

NORTH CAROLINA

CABARRUS  
County

Agricultural Agent      Annual Report      1939

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**REPORT FILES**  
**EXTENSION WORK**

1939

NARRATIVE REPORT

OF

R. D. GOODMAN, COUNTY AGENT

AND

W. H. WILLIAMS, ASS'T. COUNTY AGENT

CABARRUS COUNTY

CONCORD, NORTH CAROLINA

COUNTY AGENT ANNUAL REPORT

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## I SUMMARY OF ACTIVITIES AND ACCOMPLISHMENTS

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

## General:

Days spent in active extension work. . . . .	.601
Farm visits made. . . . .	.1717
Different farms visited. . . . .	.600
Number of office calls relating to extension work. . . . .	.24326
Number of new articles published. . . . .	.80
Number of different circular letters issued (not copies mailed). . . . .	.79
Training meetings held for local leaders. . . . .	.13
Method demonstration meetings held. . . . .	.16
Meetings held at result demonstrations. . . . .	.6
Tours conducted. . . . .	.2
Achievement days held. . . . .	.1
Other meetings of an extension nature held or attended. . . . .	.129

## Terracing Program:

Acres of land terraced. . . . .	.1070
Linear feet of terraces made. . . . .	.358183
Hours spent terracing. . . . .	.604
Hours spent building farm roads. . . . .	.119
Hours spent in all other work. . . . .	.483

## Poultry

Brooder Houses built. . . . .	.6
Laying Houses built. . . . .	.6
Range shelters built. . . . .	.6
Poultry houses remodeled. . . . .	.5
Day-old chicks purchased. . . . .	.10,000
Flocks culled. . . . .	.26
(a) Hens culled. . . . .	3,940
Birds vaccinated. . . . .	5,000

## Dairying:

Barns constructed. . . . .	.1
Silos built. . . . .	.3
Purebred animals placed. . . . .	.41

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## Agricultural Conservation Program:

Farms participating (1939)	1976
Checks received and delivered (1938)	2821
Amount of payments	\$144,400.41
C.A.F. checks received and delivered (1939)	2530
Amount of payments	\$ 57,270.72
Wheat checks received and delivered (1939)	122
Amount of payments	\$ 2,296.03

## II COUNTY PROGRAM OF WORK

## 1. Factors considered and methods used:

In determining the county extension program of work it is necessary to consider existing agricultural conditions in the county, such as types of farming, cropping systems to be used, soil types and marketing possibilities.

In order to achieve the desired results, a combination of individual farm planning and group activities was found necessary. Wherever possible work was carried on through group activities. However, due to the 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 work out a cropping system to conserve the soil and at the same time to produce sufficient food and feed crops to meet the needs of his farm; (3) to adjust his farming operations so as to distribute farm labor throughout the year; and (4) to profitably dispose of his surplus farm products.

## 2. Project Activities and results:

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

- a Agronomy
- b Horticulture
- c Animal Husbandry
- d Poultry
- e Agricultural Engineering
- f Agricultural Conservation Program
- g Farm Management
- h Forestry
- i Tours

## AGRONOMY

## Cotton

For a long time cotton has been the major cash crop of the county, in that only its by-product, the seed, can be used on the farm, the lint always being sold for cash or used as a medium of exchange. This enables one to readily get at the cash value of the crop. However, with our diversified program of farming being widely extended, it is rapidly becoming a surplus cash crop.

Under the 1939 Farm Program the county cotton acreage allotment was 13,829 acres, while the planted acreage as checked for compliance showed only 12,121. This large acreage left unplanted is partly due to the fact that the 80% clause was withdrawn from the Regulation governing the benefit payments under the Program, allowing a farmer to limit his planted acreage and still receive maximum payment. According to compliance records the majority of this land taken out of cotton was planted in soil conserving crops or feed crops for home use.

The decrease in cotton acreage has greatly stimulated interest in higher production brought about by improved seed, seed treatment, heavier fertilization, and more thorough cultivation.

The majority of the farmers who plant cotton insist on improved varieties that will command a premium on the market. To meet this need variety tests are conducted and new seed purchased from the breeder. Each year a number of key farmers who are alert to better farm practices purchase a quantity of improved cotton seed direct from the breeder, keep it pure and offer it for sale the following year. This year 3900 lbs. was purchased from Coker's Pedigreed Seed Farm for spring planting. Of this amount 3900 lbs. was of the Coker 100 variety while 2700 lbs. was Coker 100 Strain # 2. For two years prior to this Coker 100 has been grown by quite a large number of farmers who have been well pleased with it. Last year it led the variety test both in yield and money value, and much interest is being manifested in the results obtained from similar tests conducted this year.

During the year three cotton variety tests were conducted on the farms of H. E. Bonds, Concord # 1; H. L. Barnhardt, Concord # 4; and Paul H. Barnhardt, Concord # 4, with very similar results, two of which are given here for information.



COTTON VARIETY DEMONSTRATION

NAME: H. E. Bonds

P. O. : Concord, N. C. # 1.

County: Cabarrus

Date Planted: 4-25-39

Soil Type: Sandy Loam

Fertilizer Per Acre: 400# 4-10-4

Date Harvested: 1st. picking: 9-11-39; 2nd. picking: 9-25-39; 3rd. picking: 10-7-39; 4th. picking: 10-19-39

RESULTS OF DEMONSTRATION

Variety	Lbs. Seed Cotton per plot.					Lbs. Seed Cotton Per Acre	Lbs. Lint Cotton Per Acre	% Gin Turnout	Staple Length	Price Based on 12-1-39 Ave. 9.74¢ for M 7/8"	Market Value
	1st.	2nd.	3rd.	4th.	Total						
Coker 100 56-3	21	30	20	4	75	2592.8	959.3	37	1-1/8"	12.19	\$ 116.94
Coker 100 Strain 2	23	27	18	5	73	2523.7	908.5	36	1-3/16"	13.99	\$ 127.10
Coker 100 38-8	21	20	19	7	68	2350.9	893.3	36	1-3/16"	13.99	\$ 124.97
Cokers 4 in 1 Farm Relief	18	21	20	9	68	2350.9	869.8	37	1-3/32"	11.44	\$ 99.50
Strain 5	15	21	20	10	66	2281.7	844.2	37	1-1/32"	10.94	\$ 92.35
Cleveland	9	18	22	16	65	2247.1	831.4	37	1-1/16"	11.14	\$ 92.62
Mexican Higboll	10	18	21	15	61	2108.9	736.1	35	1-3/32"	11.44	\$ 84.44
Wilds # 9	2	14	18	15	59	2039.7	652.7	32	1-5/8"	18.49	\$ 120.68

