the silo, ensiled six acres of wheat and oats with molasses on June 1, 1937. This fed twenty head of cattle all they would eat for a sixty day period. No change in the milk flow was noted upon changing from corn to grain sialge. This is the second test made of using small grain silage to supplement pasture and it has been found to be both successful and economical.

Realizing that disease control is one of the important factors in building any livestock program, Cabarrus joined the Federal T. B. eradication program in 1921. In 1935, the dairy herd Bangs eradication was started and when the government offered county area work, Cabarrus was the first county in the State to sign up for countywide eradication. Work was started July 1, 1937 with Dr. E. J. Martin as official tester. To date Dr. Martin has covered three-fourths of the county and tested 4,534 cattle of which number 105 have been condemned.

4-H GUERNSEY CALF CLUB

Cabarrus County 4-H Guernsey Calf Club - 1937

The 4-H Guernsey Calf Club with its 15 member, composed of 14 boys and 1 girl, held its annual competitive show on October 9, 1937. There were 16 calves entered in 6 classes; namely, Jr. Calf, Sr. Calf, Jr. Yearling, Sr. Yearling, 2-3 Year Old, and Aged Cow. All these calves were produced in Cabarrus county herds. This was the second show held in the county and a big improvement was seen in the quality and conditioning of the animals over last year.

Through the generosity and cooperation of the three local banks and the Cabarrus Creamery Company, $35.00 in cash was contributed for prizes. All entries in the show received awards as follows: first place, $3.00; second place, $2.00; and all other entries $1.00 each. Through the courtesy of Mr. W. A. Brown, owner of a local sales stable, we were privileged to use one of his large mule pens for housing the calves and his adjacent vacant lot for showing them. A large crowd of interested persons gathered for the show. Mr. G. H. Gartner, Manager of Clear Springs Dairy, acted as a judge. The leading calf was selected from each of the 6 classes, after which the 6 winning animals were shown for the selection of grand champion. The accompanying picture shows the 6 winning animals according to placement made at this time as follows:

Grand Champion-Sr. Calf owned by Ruth Goodman, Concord, R#2, followed by Sr. Yearling owned by Earl Goodman, Concord, R#2, Jr. Calf owned by James Culp, Gold Hill, R#2, Jr. Yearling owned by William Flowe, Concord, R#4, 2-3 Yr. Old owned by Jean Goodman, Concord, R#2, and Aged Cow owned by Osborne Flowe, Concord, R#4.

Sr. Calf | Sr. Yr. | Jr. Calf | Jr. Yr. | 2-3 Yr. | Aged Cow | County Winners 1939

The 6 winning animals together with 2 additional ones to make a group of 8 were taken to the State Fair where they made a very creditable showing in view of the fact that this was only the second year the Club had shown there. In group competition, the Cabarrus Club placed fourth in competition with Clubs from 10 counties.

In individual judging, calves from this group won the following places: Jr. Calf, owned by James Culp, fifth place; Sr. Calf, owned by Ruth Goodman, second place, with fourth place in open classes; Jr. Yearling, owned by William Flowe, fifth place; Sr. Yearling, owned by Earl Goodman, third place, with fourth place in open classes; Sr. Yearling, owned by Leo Barnhardt,

seventh place; Aged Cow, owned by Osborne Flowe, fourth place; Produce of Dam, owned by Ruth and Earl Goodman, third place; Produce of Dam, owned by William and Osborne Flowe, fifth place. Accompanying picture shows the Cabarrus county group as shown at the State Fair.

Another feature of the week at the State Fair was the 4-H Livestock judging contest. The Cabarrus team composed of Boyce Morrison, Everett Mesimer and Earl Goodman, ranked high in the contest. In competition with more than 60 boys, this team placed second in judging dairy cattle, second in beef cattle, and second in total team score for all classes of livestock. Boyce Morrison ranked third highest in individual scoring for the entire group in judging dairy cattle.

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The newspaper clipping shows the winnings of the Cabarrus team in the 4-H livestock judging contest at the State Fair.

The six highest teams in the sweepstakes were: Buncombe 606.5; Cabarrus, 579; Wayne, 564; Hyde, 537; Robeson, 533; and Lenoir, 532.4.

The highest scoring individuals in the contest were: Charlie Tomlin, Iredell County, 238.5; Eugene Creesman, Buncombe, 225.5; Horace Clark, Buncombe, 222; and Boyce Morrison, Cabarrus, 219.5.

In swine judging, the highest county teams were: Anson, 156; Wayne, 154; and Buncombe, 153.

Individual high scorers in swine judging were: John Dair, Jr., Lenoir County, 77; Elwood Cherry, 75.

In judging dairy cattle, high teams were: Buncombe, 263; Cabarrus, 253; and Haywood, 235.

Individual high scorers in beef cattle: Charlie Tomlin, Iredell, 94; Horace Clark, Buncombe, 92.5.

Eighty-three teams of three members each were entered in the livestock judging contest, one team from a county.

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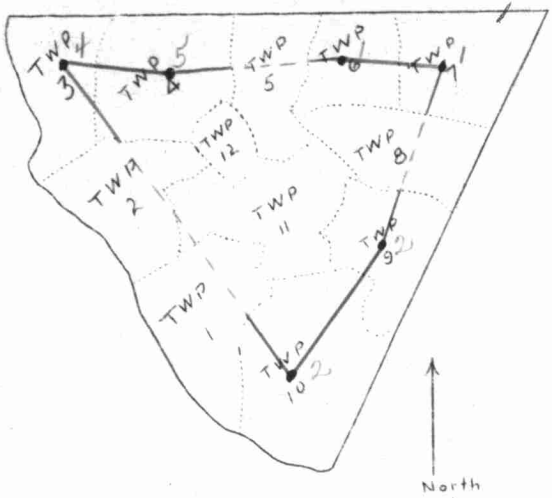
Red lines connect townships in which 4-H Calf Club members are located.



CABARRUS COUNTY

Swine

February 11, 1937 was "Pig School Day" in Cabarrus County. On this date Mr. H. W. Taylor, Extension Swine Specialist, State College, and Dr. A. A. Hussman, Veterinarian, Bureau of Animal Industry, were present and assisted us in a countywide "pig school". This meeting was held in Concord and attended by 225 interested farmers. Pictures were shown on feeding and general management of hogs, and disease and parasite control. These pictures were highly educational and caused many farmers to pay closer attention to these important matters on their farms. Many calls have been received for self-feeder plans and hog houses.

After seeing the pictures shown by Mr. Taylor, Mr. F. A. Barnhardt, Concord, R#3, decided to try this method of growing out pigs on his farm. An acre of clean ground was fenced off and sowed to soybeans and sudan grass in the spring. Before the sow furrowed, she was moved to this new pasture and the pigs grazed on these crops from the time they were 3 weeks of age until they were marketed. These pigs were weighed at 8 weeks of age and weighed 49½ lbs. each. They were weighed again at 17 weeks of age and averaged 178 lbs. each. These pigs were put on the market at 5 months of age averaging 150 lbs. dressed weight. The feed cost including grain, protein supplement and mineral mixture fed through self-feeder, was $10.07 each. The sale value amounted to $21.00 each, leaving a net profit of $10.93 each. Mr. Barnhardt said this was the finest lot of pigs he ever grew out and that he expects to raise all of his pigs by this method in the future.