COTTON VARIETY DEMONSTRATION

NAME: Paul H. Barnhardt

P. O.: Concord, N. C. # 4

Cabarrus County:

Date Planted: 5-3-39

Soil Type: Sandy Loam

Fertiliser Per Acre: 560# 4-10-10

Date Harvested: 1st. picking: 9-19-39; 2nd. picking: 10-29-39

RESULTS OF DEMONSTRATION

Variety	Lbs. Seed Cotton per plot			Lbs. Seed Cotton Per Acre	Lbs. Lint Cotton Per Acre	% Gin Turnout	Staple Length	Price Based on 12-1-39 Ave. 9.74¢ for M 7/8"	Market Value
	1st.	2nd.	Total						
Mexican	52	12	64	1792	681.0	38	1-1/8"	12.19	\$ 85.02
Cokers 4 in 1	51	9	60	1680	621.6	37	1-3/32"	11.44	\$ 71.11
Wild's # 9	45	15	60	1680	586.0	35	1-3/8"	18.49	\$106.72
Coker 100-36-8	52	6	58	1624	649.6	40	1-1/8"	12.19	\$ 79.19
Coker 100 Strain 1	49	6	55	1540	600.6	39	1-5/32"	13.19	\$ 79.22
Coker 100 Strain 2	48	6	54	1512	589.7	38	1-1/8"	12.19	\$ 71.86
Farm Relief Strain 5	39	15	52	1456	597.0	41	1-1/8"	12.19	\$ 72.77

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The accompanying photograph taken September 27, 1955 shows cotton variety tests conducted by Paul H. Barnhart, Concord # 4.



Aside from these variety tests a number of result demonstrations were conducted on cotton this year, from which space will permit us to give the results of but a few.

Coker's Pedigreed Seed Company, Hartsville, South Carolina furnished 200 lbs. of Coker 100 Strain # 2 seed for a demonstration which was conducted on the farm of C. J. Goodman, Concord # 2. The plot selected for this demonstration contained 5.1 acres. During the winter the old cotton stalks from last year's crop were plowed out with two furrows and 25 loads of good manure broadcast

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over the plot. Early in the spring this land was rebedded with two furrows to the row. Near planting time a mixture of 200 lbs. of acid and 100 lbs. of potash was applied in the row with a fertilizer distributor. On April 20, 1939, the ridges were section harrowed and the seed planted applying at the same time 100 lbs. per acre of 4-10-6 fertilizer. The seed bed being settled the cotton quickly came up to a good stand and given thorough cultivation throughout the growing season. The analysis of fertilizer used and method of application along with the small stalk open type cotton characteristic of Coker 100 Strain 2 worked together to produce a medium size, heavily fruited stalk. This cotton was planted on the same date as a nearby field of Farn Relief # 4 on the same farm, however, it opened 10 days earlier than the Farn Relief. It, also, being more open type and earlier showed less weevil damage than the Farn Relief. Due to the dry season the cotton from this demonstration plot was all picked before frost, yielding a total of 10,461 lbs. of seed cotton. It was taken to the gin and after the roll was dropped and gin thoroughly cleaned, it was all ginned at one time with the seed being dropped in front of the gin and sheveled into sacks to prevent any mixing. The total lint produced was 4,015 lbs. or a turnout of 38.4%. This gave an average of 2,051 lbs. of seed cotton or 787 lbs. of lint per acre. A small sample of this cotton was sent to the State College laboratory in Raleigh for test purposes which also gave a gin turnout of 38% and a staple length of 1-1/8 in. To date this cotton has not been sold.

(See next page for picture.)

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The following picture shows a portion of the demonstration plot and the grower.



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G. W. Headling, Davidson # 2, on 2.5 acres of Mecklenburg loan that has been worked in cotton continuously for 49 years produced 5,390 lbs. of Coker 100 Strain # 2 seed cotton that after paying 269 lbs. toll for ginning, turned out 2,015 lbs. of lint, or 39%, averaging 875 lbs. of lint per acre. Mr. Headling applied with distributor before planting 500 lb. of 4-10-10 fertilizer per acre, and later top-dressed with 70 lb. of a 50-50 mixture of nitrate of soda and potash.

W. F. Harry, Harrisburg # 1, seeded 100 lbs. of Coker 100 Strain 2 cotton seed on 3.4 acres. Before planting Mr. Harry applied with a distributor 350 lbs. of 4-10-9 fertilizer per acre. From this demonstration plot Mr. Harry produced 6,805 lbs. of seed cotton that turned out 2,662 lbs. of lint or 39% an average of 783 lbs. per acre. Mr. Harry is well pleased with this variety of cotton and states it yielded him more cotton per acre than any variety he has grown.

Combined results from 9 other demonstrations of Coker 100 Strain 2 cotton that were conducted in the leading cotton sections of the county are as follows: Acres planted-34.4 acres; production-54,127 lbs. seed cotton and 20,680 lbs. lint cotton. This shows 36.2% gin turnout and an average of 601 lbs. per acre which speaks for itself.

Reports from the 2,700 lbs. of Coker's 100 Strain 2 cotton seed purchased direct from the breeder this year approximately 100 acres were planted which averaged a little better than a bale per acre. The seed from this cotton amounting to approximately 2,500 bushels has been saved pure for planting purposes. This seed with prior Strain of Coker 100 already being grown in the county will furnish sufficient seed of this variety of cotton to plant half the county's 1940 allotment.

The County Agents and Vocational Teachers of the County are cooperating in an effort to make Cabarrus county a one-variety cotton county, and have selected Coker 100 as the variety best adapted, to all conditions of the county. This decision was arrived at early in the year as shown in attached newspaper article.

# Coker 100 Cabarrus Farms

## COUNTY AGENT MAKES REPORT

**Says Variety Has Done  
Well in Cabarrus Under  
Careful Test.**

**By R. D. GOODMAN,  
County Agent.**

We have recently received recommended varieties of cotton for the Piedmont area of the state as follows: Coker 100, Farm Relief, and Mexican. These varieties have been recommended from results obtained at the N. C. Experiment Station.

The Extension Service and Vocational Teachers of the county have decided to recommend one variety for Cabarrus county, namely Coker 100. In addition to being recommended by the Experiment Station, this variety gave us highest yield and most dollars per acre in the cotton variety tests conducted in the county last year.

Farm Relief has been widely grown in the county for a number of years. It was and still is one of our most profitable varieties of cotton. However, Coker 100, recently introduced, has a slight advantage over Farm Relief in that it is a week or ten days earlier, is a little more dwarf type, has a little longer staple, and gives a slightly higher germination. For these reasons, the farmers who are producing too large a stalk or have late maturing land, and are wanting to try some new variety of cotton, are urged by the Agricultural Agencies in the county to join in making Cabarrus a one-variety cotton county. Arrangements should be made to secure seed while the supply of good seed is available. A few farmers in the county are bothered with wilt. If they wish to plant cotton on that land, are urged to get wilt-resistant varieties for planting on land where this disease is prevalent.

It is necessary for farmers in a community to organize a definite program for cotton improvement in order to produce even-running lots of uniformly high quality cotton that is in greatest demand by the

## Corn

Corn being the leading food and feed crop in the county is grown on practically every farm and covers approximately 20% of the cropland.

While local varieties of white corn are widely grown, Jarvis Golden Prolific is the leading yellow corn, being grown principally for feeding livestock and poultry.

The long drought experienced by the county this summer was very unfavorable to corn, however, a fair crop was harvested.

W. J. Hartsell, tenant on E. A. Morris farm, Harrisburg # 1, practices growing corn in combination with soybeans or cowpeas, a practice that is followed generally by all the farmers in the county. The picture shows a good crop of Bilcoi beans being grown for soil building in combination with corn on a 3 acre field. This field was plowed in the spring at time of planting corn and beans. The yield of corn was estimated to be 25 bushels per acre.





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On a nearby field Mr. Hartsell had a 10 acre field of corn planted in combination with soybeans from which he harvested 30 bushels per acre. Both fields received the same preparation except the latter was fall plowed. No commercial fertilizer was applied on either field. Mr. Hartsell attributes the increased yield to fall plowing conserving more of the winter rain, as this field did not show the effect of the dry weather as much as the other. After the corn was harvested the soybeans were disked under in preparation for small grain.

Quite a few farmers are following the practice of using vetch as a winter cover crop and turning it under as a green manure crop in the spring in preparation for planting corn. D. K. Winecoff, Kannapolis # 1, followed this practice this year and disked under 17 acres of vetch as shown in the following picture and followed it with silage corn. This was Mr. Winecoffa first time to turn under vetch as a green manure crop ahead of corn but was pleased with results. He states that the corn was at least 25% better where vetch was turned. Mr. Winecoff is following this same practice again for growing corn.



## Wheat

Due to the better balanced system of farming being practiced throughout the county the growing of wheat for the farm bread supply has steadily increased. This year 12,226 acres of wheat were grown on 1976 Cabarrus farms. Among this number were 103 farmers producing wheat on a commercial basis. With the continuous practice of growing lespedeza in combination with small grain, farmers find it profitable to grow their small acreage allotment of wheat and at the same time build up their land with the use of this legume.

The continuous dry weather throughout the harvest season made it favorable for saving small grain in good condition and especially so for the use of combining, a service which many farmers waited for. Farmers are fast recognizing the importance of letting their small grain get "dead" ripe (too ripe for cutting, with the binder) before combining. When wheat is harvested at this stage very little trouble is experienced in saving it. In general the small grain crop was better this year than the farmers were expecting. Many yields of from 20 to 30 bushels of wheat per acre being reported.

F. L. Johnston, Concord # 2, who resides in the cotton section of the county where the growing of wheat has been steadily increasing, produced 207 bushels, weighed measure, from 8 acres of land that had been grown in cotton for many years.

C. R. Barrier, Mt. Pleasant # 1, combined 26 bushels of wheat per acre from a 9 acre field. This land was heavy disked in preparation for the seeding of wheat in the fall of 1938, and 250# of 4-8-4 fertilizer per acre applied at the time of seeding. In the early spring it was reseeded with Korean lespedeza and later top-dressed with a mixture of  $\frac{1}{2}$  potash and  $\frac{3}{4}$  nitrate of soda by weight and approximately 100# of this mixture applied per acre. When Mr. Barrier bought this land 7 years ago the wheat growing on it at the time yielded less than 2 bushels per acre. Following the wheat harvest that year he sowed it in cowpeas which were turned under in preparation for seeding small grain that fall. This land has had a crop of small grain and lespedeza on it each year since, with the exception of 1937 when it was planted in corn. Following the combining of the lespedeza seed from this field this year Mr. Barrier seeded hairy vetch on it at the rate of 15 to 20 pounds per acre and covered it by disking. This winter cover crop will be turned under in the spring and it will again be

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planted in corn. This is a clear illustration of the way Cabarrus farmers are building their soil and producing the necessary food and feed at the same time.

On May 17th. a group of farmers from Cabarrus attended the meeting held at the farm of C. L. Neel, Salisbury # 2, to inspect the varieties of small grain being grown for test purposes. It was especially interesting to them to note that the wheat we furnished Mr. Neel in 1936 known as Turkey Island (having been brought to Cabarrus county by the late Giles T. Crowell of Concord from the country of Turkey about a half century ago) holds 2nd. place in the four year averages of wheat in the tests.

## Oats

Oats is one of our leading crops being grown for grain and hay. Records for 1939 indicate that 10,410 acres of oats was harvested for grain on Cabarrus farms while a large acreage was cut green for hay.

Coker 33-19 Fulgrain is the leading oat used for grain, while the 33-47 forage type oat continues to hold its place with farmers where both forage and grain are wanted.

The largest acreage of oats grown on any farm in the county was that of the Jackson Training School, Concord # 1, where 125 acres was harvested for grain producing 5,208 bushels. The large number of livestock kept by the School creates a demand for an oat that will not only give a high yield of grain but produce a quantity of forage as well. Therefore, Coker 33-47 forage type oat is grown exclusively by them.

Among the large number of farmers growing 33-19 Fulgrain oats was W. A. Brown, Concord # 1, who harvested 55 bushels per acre from 30 acres, while his entire 119.6 acres produced 3,600 bushels.

## Barley

Since the introduction of the cold-weather resistant beardless barley in the county in 1937, the acreage devoted to this "winter corn" crop has rapidly increased.

A number of farmers find that they can grow as many bushels per acre, or more, of barley as corn at less expense, also, grow it on winter rain and at the same time conserve their soil.