Interest in pure bred swine is shown by the fact that breeders in the county are replacing grade hogs by purebreds. Three fine Poland China hogs were purchased this year, by Mr. F. A. Barnhardt, Concord, R#3, and Mr. J. C. Hurlocker, Mt. Pleasant, R#1. Mr. Barnhardt bought a male and a female, and Mr. Hurlocker a male from the herd of Mr. S. S. Mauney, Shelby, N. C. These animals came from outstanding blood lines, the males being sons of the Indiana State Champoin and Reserve Grand Champion of the National Poland China Show a few years ago.

Mr. R. O. Caldwell purchased a young Berkshire boar of fine breeding from Clemson College, S. C. to add to his herd.

In addition to these outstanding purchases, a number of pure bred sows have been sold in the county by breeders in the county.

Workstock

The high price of workstock the past several years has greatly stimulated the interest in the production of farm workstock at home. During the past year approximately 75 colts were foaled on Cabarrus county farms.

Mr. Zeb Barrier, Concord, R#4, has a nice pair of spring mule colts that he is growing out into a team for his farm.

Mr. J. W. Davis, Harrisburg, R#1, has two mares and is producing workstock for his farm. He now has a yearling mule and two spring colts possessing bone, size and quality equal to mules shipped to us from recognized livestock growing section.

Cannondale Farm, Concord, R#1, just recently purchased 4 3-year old Percheron mares, weighing approximately 1400 pounds each, from leading stockmen and plans to raise mule colts in connection with general farming.

POULTRY

Breed Improvement

A valuable source of income for the farm family is poultry, which, while not developed as a commercial enterprise in Cabarrus, yet serves as an economic and cash income source for many farms. It often provides cash for seasons when regular farm income is slacking. While it has only been within the past few years that poultry has been thought of as an important source of farm income, farmers in all sections of the county are now beginning to realize that a flock of well bred hens properly cared for will add materially to their annual income. Farmers who formerly thought of poultry as another necessary evil on the farm, can now be seen going to market each week with a basket of eggs.

The four leading breeds of poultry in the county are Rhode Island Reds, New Hampshire Reds, Barred Rocks, and White Leghorns. The heavy breeds are recommended for the farm size flocks, and the white leghorn breed for those inclined toward commercial egg productions. During the past year many mongrel flocks in the county have been replaced by these leading breeds.

Farmers of the county have shown more interest in purchasing good quality chicks this past spring than ever before. An effort on the part of the Extension Workers in the county was made in the early spring to make them realize the importance of buying only blood-tested chicks from a known reliable source. As a result of this effort, we placed orders for more than 10,000 blood-tested chicks for 35 poultrymen in the county. In addition to this several thousand chicks were hatched and sold by local hatcherymen. Many of these chicks came from some of the leading breeders over the country and with this stock as a nucleus we hope to develop some high producing flocks.

Proof that pure bred poultry pays is shown in the comparison of flock records kept by Mrs. E. L. Caubles, Mt. Pleasant #1, on a flock of pure bred hens and an average mongrel farm flock. These birds were given the same feed and attention and an accurate record kept of all expenses and receipts. At the end of the year a summary of these records show a return above feed cost of $1.52 per bird from the pure bred flock as compared with $0.36 per bird from the mongrel flock, or a difference of $1.16 in favor of the pure bred flock.

Flock Records

Realizing that no enterprise on the farm can be carried on successfully without keeping some form of record, poultrymen are urged to cooperate with the county and State Extension workers by keeping a demonstration flock record. As a result of this 13 poultrymen of the county kept demonstration flock records for the flock record year 1936-1937.

The yearly summary of the flock records kept by these 13 poultrymen shows that they made a total profit of $3779.33 for the year. This is an average profit of $284.16 per farm, or $1.68 per hen above feed cost. Several of these flock owners who are general farmers say that the profit from the poultry flock amounted to more than the total income from cotton on the farm.

The flock record summary showed that records were kept on an average total of 2258 hens. These hens consumed an average of 85# of feed and laid in return for this 175 eggs each. The average feed cost per dozen eggs was $.144 and the average selling price per dozen eggs was $.259. The total value of eggs produced on the 13 farms was $8537.78, leaving the above mentioned total return above feed cost of $3779.33.

Mr. W. E. Hahn, Mt. Pleasant #1, who started with a small flock of pure bred white leghorns 3 years ago has gradually built up this enterprise to the extent that it is now one of the major sources of income on his farm. The summary of his records for the past year show the following results:

Average number of birds for year	252
Eggs laid per bird	190.5
Total value of eggs produced	$986.37
Total feed cost	$427.10
Total return above feed cost	$558.43
Return above feed cost per bird	$2.22

When asked to what he attributed his success, Mr. Hahn replied, "Good chicks from a reliable source, proper housing, strict sanitation, balanced feeding and a feeding schedule are vital factors for success with poultry". Mr. Hahn also said that without keeping a record one could never realize the value of eggs produced by a few hundred hens in a year's time.

Mr. J. M. Jenkins, Stanfield # 2, is highly pleased with the results shown by his flock record summary. Even though this was his first year to keep a record he believed it a vital factor in successful poultry productions. His records for the year show:

Average number of birds for year	408
Eggs laid per bird	192.5
Total value of eggs produced	$1,645.20
Total feed cost	$778.21
Total return above feed cost	$866.99
Return above feed cost per bird	$2.12

Mr. Jenkins is a former school teacher and realizes the importance of close attention to details which is essential in the care of poultry.

Mrs. R. F. Kindley, Mt. Pleasant #1, who replaced a mongrel flock with pure bred white leghorns last year, found this to be a profitable move. A record kept on her flock last year shows the following results:

Average number of birds for year	193
Eggs laid per bird	186
Total value of eggs produced	$868.68
Total feed cost	$501.73
Total return above feed cost	$366.95
Return above feed cost per bird	$1.90

Mrs. Kindley realized this profit from her flock even though it was necessary to buy all the feed consumed by the flock. Shown here are Mrs. Kindley's flock of growing pullets, also her brooder house and 20' x 60' modern laying house.

Mr. H. J. Furr, Concord #4, has shown that it is possible to have a successful poultry flock without a large outlay of cash and without expensive equipment. Mr. Furr started his poultry enterprise in the spring of 1934 and has gradually increased each year, making the flock pay its own way all the time. His record for the past year is as follows:

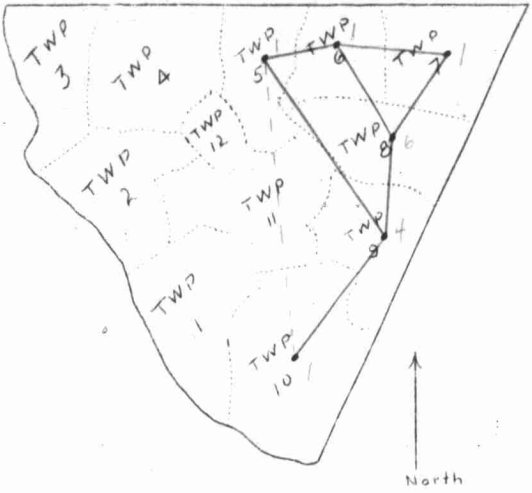
Average number of birds for year	227
Eggs laid per bird	212.9
Total value of eggs produced	$922.18
Total feed cost	$481.61
Total return above feed cost	$440.56
Return above feed cost per bird	$1.94

Even though Mr. Furr sold his eggs at wholesale prices he states that the profit from the 227 hens was more than the entire income from his 10 acres of cotton which produced nearly a bale per acre.

Records like these convince us that there is room for further expansion of the poultry enterprise in the county. Records have already been started on 18 poultry flocks for the coming year with a total of 4066 birds.