This variety of barley is noted for its earliness which makes it well adapted for being grown in combination with crimson clover for harvesting for seed. The results from a 3.6 acre demonstration conducted on Woodside Farm, Concord # 2, indicate that the two crops can be successfully grown together, combined for seed and get the clover out of the burr without crushing the barley. This was not found to be difficult when combining was done in the afternoon and the crimson was both ripe and dry. The only trouble encountered was regulating the air so as to keep the sieves clean and not blow the seed over. After losing a part of the crimson clover seed on the first acre while getting the machine properly adjusted, 210 lbs. of re-cleaned crimson was separated from 73 bushels of re-cleaned barley from the 3.6 acre plot mentioned above.

The growing of crimson clover in combination with the barley seemed to be a help to each crop, instead of a hindrance, the crimson being a foot to eighteen inches tall kept the ripe barley heads from dropping down where the combine would miss them, while the barley straw seemed to aid in holding up the crimson and prevent it from falling down when ripe.

A number of outstanding yields were reported this year by farmers growing this variety of barley, among them being W. D. Melcher, Gold Hill # 2, who combined 200 bu. from 4 acres or 50 bu. per acre, while the average yield for the county was 25 bu. per acre.

## Lespedeza

Cabarrus county began growing Korean lespedeza in 1928 when the County Agent assisted W. R. Bailey of Woodleaf in placing 375 lbs. @ 50¢ per lb. among farmers in the county. From this small beginning Cabarrus has developed into one of the largest Korean seed producing counties in the State. Scarcely a field of small grain can be found on which lespedeza is not found growing, also. Aside from this large acreage grown in combination with small grain, there is each year a large acreage seeded alone and on pastures, both temporary and permanent. This year according to figures obtained from the county AAA records, 1796 farms out of 1976 checked for compliance were found to have a total of 44,760 acres of lespedeza, largely Korean. This represents half the cropland on these farms.

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 from the sale of seed as well as a dependable hay crop. For the past several years farmers have been harvesting from 300,000 to 400,000 lbs. of seed annually for sale aside from the large amount used for reseeding large acreages.

This year the farmers were very uneasy during the early summer lest the prevailing dry weather would prevent lespedeza making sufficient growth for a hay crop. However, rain came just in time to save it and an unusually large crop of fine lespedeza was cut for hay. Due to the favorable weather conditions at the time of making hay practically all of this hay is of fine quality, being well cured with plenty of color and leaves. Many exceptionally good yields of lespedeza hay have been reported. Clear Springs Farm, Concord # 1, harvested 121 leads, estimated at a little more than a ton per lead from 60 acres of Korean lespedeza. Pictured may be seen a 24 acre field of this lespedeza in sheaf ready for hauling. This lespedeza followed early barley which combined 25 bu. per acre.

(See next page for picture.)

*Kereon lespedosa* in check on Clear Springs Farm, Concord # 1.



Woodside Farm, Concord # 2, produced 314 bales of Lebe lespedosa averaging 85 lbs. per bale from 5.5 acres, or 2.4 tons per acre. Accompanying picture shows this lespedosa in sheek prior to being hauled to stack where it remained a week before being baled. This lespedosa followed early barley which threshed 28 bu. per acre.





In addition to the large acreage of lespedeza harvested for hay in the county this year, the amount of seed saved has been estimated at 400,000 lbs. The rapid introduction of the combine in the past two years has made it possible to harvest large quantities of seed per acre leaving all forage on the land for soil building. With a number of combines doing custom work a larger number of farmers were able to get their seed saved this year, and the exceedingly favorable weather was exceptionally good for combining lespedeza. Many combines report running continuously throughout the seed harvesting season without interruption, harvesting the seed practically free of moisture. Numerous farmers are reporting exceptionally good yields of seed. L. A. Pharr, Jr., Concord # 1, reports combining 14,000 lbs. Korean from 22 acres. While L. B. Barrier, of Green Hill Farm, Mt. Pleasant # 1, harvested 9,000 lbs. from 15 acres of second year lespedeza, against 12,000 lbs. last year from the same land. However, last year the land received the following preparation: seeded to oats in fall of 1937 with an application of a ton of lime and 200 $\frac{1}{2}$  of 2-10-6 fertilizer at time of seeding. In the Spring of 1938 lespedeza was seeded on it and the small grain top-dressed with 60 $\frac{1}{2}$  of soda and 40 $\frac{1}{2}$  of potash per acre. This year the lespedeza was volunteer and received no attention except the weeds were mowed off in the early summer.

I. B. Cline, Concord # 3, says there is more profit in growing Korean lespedeza than cotton. This year he hired 18 acres combined at a cost of \$3.00 per acre. This acreage yielded him 4,100 lbs. of re-cleaned seed for which he has already been offered 4-3/4¢ per pound. Aside from the cash value of the seed saved he has all the forage left on the land for improving the soil.

Pictured here may be seen C. R. Barrier, Mt. Pleasant # 1, combining Korean lespedeza from a 9 acre field which produced 24 bushels of Korean seed per acre. This lespedeza followed a wheat crop which yielded 26 bushels per acre. Seven years ago when Mr. Barrier purchased this land it produced less than 2 bushels of wheat per acre. Since that time he has kept it in a continuous rotation of small grain in combination with lespedeza except the year 1937 when it was planted in corn. Two years ago Mr. Barrier applied a ton of lime per acre to this field and estimates that the lespedeza has practically

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doubled since the application of lime. This is a clear demonstration of the many farms in Cabarrus county that have benefitted from following the general practice of growing lespedeza in combination with small grain and where lime is applied, the growth of lespedeza is greatly increased.



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

	Yield per A. Small Grain	Yield per A. Korean Seed	Per Acre Preparation	Remarks
1928	Oats 57-2/3 bu.	1241 lbs.	1 ton lime 300 $\frac{1}{2}$ 8-4-4 200 $\frac{1}{2}$ Slag 70 $\frac{1}{2}$ Soda	Spring Oats Good oat year Seeded 15-2/3 lbs. Korean on Mar. 1st.
1929	Wheat 30 bu.	790 lbs.	1195 $\frac{1}{2}$ lime 300 $\frac{1}{2}$ 8-4-4 476 $\frac{1}{2}$ Slag	Volunteer Korean
1930	Oats 45 bu.	810 lbs.	300 $\frac{1}{2}$ 9-2-4	Volunteer Korean
1931	Wheat 41 1/2 bu.	1171 lbs.	300 $\frac{1}{2}$ 8-4-4	Seeded 20 lbs. Korean per acre
1932	Wheat 21 bu.	Korean plowed under	200 $\frac{1}{2}$ 8-4-4	Heavy freeze Volunteer Korean
1933	Wheat 27.9 bu.	Korean plowed under	300 $\frac{1}{2}$ 8-4-4	Poor stand wheat Volunteer Korean
1934	Wheat 37 bu.	1195 lbs.	300 $\frac{1}{2}$ 8-4-4	Seeded 20 lbs. Korean per acre
1935	Oats 60 bu. & 50 lbs.	Mowed for hay 3.37 tons per acre	300 $\frac{1}{2}$ 12-4-4 100 $\frac{1}{2}$ soda	Seeded 25 lbs. Korean per acre
1936	Wheat 26.6 bu.	Korean plowed under	300 $\frac{1}{2}$ 4-16-7	Heavy freeze Seeded 25 lbs. Korean per acre
1937	Wheat 29.6 bu.	Korean Sub-dicked under	400 $\frac{1}{2}$ 4-8-4 100 $\frac{1}{2}$ Soda	Heavy freeze 25 pounds per acre Korean seeded
1938	Wheat 29.5 bu.	600 lbs.	400 $\frac{1}{2}$ 4-16-7	Seeded 50 lbs. Korean per acre
1939	No small grain seeded	850 lbs.	No fertilizer added	Korean volunteer following being combined in 1938

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

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

December 2, 1939

H. B. CLINE  
 CONTINUOUS SMALL GRAIN DEMONSTRATION  
 9 years Korean on same land  
 4 acre test plot

	Yield per A. Small Grain	Yield per A. Korean Seed	Per acre Preparation	Remarks
1931	Oats 28 bu.	675 lbs.	200# 8-2-2	Seeded 27½ lbs. Korean per acre
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 per acre
1935	Wheat 16 bu.	650 lbs.	200# 0-10-4	Seeded 25 lbs. Korean per acre
1936	Oats 20 bu.	500 lbs.	200# 2-10-6 100# Phosphate	Heavy freeze Seeded 25 lbs. Korean per acre. Leap. killed by drought
1937	Wheat 18 bu.	794 lbs. clean seed	250# 2-10-6	Heavy freeze Seeded 25 lbs. Korean per acre
1938	Oats 35 bu.	300#	200# 2-10-6	Seeded 25 lbs. Korean per acre
1939	Oats 43 bu.	Disked under	200# 2-10-6	Seeded 25 lbs. Korean per acre

H. B. Cline  
 Cabarrus County  
 Concord, N. C. R/S

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

December 2, 1939

## Alfalfa

The acreage devoted to the growing of alfalfa in the county is steadily increasing even though only a few of our soil types are suitable for growing this legume. By making heavy application of lime and stable manure proper fertilization and preparation of seed bed before sowing, a number of farmers are growing this valuable crop successfully.

W. L. Overcash, Kannapolis # 1, who has Cecil clay loam soil, which is well adapted to the growing of alfalfa, averaged approximately 4 tons of hay per acre on his 20 acres of old alfalfa. Mr. Overcash seeded 8 acres additional of alfalfa this fall.

Clear Springs Dairy Farm, Concord # 1, having the largest alfalfa acreage in the county averaged 3 tons per acre from their 86 acres, making four cuttings. The first two cuttings were good, averaging a ton per acre at each cutting. Due to the dry weather the third cutting was very short. This farm used 400# of alfalfa seed this fall for seeding 8 additional acres and reseeding a part of the old acreage. All of this was heavily limed this fall, the farm having used 153 tons of limestone on this crop, its pastures and winter legumes. In the following picture may be seen one of their large alfalfa fields with farm hands patch seeding this spots on the Clear Springs Farm.



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The Jackson Training School, Concord # 1, the second largest grower of alfalfa in the county, after plowing up a part of their old alfalfa this year had 26 acres left from which they harvested 3 tons per acre from 4 cuttings. The Jackson Training School seeded an additional acreage this fall using 360 lbs. of seed.

J. L. Patterson, Concord # 3, started growing alfalfa by seeding 3.5 acres in the fall of 1936, and has increased this each year until he had 9.5 acres in 1939 from which he made four cuttings netting him an average of 3 tons per acre. The first two cuttings yielded an average of a ton per acre each cutting, but due to the dry weather the third was very poor. Following his practice of seeding a few additional acres each year, Mr. Patterson has seeded 3 acres this fall. During the summer wheat was combined from this field and the straw left on the land. It was then subsoiled and 25 loads of manure added. Ten tons of lime was applied and the seed bed thoroughly prepared. At time of seeding alfalfa, 500# of 2-10-6 fertilizer per acre was applied. Barring unfavorable weather conditions Mr. Patterson should harvest an excellent crop of alfalfa from this another year.

Several farmers are seeding alfalfa this fall for the first time. Altogether 1,135 lbs. of choice alfalfa seed was ordered through the county agents office for fall seeding by Cabarrus farmers.

## Pasture

Dairymen are fast realizing that successful dairying depends on home production of feed, and to meet this competition large acreages of pasture are being improved or made, either for temporary or permanent use. In addition to the grazing of lespedeza after small grain, which affords our cheapest summer grazing, permanent pasture mixtures consisting of blue grass, herds grass, rye grass, alsike and white dutch clover are being seeded on land that has been prepared well, limed and topdressed with manure.

On January 16th. Mr. F. R. Farnham, Dairy Extension Specialist from State College, conducted a follow-up pasture meeting at the dairy farm of W. L. Overcash, Kannapolis # 1. In spite of the rough weather a few dairymen and others interested in better pasture were present to hear Mr. Farnham's discussion and observe the pasture work being carried on by Mr. Overcash.



Two years ago Mr. Overcash scattered some rough manure over some bald places in a pasture and noticed that volunteer bluegrass began to thrive. He then applied manure on the remainder of this pasture, and added a few bluegrass seed to the volunteer already there. When asked last summer how much pasture it furnished, he replied

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that it was all the pasture he had. Last fall Mr. Overoash prepared an adjoining plot of 9 acres and seeded 200 lbs. of bluegrass on it. Owing to the very dry fall the grass came up very late and had a hard time with the native grass and weeds. In the meeting Mr. Farnham called special attention to a place in another pasture where Mr. Overoash had scattered a load of manure from the gutter of his dairy barn. As far as the manure was scattered on each side of the wagon tracks bluegrass had come up through the manure and was about 3 inches high. While between the wheels and on the remaining pasture volunteer bluegrass was practically dormant, due principally to the lack of fertility. This was a splendid illustration of the results obtained from the use of manure on pasture, and Mr. Overoash is thoroughly convinced that applying manure to his permanent pasture is a profitable practice.