-4-

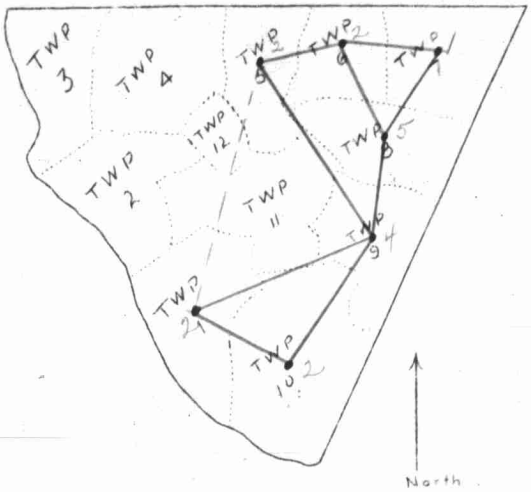
Red lines on map show where demonstration flock record work was conducted during the flock record year 1936-1937



CABARRUS COUNTY

-5-

Red lines on may show township in which demonstration flock record work is being conducted in flock record year 1937-1938.



CABARRUS COUNTY

Broiler Production

A few farmers have added broilers as an additional source of income to their farm enterprise. In most cases these are put in soon after Christmas and gotten out of the way before time to put in chicks for growing out layers.

Mr. F. A. Barnhardt, Concord, R#8, realized last spring what could be done by starting with strong healthy chicks and paying close attention to details of brooding. Mr. Barnhardt paid 15¢ each for 300 day old New Hampshire Red chicks from a noted breeder, and raised 305 out of the 306 received. At six weeks, he had broilers weighing 2 lbs. each, and at ten weeks the cockerels had been disposed of and his records showed the following:

131 broilers sold for.....	$ 75.37
174 pullets on hand valued at.....	130.50
Total broilers sold and pullets on hand..	205.87
Cost of production, including chicks, feed, and fuel.....	105.42
Profit above cost, or labor income.....	100.45

As a result of this fine record made by Mr. Barnhardt, he won second prize of $75.00 in the Nationwide Chick to Layer contest sponsored by Poultry Tribune, Mt. Morris, Illinois.

Broiler Project F.A. Barnhardt, 1937

4-H Broiler Project

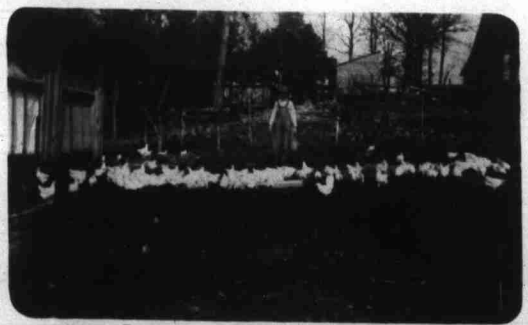
Three 4-H broiler projects were carried on in the county this year involving a total of 830 chicks. These were carried on by F. A. Barnhardt, Jr., Concord, R#3, Billie Jenkins, Stanfield, R#2, and Katrina Kindley, Mt. Pleasant, R#1. Their combined records show:

Total Chicks started	830
Total chicks raised to broiler size	763
Total cost of chicks	$ 68.20
Total feed cost	$165.84
Total fuel cost	$18.05
Other costs	$3.95
Total weight of chicks sold	1874.3lbs.
Total Profit	$144.83

The individual record of F. A. Barnhardt Jr. shows:

Number of chicks started	225
Number of broilers sold	219
Percent Mortality	2.6
Total feed cost	$43.85
Total fuel cost	$2.40
Total cost of brooding	$64.25
Total weight of chicks sold	490.3 lbs.
Total receipts	$120.15
Net Profit	$55.90
Profit per chick brooded	$0.252

This club member is planning to start a brood of chicks around Christmas this year and add a new brood every four weeks in order to have a continuous supply during the broiler season.



4-H. Broiler Project F.A. Barnhardt, Jr. 1937

Disease And Parasite Control

During the summer assistance was given to 17 farmers in vaccinating approximately 6,000 pullets for fowl-pox (sore head) and diptheria. Several flock owners had outbreaks of fowl-pox in their flocks last fall and were anxious to get their pullets vaccinated this year.

Mr. T. T. Brown, Extension Poultryman from State College, spent one day in the county assisting with demonstrations in vaccinating pullets for fowl-pox. Twenty-five interested farmers and farm women attended these meetings and took part in the discussions.

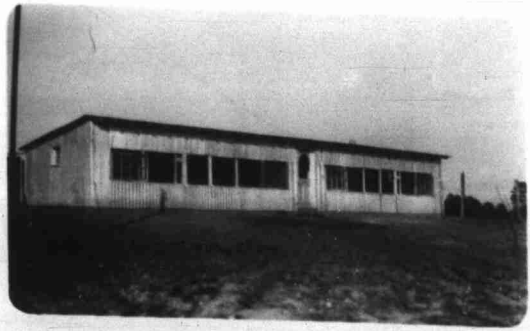
Some very interesting as well as valuable information in regard to chicken pox has been obtained this fall. Of the more than 6,000 birds that were vaccinated during the summer, not one has showed any signs of chicken pox. While there have been eight outbreaks of this dreaded disease already reported in flocks in the county that were not vaccinated.

Poultrymen over the county in general have adopted measures of controlling internal parasites, first by attempting to grow the pullets on clean ground, second by individual worm treatment of the pullets when they are 10 to 16 weeks of age.

Buildings and Equipment

Widespread interest has been aken by farmers throughout the county in proper housing both for brooding chicks and for the laying flock. At present modern shed-roof type poultry houses may be seen scattered through all sections of the county. During the year 19 modern brooder houses and 21 shed-roof type laying houses have been built. All of these houses are equipped with modern feeders and drinking fountains and several are equipped with running water and electric lights.

The following pictures show modern shed-roof type laying houses built during the year. The first picture shows a 20 ft. by 56 ft. laying house built by Mr. J. A. Burris, Concord, N. C. R#3. The foundation is of cement. It is weatherboarded with tongue and grooved boards and this is covered with corrugated metal making it air-tight on three sides. The roof is sheeted solid, covered with corrugated pasteboard for insulation, then with metal roofing. The wire front is of heavy highway fencing giving it protection against thievery. It contains two 20 ft. by 24 ft. sections with an 8-foot feed room between them. It is equipped with running water and electric lights, and was recently painted with aluminum paint, making it one of the most modern laying houses in the county.



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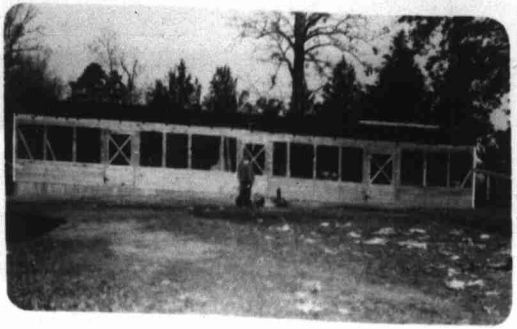
The house shown below built by H. B. Iley, Harrisburg, N. C. R#1, differs from the one above in that the three sides are covered with composition roofing instead of metal, with batting every two feet to hold it on, and the open front is covered with 1-inch poultry wire.