In February Z. A. Morris, Harrisburg # 1, cleared out the undergrowth from 3.5 acres of old pasture, disced and seeding the following mixture per acre with a grain drill:

5 lbs. Kentucky bluegrass  
 4 lbs. red top grass (herds)  
 7 lbs. orchard grass  
 2 lbs. White dutch clover  
 5 lbs. Korean lespedeza  
 400 lbs. Basic slag

Due to spring seeding this plot was wired off and allowed to get established the first summer.

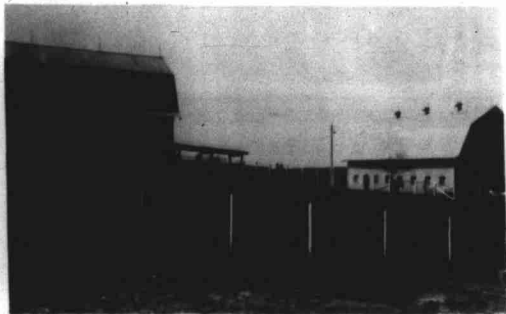
In the spring Green Hill Dairy Farm, Mt. Pleasant # 1, top dressed the old pasture with stable manure, adding a few blue grass seed. A plot of bluegrass and White Dutch clover was seeded near the barn for pasturing the calves.

W. Justin Flows, Concord # 4, has a very interesting plot of ryegrass near his barn where he grazes his Guernsey heifers. Mr. Flows states that this is the 4th. crop of ryegrass that he has grown from the original seed, as he allows it to make seed sufficient for reseeding each year. This is grown in combination with Korean lespedeza which also has reseeded itself each year. This plot affords Mr. Flows an all year pasture for his calves. Mr. Flows has an additional plot of permanent pasture of bluegrass, ryegrass and White Dutch clover which also afforded excellent grazing for his Guernsey herd.



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The owners of Quays Dairy, Harrisburg # 1, find that a plot of ryegrass near the barn improves the appearance of the premises and furnishes excellent spring grazing ahead of lespedeza. With this in mind they seeded a plot adjacent to their dairy barns as here illustrated.



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In addition to 78 acres of permanent pasture on Clear Springs Farm, Concord # 1, the field of 18 acres pictured below was added this fall. By way of preparation for seeding this pasture a good crop of Korean lespedeza was thoroughly disked into the soil then it was heavily limed, fertilized and drilled with a mixture of Kentucky bluegrass, ryegrass, red top or herds grass, orchard grass, alsike and white dutch clover. Later it will be top dressed with manure.



While a number of our larger dairymen and livestock producers are making highly improved permanent pastures, the small farmer with fewer livestock is turning to the seeding of ryegrass in combination with Korean lespedeza and finding it well adapted to a high percent of their pasture land. From the results received when crimson clover has been grown in combination with ryegrass for pasture we feel quite certain that the early seeding of crimson clover with the ryegrass will add greatly to the grazing capacity of the lespedeza pastures and additional demonstrations have already been seeded this fall.

## HORTICULTURE

At all times the Extension Agents in the county have been stressing the importance of farmers producing to meet the farm food supply. In this connection on January 5, 1939, a joint meeting of farmers and farm women was held at which time Mr. H. R. Niswonger, Extension Horticulturist, and Miss Mary Thomas, Nutritionist from State College, discussed orchards and home gardens as a part of the farm food supply. Despite the downpour of rain, 21 men and 18 women were present for the meeting. Special emphasis was placed on the importance of planting 5 to 6 apples and an equal number of peaches on each farm to provide fruit for home use. The need for a small space to be set aside for strawberries and raspberries was also brought out. Small berries should be given more attention on every farm. Much emphasis was placed on the vital need of a fertile spot near the house for a home garden and that a succession of vegetables be planted to furnish fresh vegetables for the home throughout the year.

Mr. H. R. Niswonger, Extension Horticulturist from State College, was with us on January 11, and assisted in orchard management. Three field meetings were held with a total attendance of 92 interested farmers and vocational boys present. At each of these meetings several peach and apple trees were pruned to demonstrate the proper method of pruning. Mr. Niswonger also discussed proper cultivation, fertilization and general orchard management.

The first of these meetings was held at the Jackson Training School orchard, Concord # 1.



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The Jackson Training School orchard consisting of approximately 1400 apple and peach trees was set in the spring of 1936. Mr. Hiewinger visited this orchard about a year ago, and seemed well pleased with the growth made by the trees within that time. He highly complimented the splendid management of the orchard being carried on—consisting of strip cropping every other middle. The rotation included one middle being planted to row crops while the alternate middle is in small grain and lespedeza. Aside from the returns received from the crops grown, this practice conserves the moisture and adds organic matter, affording sufficient cultivation to give good growth to the young trees, and at the same time controls erosion without the use of terraces.

The next meeting was held at the young orchard of E. L. Cline, Concord # 4. Mr. Cline has approximately 700 apple and peach trees. Part of these were set in 1933 and the remainder in 1935. In this orchard was found a condition very noticeable where too much commercial fertilizer was being used resulting in too rapid growth of the trees and preventing the formation of fruit buds.



Lepedesa sod is being used as a cover crop while clean cultivation is practiced around the trees. This was approved by Mr. Niswonger though he suggested that strip cropping of every other middle might be put into practice later on. Mr. Cline intends to subsoil this orchard as soon as the weather permits, and Mr. Niswonger suggested that 2 or 3 subsoil furrows be run through each middle.

Here Mr. Niswonger demonstrated very clearly the method of heading back young apple trees. Contrary to the general practice of heading back apple trees to the same height, he recommended that they be headed back where the buds are farthest apart, which will cause the tree to be stronger and will reduce the probability of later splitting. By heading them nearer the ground there will be less damage from the wind whipping them about and breaking the tap root.

The third meeting was held at the large orchard of J. P. Cox, Stanfield # 1.



Mr. Cox is a commercial fruit grower and has one of the largest orchards in the county. He has 10 acres of apples consisting of 500 trees ranging in age from 1 year to 25 years. His peach orchard of approximately 6 acres contains 450 trees. Here a remarkable difference was shown as compared with the Cline orchard in the number of fruit buds forming on apple trees. This difference was attributed to more proper fertilization.

Last fall Mr. Cox plowed his orchard crossways, turning under the lespedeza sod and left it rough during the winter. Mr. Niswonger recommended that he apply lime or phosphate or basic slag at the rate of 400 lbs. per acre in February or March, and seed every other middle to lespedeza to conserve the soil and provide humus. The alternate middle should then be cultivated until early summer to conserve all the moisture possible for the crop of fruit, then be seeded to cowpeas to be turned under in the fall and seeded to a winter legume.

After leaving the Cox orchard, a stop was made at the farm of S. C. Barrier, Mt. Pleasant # 1, where a vineyard was inspected and a demonstration in pruning grapevines was given. Mr. Barrier's vineyard showed lack of sufficient plant food and Mr. Niswonger recommended fertilizer, also, an application of well rotted manure near the vines, then sowing a cover crop of lespedeza to aid in building up the soil and to increase the growth of the vines. Mr. Barrier's son has rooted several dozen cuttings to be used in increasing the size of their vineyard.

Another stop was made at the farm of M. A. Petrea, Concord # 3, where a grapevine was pruned to show the proper method of pruning vines. Also, a large apple tree was pruned here for Mr. Petrea.

J. P. Cox, Stanfield # 1, followed the recommendation made by Mr. H. E. Niswonger, Extension Horticulturist, upon visiting his orchard earlier in the year and seeded the alternate middles of his large apple orchard to cowpeas. The other middles were already seeded to lespedeza at time of Mr. Niswonger's visit. This system of orchard management of allowing every other middle to remain in lespedeza during the summer has proven very satisfactory on other orchards in the county where it has been practiced for several years. In addition to conserving the soil this lespedeza middle furnishes a good place from which to operate the spray pump for the summer sprays as well as for removing the fruit from the orchard.

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Cedar rust damaged the leaves of Mr. Cox's apples more this year than any time in the past, causing them to shed very heavily. In spite of this most of the trees had a good crop of apples this year.

The Jackson Training School, Concord # 1, had an exceptionally fine crop of grapes this year which can readily be seen from the accompanying snapshot of young Murray, one of the boys from the school, who was detailed to assist with the vineyard. These grapes were well manured, fertilized with 5-7-5 fertilizer, cultivated and sprayed under the supervision of Mr. John Carriker, one of the officials of the school who has charge of the vineyard. From the  $\frac{1}{2}$  acre vineyard 8000 lbs. of grapes were gathered.



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Mr. J. O. Rowell, Extension Entomologist from State College, visited the county on November 13, and assisted in conducting demonstrations on the use of ethylene dichloride emulsion for control of peach tree borer. Demonstrations were given at the home orchards of E. B. Cline, Concord # 3, H. L. Cline, Concord # 4, and Jackson Training School, Concord # 1. This insect does considerable damage to young as well as old peach trees and other stone fruits. The old dichloride method which has been used by a great many of our orchardists could only be used early in the fall while temperatures were still high enough to cause the dichloride to become volatile. This new emulsion method can be used throughout the year with greater efficiency and less danger of injury to the trees. Several of our farmers have already begun using this method of control for peach tree borer.

While there are very few commercial vegetable growers in the county, practically every farmer has a home garden in which the standard vegetables are grown. Many farmers are trying to have a year-round garden, as nearly as the seasons will permit.

Several result demonstrations were conducted with sweet potatoes this year, but due to the prevailing dry season, results were not as good as expected, but are given as follows:

M. L. Barnhardt & Son, Concord # 4, planted 5 acres of the N. C. Strain of Porto Rico potatoes, applying 1,000# of 4-10-10 fertilizer per acre. Mr. Barnhardt harvested 1,000 bushels of sweet potatoes, which he estimated to be only about 2/3 of a crop. Of this amount approximately 10% are under market size. This is about 5% more small potatoes than usual.

J. E. Carter, China Grove # 1, planted 3 acres of N. C. Strain of Porto Rico, applying 200# acid, 200# potash, 200# of 5-7-5 and 100# of tobacco dust per acre. Mr. Carter harvested 750 bushels which he considers a fair crop for the season.

The Jackson Training School, Concord # 1, produced 2000 bushels of N. C. Strain of Porto Rico sweet potatoes on 10 acres. Approximately 700# of 5-7-5 fertilizer per acre, was applied. This is considered a fair crop for the extreme drought throughout this section of the county.



## Home Ground Beautification

Increased interest is being manifested in home ground beautification. This interest was greatly stimulated when on January 21 Mr. John H. Harris, Extension Landscape Specialist from State College, gave an illustrated lecture on this subject to 26 interested farmers and their wives at a joint meeting in Cabarrus. Mr. Harris splendidly contrasted the planting of shrubbery around the base of buildings and spot planting, showing that spot planting is much more desirable. He, also, stressed the frequent mistake made by planting tall growing evergreens under windows instead of at the corners of buildings.

Assistance has been given in beautifying the grounds of the consolidated schools in the county and the proper care of the shrubbery has been emphasized.

The County Agent is frequently called with regard to preparation of lawns, fertilization, kind and amount of seed to be sown, etc. These calls not only come from rural but city people as well. Pictured here is the lawn of Mr. E. Sauvain, Concord, which was prepared under the supervision of the County Agent. It shows a rich green covering from a seeding mixture of ryegrass, herds grass and blue grass made on top of the old sod and heavily manured and fertilized.



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The sowing of ryegrass on old lawns for a winter green is becoming very popular. The Jackson Training School, Concord # 1, this fall seeded 1,000# of ryegrass on the old sod around their numerous buildings, then topdressed with manure.

Several demonstrations have been started to beautify homes and public buildings the coming year.

## ANIMAL HUSBANDRY

## Dairying

Due to the ready market for fluid milk afforded by the rapidly developing industrial centers of Cabarrus, dairying has developed into the leading livestock industry and continues to grow. Interest in better bred cattle is on the increase. Each year a large number of purebreds are purchased by the dairymen. This year 10 registered Guernsey sires were purchased to add to herds or start new herds in the county.