AGRICULTURAL ENGINEERING

Soil Conservation

Due to continued heavy rains the County Terracing Outfit was able to do no work from December 1, 1936, until February 15, 1937. Since that time work has been done by the outfit as follows:

Acres terraced	915
Linear ft. of terraces built	322,011
Hours spent terracing	650
Acres subsoiled	70.5
Hours spent subsoiling	89
Acres disked	148.5
Hours spent disking	99
Feet of Farm Road built	64,460
Hours spent farm road work	132
Hours other work (including ditching, pulling stumps, gully work, etc.)	654
Total Amount Charged For Work Done	$4,803.35

After the Terracing Outfit was forced to remain idle for several months due to excessive winter rains, we were very fortunate in getting a job of reclaiming land on a farm recently purchased by Mr. A. L. Brown, Concord, R#1, and began operation on February 15, 1937. The nature of this work permitted us to begin work several weeks before terracing could be done. This farm had been in the hands of tenants for a number of years and it had eroded to the extent that much of it was unfit for cultivation. One field of 10 acres was severely eroded, most of the top soil being washed away leaving numerous gullies to disfigure it. These gullies ranged in depth from a few feet to 15 feet, and were from 10 to 20 feet wide, while the largest was 30 feet wide at the widest place and 300 feet long. These gullies were scraped shut, then the farm was terraced (17,856 ft. of terraces being made), and the fields were subsoiled where needed. The fields that were most eroded can now be cultivated with any type of machinery. After thorough cultivation, these fields were planted in cowpeas and Mr. Brown says he expects to grow profitable crops on them after growing soil building crops for a few years. This job was done at a total cost of $708.81. It was the biggest reclaiming job we have done and Mr. R. O. Broaddus, Extension Agricultural Engineer from State College, said it was one of the biggest jobs undertaken by a terracing outfit in the State.

-2-

The first picture below shows the County Terracing Outfit at work on the large gully on this farm. The picture was taken after the small gullies had been filled and the banks of the large gully had been worked down until about two-thirds of the gully had been filled. The second picture shows the same field at a distance after the gully control job had been completed and the field had been subsoiled and terraced.

-3-

Another reclaiming job done by the Terracing Outfit was that done on the farm of Mrs. Agnes Barnhardt, Concord, Rt2, 20 acres of this had become so badly eroded that it had been abandoned as unfit for cultivation. The outfit spent 70 3/4 hours scraping the gullies shut, terracing, subsoiling and disking, leaving it in fine shape for the seeding of cowpeas. Mrs. Barnhardt plans to grow legume crops on it for several years before trying to grow crops for harvest on this.

On the farm of Mr. W. A. Brown, Concord, Rt1, a fine job of terracing was done by the county Outfit. Mr. Brown is a strong believer in soil building crops and soil erosion control. He has been growing lespedeza on his land for several years as a means of building the soil and at the same time, aids in controlling erosion. However some erosion was taking place on the steeper slopes. The Outfit was employed for two weeks in building terraces as a further aid in checking the damage from the rapid run-off of water, and in cutting ditches and making farm roads. Altogether 26,750 feet of terraces were built on 80 acres, 4,525 feet of ditches cut, and 2,360 feet of farm roads made. Picture shows a 40 acre field that was terraced.

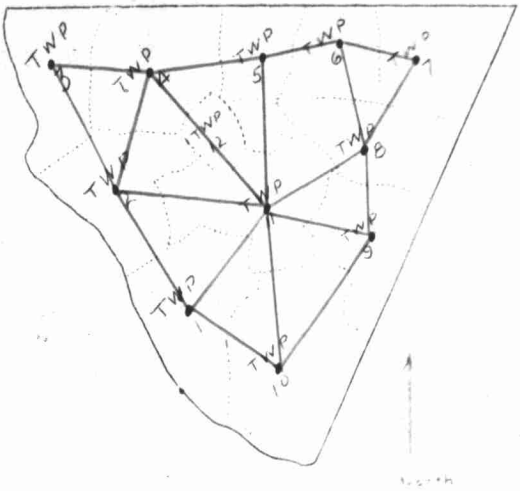
On the farm of Mr. F. O. Dry, Albemarle, N. C. (farm in #7 Township), 14,300 feet of terraces were made and several thousand feet of ditches were pulled. A very heavy rain fell just after the terraces were completed and Mr. Dry said he expected to find most of them washed away. However, the terraces were checked and much to his surprise, none of them had broken.

We are pleased to hear the farmers over the county express their satisfaction with the terraces built last summer and fall as well as those built this year. A check-up showed that very few terraces broke during the exceedingly heavy rains that fell during the winter months. Mr. C. R. Barrier, Mt. Pleasant, Rt1, stated that he was not sold on the idea of terraces when he had part of his farm terraced last fall, but since he has had an opportunity to see how terraces aid in controlling erosion, he would not want them plowed down at any price.

It is also gratifying to see the interest that farm people over the county are taking in checking the damange from soil erosion. Since the County Terracing Outfit began operations in April 1936, it has done work in every township of the county and has been in operation every day that the weather permitted since it started. Present indications based on requests for work are that the outfit will be kept busy throughout the coming year.

-5-

Red lines on map show that work was done by County Terracing Unit in every township in the county during the year 1937.



CABARRUS COUNTY

BUILDINGS

Clear Springs Dairy, Concord, N. C. R#1, built a 30-foot addition to their box stall cattle and hay barn which was already 138 feet long, making it a total length of 168 feet. This addition was made in order to take care of the rapidly increasing herd. They, also, installed an electric motor to their hay fork in order to speed up unloading and save labor.

In order to take care of the cows being placed on advanced registry test, Clear Springs Dairy has built during the year a modern brick test barn. This barn is 34 feet by 50 feet and built to accommodate 20 cows. It has concrete walkways connecting it with the cattle barn and the milk room. (Picture Below)

During the year 4 new upright silos and one trench silo have been constructed by the following dairymen:

Clear Springs Dairy	1 Hollow tile
P. A. Barrier	1 Octagon (wood)
R. E. Barrett	1 Octagon (wood)
R. E. Snyder	1 Stave
J. D. Suther	1 Trench

The dairymen of the county are realizing more and more the benefits to be derived from having an abundant supply of succulent silage for their cattle during winter months as well as for the dry summer months when the pastures are poor.

G. H. Cartner, Manager of Clear Springs Dairy, reported a noticeable drop in their milk supply this year when the silage gave out. The same report came from other dairymen who were feeding silages.

Several modern machine and tool sheds were constructed during the year, outstanding among these were those built at Jackson Training School, Concord, N. C. Rfd, and Commondale Farm, Concord, N. C. Rfd.

During the year increased interest in better care and management of the farm poultry flock was indicated by the construction of 19 modern brooder houses and 21 shed-roof type laying houses. For detail and illustrations of these, see Poultry division of this report.

Machinery And Equipment

Farmers throughout the county are showing increased interest in modern and more efficient farm machinery and equipment. They realize that with more efficient machinery and equipment, increased service can be rendered with less time and labor. Each year the number of farmers purchasing such machinery and equipment increases. This is evidenced by the following purchases this year:

Tractors	33
Disk Harrows	40
Reapers	20
Mowers	30
Drills	8
Combines	4

Accompanying picture shows Combine in operation harvesting oats on the Jackson Training School farm, Concord, R#1.

Rural Electrification

As the rural sections of the county become more thickly populated making the construction of power lines possible, interest in rural electrification has been greatly stimulated. The farmers are not satisfied with simply making progress in farming operations but are anxious to enjoy the comforts and conveniences afforded by the use of electricity in the home and on the farm. This desire for better living conditions has resulted in the construction of numerous power lines in the past few years.

Early in the year a check up meeting on rural electrification in the county was held at which time 31 miles of line was reported to have been completed in 1936 with several additional projects under consideration. Since that time, 4 projects have been completed with a total of 25 miles of line serving approximately 100 families. Several other projects that have been under consideration for some time are receiving renewed interest and we trust that they may be carried to completion during the coming year.

AGRICULTURAL CONSERVATION PROGRAM

The purpose of the 1936 & 1937 Agricultural Conservation Program was to conserve the soil, maintain a parity income for the farmers and to assure the consumers of the nation an ample supply of food.

Because of the fact that the County Agent of Cabarrus county and the progressive farmers of the county had realized the necessity of working toward these objectives, a beginning movement toward the gradual accomplishment of these objectives had been started some years before the National Government gave its cooperation. As a result of the work already done cooperation with the Soil Conservation Program was a matter of continuation and strengthening of a program already started in the county.

Due to the efforts of the County Agent, the majority of the farmers of the county had already changed from one-cropping system and begun to conserve the soil by means of legume crops, chiefly among them being Korean lespedeza.

With the 1936 Program late getting underway, the preparing of applications for payment was not completed until late in December and the delivery of checks was made in February and March of 1937. During this time 1976 checks amounting to $106,110.04 were delivered to individuals participating in the program. This was an average of $89.39 per farm, and an average of $53.70 per check.

The 1937 Program, similar in most respects to that of 1936, got underway on February 20th., with a meeting of the committeemen in the forenoon and amass meeting of the farmers in the afternoon. Mr. J. F. Criswell, in charge of the 1936 Program, was present and ably explained the changes made in the 1936 Program as carried over into 1937, chief of which was the setting up of conserving bases for farms.

Early in March, the various township committeemen together with the county committeemen were called into the County Agent's office for the purpose of adjusting old bases and setting up Soil-Conserving bases, for the farms intheir respective communities.

The month of May was set apart as time for accepting worksheets from farmers which had not participated in the 1936 Program. During this time 254 worksheets were signed bringing the County total to 1500.

During June and July much time was spent in explaining the requirements of the 1937 Program to the farmers and training

supervisors in the correct procedure for checking farms for compliance. Actual work of checking compliance began in August with twenty-four supervisors working. Fifteen hundred farms were visited and checked for participation in the 1937 program. This phase of the work was practically completed by October 15th.

Every effort was made to get the farmers to comply with the 1937 program in full in order to insure them maximum payments, and to bring their farms into a well balanced program of soil conservation and production of food and feed crops for the farm. An attempt was made to acquaint each farmer with the specific things necessary for him to do in order to participate fully in the Conservation Program. A statement was sent to each farmer in May setting forth the bases for his farm and what was needed for full participation. After his farm was checked for compliance, a statement was sent him showing various acreages found on the farm by the supervisor and pointing out any deficiencies in conserving acres or soil building practices that were found. As a result of these efforts, an analysis of data received from compliance forms shows that approximately 98% of the farms under worksheet will receive some payment, while the majority will receive maximum payments.

To date approximately 25% of the applications for payment have been signed and typed preparatory to being sent to the State office.

On November 12th., a district meeting, including Anson, Union, Stanly, Mecklenburg, and Cabarrus counties, was held in Concord for the purpose of explaining the 1938 Agricultural Conservation Program. Mr. W. A. Hodgers, from the State office, very ably presided at this meeting.

FARM MANAGEMENT

As the desire for higher standards of living increases among farmers they are giving more and more attention to farm management. In earlier days when cotton was about the only source of income on the farm very little attention was given to the problem of farm management. However with the low price of cotton, educational programs, and the additional sources of income for the farm, they are realizing that the farm must be operated as a business and set up on a year-round businesslike basis. This has brought about diversity of crops, crop rotations, addition of livestock so as to distribute the labor throughout the year, and a realization that keeping of farm records is necessary in the successful operation of their business.

The 19 farms that were mapped and had complete rotations worked out for them last year, completed their rotations and 16 of them kept accurate records of their farming operations and turned in a detailed farm account record at the end of the year. These were demonstration farms in cooperation with the Extension Service and the Tennessee Valley Authority. While a few of these farmers had kept simple farm records this was the first attempt for most of them in keeping a complete detailed record on their entire farm income and expenses. The table below gives a combined average of the 16 Cabarrus county cooperating farms as compared with the average for this area. This area is made up of cooperating farms in Anson, Union, Stanly, Montgomery, and Cabarrus counties.

Item	Combined Average	Area Average	Item	Combined Average	Area Average
Labor Income	834.43	577.22	Acres in farm	115.266	126.1
Total Cash Receipts	1986.70	1570.73	Acres in Cultivation	68.366	61.6
Cash Receipts Per Tillable Acre	30.11	25.50	Acres in Improved Pasture	15.566	13.3
Total Cash Expense	1337.44	1016.54	Crop Returns Per Tillable Acre	19.58	$13.50
Cash Expense Per Tillable Acre	20.73	16.50	Livestock Returns Per Animal Unit	79.33	$87.11
Average Investment	8937.56	7011.02	Number of Sources of Income	3.0	2.9

The analyses of these farm records bring out very clearly the importance of having several sources of income to the farm. In practically every case the farm showing a high labor income was one having at least 3 or more sources of income from enterprises distributing the labor throughout the year.

The record of Mr. H. E. Cline, Concord, R/3 is a typical example of what we mean by distribution of sources of income.

Cash Receipts			Cash Expenses		
Item	H. E. C. Farm	Area Average	Item	H. E. C. Farm	Area Average
Poultry and Eggs	$ 46.55	$209.08	Taxes and Insurance	$ 49.35	$ 50.77
Dairy Products	582.80	372.81	Hired Labor	65.00	156.84
Cattle	20.10	101.37	Fertilizer	205.55	157.99
Hogs	103.83	103.62	Other Crop Expense	52.75	34.56
Misc. Livestock		1.47	Feed Purchased	98.40	208.30
Cotton & Cottonseed	294.75	290.15	Livestock Purchased	15.00	72.37
Fruit and Truck		32.79	Other Livestock Expense	2.70	10.42
Small Grain and Corn	283.80	108.62	Machinery and Equipment	42.75	67.07
Clover, Lespedeza, Vetch & Alfalfa Hay	574.45	163.06	Building & Repairs	80.33	43.64
Misc. Farm Crops		37.56	Misc. Expense		24.65
Other Receipts		66.31	Auto, Truck & Tractor	41.50	189.93
Total Cash Receipts	1906.28	1570.73	Total Cash Expenses	653.33	1016.54

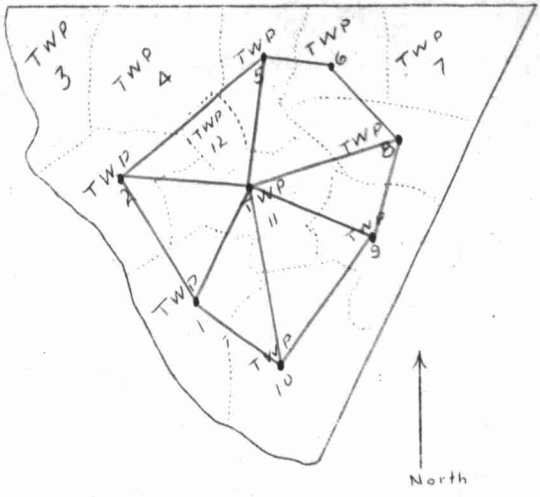
Receipts Less Expenses $1252.95 $554.19

These 16 farmers are carrying their record work on this year and working with them as examples, we are trying to encourage at least a simple form of record keeping by all farmers in the county.

In addition to the farm rotations already mentioned, the CCC Camp, located in Rowan County, has written agreements on 9 farms in Cabarrus this year and have worked out complete crop rotations for each of them. On these farms in addition to following crop rotations, contour tillage, strip cropping, reforestation, and timber stand improvement are being practiced.

-4-

Red lines on map show townships in which TVA demonstration farms are located.



CABARRUS COUNTY

FORESTRY

Farmers over the county are coming to think of their timber crop as an important source of income. They are being encouraged to improve this crop and preserve it for future generations, even though the crop of timber may not mean a large cash income it does provide a small income annually and at the same time is increasing in value. Aside from being a source of income, a crop of trees is one of the best ways to conserve the soil and utilize steep and gullied land that is otherwise unfit for cultivation.

A number of Timber Stand Improvement meetings were held during the year at which demonstrations in timber thinning were conducted. Mr. R. W. Graeber, Extension Forestor, State College, assisted with three of these. The first of these was conducted on the farm of F. P. Smith, Concord, N. C. R#4, where one tenth acre measured and thinned 1½ cords of wood, to the surprise of those present. The second was on the farm of L. B. Barrier, Mt. Pleasant, R#1, where the tenth acre of more mature trees, that were not very thick on the ground, thinned out cull trees to the amount of one cord. The third of these demonstrations was conducted on the A. F. Goodman farm, Concord, N. C. R#1, where the tenth acre consisting of thick pines about 20 years old, thinned out 1½ cords and left a stand thick enough for another thinning equal to this in about 5 years.

Another timber stand improvement meeting was held on the Bethpage Church grounds with a large group of farmers present. A thinning demonstration was conducted on 1½ acres of young volunteer pines that were so thick very little growth was being made. Another thinning of these pines will be made in the near future.

A timber stand improvement demonstration was conducted by Mr. C. R. Barrier, Mt. Pleasant, N. C. R#1, on one acre of more mature pines. These pines were possibly 35 or 40 years old but due to thick stand had not made normal growth. Cutting the undesirable trees resulted in 12 cords of wood which was sold at $3.50 a cord, or a total of $42.00. Labor, including cutting and placing wood on roadside, cost $7.00, and delivery 75¢ per cord making a total expense cost of $16.00, leaving anet profit of $26.00 the acre. The timber stand is in much better condition and approximately 600 trees were left on the acre. Mr. Barrier is planning further thinnings this year and expects to take out at least 5 or 6 cords more.

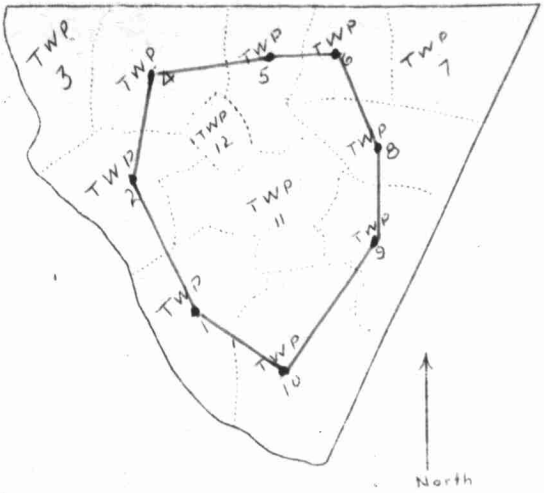
Timber stand improvement was done on 5 additional farms in Cabarrus by the CCC Camp, located in Rowan County, involving a total of 19.5 acres.

Considerable interest has been manifested in reforestation in the past year in that 46,337 tree seedlings have been planted on 7 different farms covering 98 acres. Of this number 29,000

loblolly pines were planted on the watershed surrounding Lake Concord. This 100 acre artificial lake affords Concord its water supply. This reforestation is being done as a means of checking erosion and preventing the gradual decrease of water area due to silting of soil from the hillsides.

Last year 53,690 loblolly and slash pine seedlings were used in reforesting the open land on the Boy Scout Camp site. These trees have shown practically no mortality this year and have made satisfactory growth. While the growth last year was from 6 inches to 11 inches, a recent check showed a growth of from 12 inches to 18 inches this year, and now high enough to be observed from the highway. Demonstrations of this sort are attracting the attention of farmers to the fact that nursery grown seedlings make more rapid growth than volunteer native seedlings.

Red lines connect township in which forestry demonstrations were conducted.



CABARRUS COUNTY.

RODENTS

Two organized campaigns on rat control were conducted this year, one at the Gibson Mill, Concord, N.H., and the other at Cannon Mills, Kannapolis.

On June 19th., sixteen pounds of Red Squill rat bait was put at the Gibson Mill according to instructions set forth by Mr. Geo. B. Lay, Rodent Control Leader, State College. Wharf rats had become very numerous about the mill and much damage was being done by them. Satisfactory results were received from this first bait and it was repeated on July 6th., or two weeks later. Good results were received from this.

While Cannon Mills, Kannapolis, were closed for holiday the week of July 10th., they decided to start a campaign against rats. Approximately 60 lbs. of Red Squill rat bait was put out on July 6th., and excellent results were received. No more poison was put out here until November when an additional 16 lbs. was used with good results.

A number of farmers have been assisted in exterminating rats from their farms. Red Squill rat bait has been used in the majority of cases and with good results.

MARKETING

1. Selling:

Assistance was rendered the Cabarrus Seed Growers Mutual Exchange, Inc., in marketing 103,000 pounds of Korean lespedeza seed, netting the farmers of the county $11,362.10 in cash. In addition to this amount sold through the Exchange, approximately 350,000 pounds more was handled by lespedeza buyers in and out of the county, part of which received assistance through the County Agent's office.

A quantity of wheat, oats, barley, peas, cotton seed, and other farm and field crops grown by farmers in the county were sold to other farmers in the county, the sales of which were made through the county extension office. The same is true regarding a number of livestock purchases within the county.

2. Buying:

Although the farmers in the county are producing each year a surplus of improved seed and offering it for sale, yet they continue to buy better seed and stock from reliable producers for use on their farms. The following purchases were made through our office this year:

	Amount	Cost
Alfalfa	830 lbs.	$228.10
White Dutch Clover	412 lbs.	129.00
Rye Grass	927 lbs.	79.45
Kentucky Blue Grass	1080 lbs.	122.75
Orchard Grass	100 lbs.	12.00
Red Top Grass	100 lbs.	12.80
Alsike Clover	116 lbs.	15.84
Millet	100 lbs.	7.00
Austrian Winter Peas	500 lbs.	24.25
Vetch	1000 lbs.	71.50
Cotton Seed	11,435 lbs.	1,067.59
Cane	100 lbs.	7.00
Wheat	87 bu.	156.00
Oats	3 bu.	15.00
Corn	28 bu.	69.39
Barley	17 bu.	39.40
Rye	29 bu.	44.90
Soybeans	47 bu.	191.50
Pecan Trees	44	35.89
Undried Limestone	253 tons.	265.25
Day-Old Chicks	10,700	1,284.00

Much time and consideration was given by the Extension workers in the selection and purchase of pure bred livestock that was brought into the county this year by a number of leading dairymen.

TOURS

The Cabarrus County Educational Farm Tour was made Friday, September 3, at which time 75 interested farmers visited various farms and observed some of the leading farm enterprises and better farming practices being carried on throughout the county as a few highlights of the trip mentioned here will show.

The first stop was made at the Jackson Training School where the party looked over permanent pasture on which additional Blue Grass seed was sown on old sod in the spring then top-dressed with manure with the result that it has furnished exceptionally good grazing for their large herd of Holsteins this season. (See picture under Pasture, page 30) A modern poultry range shelter that is being satisfactorily used in the rearing of pullets was observed with interest. Also of much interest here was their young orchard of approximately 1200 trees, apples and peaches, planted in 1936. The apple trees were set 40 feet square with a full row of peaches between, leaving the trees of the orchard standing 20 feet square. Every other land between the trees is cultivated to row crop during the summer in order to promote the growth of the trees, while the alternate land is seeded to lespedeza for the growing of more humus and preventing erosion. The entire orchard is disced in the fall and seeded to small grain for hay and as an aid in the prevention of winter erosion.

J. T. School [illegible] Orchard 1937

The next stop was at Clear Springs Dairy where 10 acres of waste land was reclaimed this summer through leveling, terracing, subsoiling, top-dressing with manure and seeding to peas. Here the group also saw 10 acres of cropland being converted into pasture. It was seeded last fall with a mixture of permanent grasses to which was added this spring alsike and White Dutch Clover and lespedeza then top-dressed with manure and has furnished excellent grazing for 25 or 30 milk cows throughout the entire summer. Five safety bull pens were inspected. The fences of two of which are built of plank while three are of pipe. Through the use of bull pens one is enabled to safely keep a bull as long as he is useful. Of much interest was the modern dairy plant showing the cows being washed, then passing on into a 3-unit milking parlor where they are milked, and the milk is weighed, recorded and bottled without coming in contact with the air or human hands. Three types of silos were observed; namely, trench, metal and hollow tile.

From Clear Springs Dairy the party drove to Harrisburg through the least rolling section of the county, the "Black Jack" section where large fields of cotton, corn and lespedeza are common. Arriving at the J. W. Davis farm at Harrisburg, Jarvis corn was observed growing thick enough for silage and well eared. Here the party was toured through a large lespedeza field to a pasture where farm workstock was inspected.

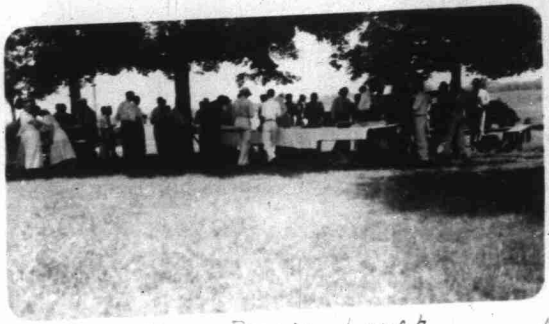
Korean Lesp. & Work Stock. J.W. Davis Farm. 1939

Another outstanding study was the cotton variety test being conducted on the Davis farm. Through the cooperation of Mr. W. H. Williams, Teacher of Vocational Agriculture in the Harrisburg High School, we were able to get an actual boll count (made the morning of the tour) of the 2 rows each of the 8 varieties, which showed an average per row as follows:

Coker's 100	1708
Coker's Farm Relief #5	1609
Coker's Farm Relief #4	1599
Coker's Farm Relief #3	1535
Coker's Clevewilt #7	1500
Addison's Prolific	1425
Cook's Improved	1343
Mexican Bigboll	1263

The boll count of this test showed the better bred varieties of cotton produced the greatest number of bolls per given area. For complete results of this test see page 7 of this report. Fully 75% of the cotton in Cabarrus county is a strain of Farm Relief, while 11,200 lbs. of Coker's Farm Relief #4 and 380 lbs. of Coker's 100 came into the county direct from the breeder this spring and is being used in growing seed for another crop.

The party next journeyed to Mr. A. F. Quay's Dairy Farm where a fine field of Farm Relief #4 cotton following Red Clover was inspected while a bounteous picnic lunch was being spread in the spacious grove. To the lunch furnished by the party was added cake, sandwiches, barbecue, ice tea, milk, and chocolate milk by the host and others of the community.



Farm Tour Picnic Lunch 1937

Following lunch, the party moved on to the F. M. Krimminger farm to inspect his 10 year continuous small grain and lespedeza demonstration. The demonstration plot had already been subsoiled and was being disced in preparation for the 11th crop of small grain. Mimeographed sheets containing accurate record by years of small grain and lespedeza yields and fertilizers used on the plot were distributed.

-5-

The next stop was to inspect the 10 acre apple orchard on the farm of Mr. J. P. Cox. In this orchard are 600 trees ranging in age from 1 year to 25 years. The leading varieties grown are Golden and Red Delicious, Winesap, Stayman Winesap, Black Twig, and "Tony". The members of the party were amazed at the estimated 2000 bushel crop of marketable apples being grown on this farm in the county this year. To the question asked by one of the party, "Where do you expect to sell all these apples?", Mr. Cox cooly replied, "The people come here for them and I don't have enough to supply the demand." While the group was passing through Mr. Cox's grading and storage house, delicious apples were freely served.

Apple Orchard. J.P. Cox Farm, 1937

At Mr. W. E. Hahn's general and poultry farm the group observed an excellent demonstration on the proper care and management of the poultry flock showing that it fits well in the program of general farming and may become on e of the major sources of the farm income.

Green Hill Dairy farm was next visited where approximately 35 head of milk cows in addition to dry cattle and young stock had been fed silage the entire year with about 10 feet of silage left in his trench silo last fall, and after feeding throughout this year will have an equal amount left this fall. The 2-year old silage was examined and found to be in perfect condition. Plen ty of tall Honbaier silage corn was found growing to refill the remainder of the trench silo and also the 150 ton metal silo with enough left over to practically fill another one. The storage space in the large lounging and hay barn was filled to capacity with good roughage.

After being refreshed with orangeade served by the host, the party moved on to the farm of Mr. H. E. Cline where his 7-year old continuous samll grain and lespedeza demonstration is being carried on. Mimeographed sheets with results by years also were distributed here. The plot showed a good stand of lespedeza being grown for seed.

Another cotton variety test similar to the one at Harrisburg was observed on the farm of Mr. F. A. Barnhardt. Here, also, cotton following Crimson Clover was observed showing 25 to 30% better cotton following where Crimson Clover was turned under. A good example of proper feeding and management was seen in the 4-H Club Guernsey Calf shown the group by Mr. Barnhardt's son, Leo.

4-H. Guernsey Calf. Leo Barnhardt, 1937

The "thrifty pig" demonstration being conducted by Mr. Barnhardt showed clearly the advantages of growing out pigs on new summer pasture of soybeans and sudan grass and at the same time allowing the pigs to finish balancing their diet on a self-feeder. These pigs averaged 49 lbs. at 8 weeks and the owner says they are the finest lot he has ever grown out. Mr. Barnhardt is a firm believer in pasture for hogs and as evidence for this, he already has a stand of Crimson Clover and Rye Grass for winter and spring grazing.

Thus ended a day full of good things and many expressed the hope that such a day become an annual event.

County Farm Tour Proved Interesting As Well As Highly Educational

Farmers Get First Hand Data On Successful Farming Plans

Cotton Variety Test at J. W. Davis Farm One of Highlights of Tour Which Covered County.

CONSERVATION OF LAND IS STUDIED

Farmers See How New Methods Rebuild Washed Land—Poultry and Dairy Herds Inspected.

BY GEORGE LEE SIMPSON

Interesting as well as highly educational was the Cabarrus county educational farm tour conducted over Cabarrus county Friday by county farm agent R. D. Goodman and his assistant, Miss E. Wilson, and attended by a varying crowd of from fifty to seventy five interested farmers.

The tour, one of those conducted at intervals by the county agent, touched some of the highlights of Cabarrus county farming, and the route of the tour offered a wide range of observation for those going from point to point.

Numbers of farming problems were discussed, with the tableau of the land serving as a blackboard, and actual illustrations being used to carry out the points made by the agents. Enough area was covered by the party to study farming conditions on different types of soil, and, since the rains have been ended this year, under different types of weather conditions.

Probably one of the most significant things to the farmers was the cotton variety test, which was made at two different places, but which was more nearly completed on the farm of J. W. Davis at Harrisburg. Here two rows each of eight different brands of cotton planted last spring.

No type of the cotton has yet opened, but a boll count was made yesterday morning and an average of the two row count showed that Coker's 100 led the list with an average yield of 1708 bolls for the two rows. It was followed by Coker's Farm Relief No. 5 with an average of 1609 bolls for the two rows. In third place was Coker's Farm Relief No. 4 with an average yield of 1599.

The pertinent fact was pointed out by County Agent Goodman, however, that although the Farm Relief No. 4 ran one hundred and nine bolls behind the Coker 100, the bolls on the No. 4 were much larger, thus a larger yield of No. 4 in the long run is expected. He also stated that the foliage on the No. 4 was sparser, thus making conditions up der on the boll weevil.

However, as Mr. Goodman said, this test will not be complete until all of the different types have been ginned, at which time it will be known which is the best. He also pointed out that a one year test could not produce a wholly ariproof testment, and said land and weather conditions should be taken into consideration.

The average yield of the other brands is as follows: Cooker's Farm Relief No. 3, 1536; Coker's Cleve No. 7, 1509; Addison's Prolific, 1425; Cook's Improved, 1500; and Mexican Big Boll, 1263.

The procession left the County Building at 8:45 a. m. The first stop was at the Jackson Training School, where the reclaiming of land and pasturage building were demonstrated, as well as poultry shelters and archard management. J. Lee White, farm superintendant of the school, explained the usage of blue grass as a pasturege feed, and the way in which to grow it.

A striking example of soil reclaimation was shown just opposite the old fair grounds. A washed away ten acre tract of land partly hilly, and filled with gulleys as much as thirty feet deep, had been terraced and worked and is now producing a crop. The work was done by the county's machinery and is indeed a marvelous example of soil conservation.

A few hundred yards further, the cavalcade inspected Clear Springs Dairy. The bull pens, milking process, silage and silos and a natural pasture were put under the scrutiny of the farmers.

The procession drove approximately ten miles through the "Black Jack" section and came into highway No. 29 at the farm of J. W. Davis. The afore mentioned cotton variety test was made as well as livestock inspection.

From the Davis farm, the party motored to Aaron Quay's farm where a characteristically bountiful picnic lunch was served. A field of Coker's Farm Relief No. 4 cotton was inspected also.

After lunch, a cross-country trip was made to the farm of J. P. Cox in No 9, where the farmers view apple laden trees in his orchard. Mr. Cox indicated that he expected about two thousand bushels from this crop, and the whole party was given free run of the orchard.

Care and management of farm poultry flocks was inspected at the home of W. E. Hahn's fine flocks and his equally fine method of raising them were thrown open to inspection.

The farms of P. M. Krimminger and H. E. Cline were visited during the afternoon to view plots of land on which lespedeza and small grain had been planted continuously for a number of years. Mr. Krimminger's plot, located about two miles south of Concord, has been sown in lespedeza and small grain for ten years, and this is, in the opinion of county agent Goodman, a record for the whole country. Mr. Cline's plot has been used in this manner for a period of seven consecutive years. No one knows how long such a usage may be kept up, but up to now, sufficiently large yields have been produced to warrant a continuence of this system.

Some of the best silage corn in the county was exhibited at the Green Hill Rairy, owned by L. B. Barrier. Mr. Barrier also has an excelent example of the trench silo, and he showed some silage that has been in the trench silo for two years.

Further cotton variety tests, similar to those on the Davis farm, were made at F. A. Barnhardt's. A boll count was not made here, however, but the effect of turning under crimson clover before planting cotton was shown. Mr. Barnhardt, has, during the past year, carried out the idea of raising pigs in a pasture, and his method of doing this was shown. A calf, gained by one of Mr. Barnhardt's boys, was shown. This is one of the 4-H Club projects being carried out throughout the county.

P. H. Gaston, Walter, Smith and A. S. Curlee, of the Government Soil Conservation Service of the Rowan CCC camp made the tour with the Cabarrus farmers and farm agents.

In company with a group of 26 farmers a trip was made to the CCC Camp near Salisbury on August 31. After conferences with the officials relative to the type of work being done by the CCC Camp, a tour was made to observe work that had been done as well as work now being done by them on various farms in Rowan County. Much interest was shown by the group in methods of controlling soil erosion. Of particular interest were the terrace outlet ditches and meadow strip outlets protected by vegetative growth of grasses and legumes. Several farmers indicated that they expected to apply this method of protecting terrace outlets on their own farms.

CABARRUS FARMERS VISIT ROWAN PROJECTS

Cabarrus farmers visited various CCC projects in Rowan today, with the members of the camp directing the tour. Those making the trip, as shown above, were, left to right: front row, A. M. Penninger, L. A. Lipe, J. R. Scott, J. C. Misenheimer, C. R. Barrier, John L. Brown, J. W. Moose, E. P. Seaford, J. N. Dixon, camp superintendent; P. H. Gaston, camp conservationist. Second row, C. W. Overcash, A. L. Mesimer, C. Lipe, Barrier, H. E. Bonds, J. W. Morris, H. C. Spencer, C. J. Goodman, A. F. Goodman, O. D. Benson, R. D. Goodman, Cabarrus farm agent. Back row, L. H. Hobbs, forestry expert; Ned W. Jestes, assistant technician; J. S. Curlee, wild life expert; W. L. Smith, senior foreman; H. E. Bonds, Jr., J. E. Wilson, James O. Horney, senior foreman; F. A. Barrier, B. Y. Pitts, engineer.—(Post Staff Photo).

OUTLOOK AND OBJECTIVES

Present indications point to another successful year of extension work in Cabarrus County.

Weather conditions were unfavorable in several townships the past year but in general, good seasons prevailed throughout the county and good crops have been harvested. Although the price of cotton is low, the farmers are realizing a fair profit from this crop due to the exceptionally good yield.

The work done by the Terracing Unit has met the approval of the farmers of the county, and the outfit was in operation every day during the year that the weather permitted. With this past record and the number of requests now on hand, we feel safe in predicting another satisfactory year in 1938.

The 1937 Agricultural Conservation Program has received the cooperation of 1500 farms as compared with 1246 in 1936. Of this number, approximately 95 % will receive some payment. These payments will be received at a time where farm income is slack and they will mean much to the farmer in getting his crop started for another year. The outlook for the 1938 Farm Program as it now stands does not look so favorable for since the beginning of extension work it has been the policy to encourage farmers to produce sufficient food and feed crops for home needs. With the goals for the farm set up as now proposed and a flat penalty of $12.00 per acre attached for excess acres over the general goal will mean absolute suicide to our farmers when the average general base is only 16.5 acres per farm. To grow sufficient food and feed crops for the average farm family and necessary livestock for the farm, requires a greater acreage for general crops than is allotted to many of our farms. We must also take into consideration the fact that many of our farms must support several families.

In general we expect to carry on the extension program in the county in 1938 very much the same as in the past year. Emphasis will continue to be placed on (1) improved seed, better livestock, more economical production of same through the use of seed and fertilizer adapted to the soil needs and better feeding and management of livestock; (2) the production of sufficient food and feed crops for home needs; (3) greater use of soil conserving and soil building practices; (4) individual farm planning together with somesimple form of farm record keeping; (5) setting up farm operations that will distribute the farm labor more uniformly throughout the year.