Among this number was Quail Roost Maxim's Prince bought by A. L. Brown, owner of Clear Springs Dairy Farm, Concord # 1, to become senior herd sire of Clear Springs large Guernsey herd. This bull was sired by High Point Prince Maxim with 58 A. R. daughters and 7 A. R. sons. His dam, Landmark Princess May Rose, has a record of 14,762.5 lbs. of milk and 863.5 lbs. fat in Class A. He is a brother to Q. R. M. King, non chief sire at Quail Roost Farm. Besides being a well bred bull he has the following show record: Grand Champion bull 1934 N. C. Field Day and Show; 6th. prize Age bull National Dairy Show 1936; Member of 1st. Produce of Dam at (1) Waterloo Dairy Cattle Congress 1936, (2) Canadian Royal Winter Fair, Toronto, 1936; Member of 2nd. Produce of Dam at National Dairy Show 1936; Member of undefeated get of sire that won at every important American and Canadian Show in 1936; Winner of Peer Challenge Cup.

The picture shows Bob Johnston, herdsman at Clear Springs, showing Quail Roost Maxim's Prince, while G. H. Cartner, Manager looks on.



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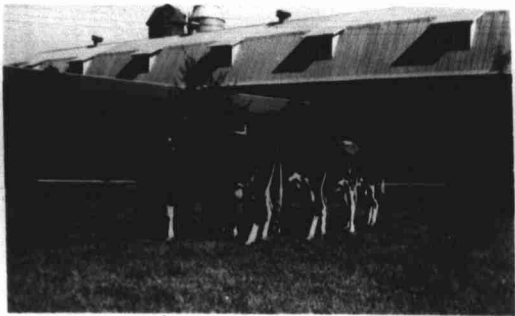
There were 31 registered Guernsey females placed in the county this year, of which number 20 were purchased from out of the county by leading dairymen.

At the Southeastern Guernsey quality sale held on May 1st. at Columbia, S. C. where 36 exceptionally good females were offered from leading herds in five states, Clear Springs Dairy Farm, Concord # 1, bought 7 of the tops sold.



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A very successful State Guernsey Sale was held at Salisbury on September 18th. at which time 33 animals were sold averaging \$227.72. Five of these animals were consigned by Cabarrus Guernsey breeders. At this sale Clear Springs Dairy Farm, Concord # 1, purchased 3 of the top animals sold. On the following day Clear Springs purchased one of the top females sold at the Chester County sale. The 4 animals are shown here together.



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On October 5th. A. L. Brown, owner of Clear Springs Dairy Farm, Concord # 1, attended the Virginia Guernsey Breeders Association Sale at Richmond, Virginia, where he purchased 5 of the leading animals sold.



# 40 # 16 # 36 # 43 # 9  
Richmond, Va.

During the summer Clear Springs Dairy Farm, Concord # 1, added another High Point Prince Maxim daughter to its herd, coming from the late Colonel Houston herd at Butler Island, Georgia. This makes a total of 6 daughters and 2 herd sires now in Clear Springs herd from this great bull. The continuous addition of such leading animals as these to this herd, has made it one of the outstanding Guernsey herds in the South and the leading young herd.

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Here we have a grandson of High Point Prince Maxie and son of a 717 B. F. Class G. daughter, Caumsett Taxpayer, used at Woodside Farm, Concord # 2, and 12 of his first daughters, showing excellent type and uniformity in breeding.



This is an example of the way the small breeders in the county are improving their herds through the use of an outstanding sire bred to the females they already have.

The production of silage for feeding dairy cattle has steadily increased. During the year, one octagon and two trench silos were built making a total of 17 upright and 12 trench silos in the county. L. N. Overcash, Kannapolis # 1, who built the octagon silo this year filled it with corn silage and plans to put small grain silage in it next summer to supplement his pasture.

Two dairymen in the county used small grain and molasses silage for supplementing summer pasture this year. This made the fourth successive year for Woodside Farm, Concord # 2, to use it, and 9 tons was ensiled from a 2.9 acre plot of wheat. From this 18

head of dairy cattle were fed all they would eat twice a day (on pasture) for 60 days.

The Jackson Training School, Concord # 1, filled one of their 12' x 35' silos and a half of another of equal size with wheat and molasses silage. For this they used 10 acres of good wheat, estimated to yield 30 bu. per acre, and 4 acres not quite so good. The better wheat averaged approximately 9 tons of silage per acre. To the wheat was added 2 gallons of molasses per load or approximately 25 lbs. per ton. Mr. J. H. Hobby, herdsman at the school, is well pleased with wheat silage as a supplement to permanent pasture, stating that the cattle liked it and produced well on it.

Small grain and molasses silage has gotten beyond the experimental stage and it is expected that many dairy-men who have empty silos will each year put in small grain silage to supplement their pastures until corn silage is ready.

With the opening of the Carnation Milk plants at Statesville and Albemarle, Cabarrus farmers are now offered an additional market for milk. Considerable interest is being manifested by the smaller milk producers and it is probable that milk routes will be established in the near future.



#### 4-H Guernsey Calf Club

The 4-H Guernsey Calf Club organized in 1935 with nine members, eight boys and one girl, has now grown to eighteen members consisting of fourteen boys and four girls. These boys and girls now have twenty-one calves.

Much interest is manifested by these club members throughout the year but the outstanding event of the year with them is their Club Show which is held annually just prior to the State Fair.

The annual 4-H Club Show was held on October 7th. at Brown's Sales Stable in Concord. Nineteen animals were entered by fifteen members, three of the club members being unable to attend.



Mr. F. R. Farnham, Dairy Extension Specialist, from State College acted as judge.

A large number of interested persons attended the show.

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Entries were made in all of the 6 classes, though as usual the larger number of entries were made in the younger groups. From the winning animals a grand champion was selected, which went to a Sr. yearling owned and exhibited by Grace F. Barrier, Mt. Pleasant, # 1, as pictured below.



As usual cash prizes were awarded the exhibitors in the Show in the order of their placings. However, an added feature at this particular event was the generosity of Mr. A. L. Brown, owner of Clear Springs Dairy, and one of the outstanding Guernsey breeders of the South, who, present at the close of the show stepped forward and gave each club member present an extra dollar.

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Immediately following the Show 8 of the winning animals were taken to Raleigh to be entered at the State Fair in competition with other county 4-H Club animals.



While two 4-H Club boys remained in Raleigh the entire week of the Fair six others went down on Wednesday to see the 4-H Guernseys judged. Although Cabarrus held 4th place in county groups she was seriously handicapped in not having animals to show in two of the six classes. However, it is worthwhile to note that all calves owned and exhibited by Cabarrus Club members have been bred and raised in the county, and the majority of them by club owners.

## Swine

Interest in purebred swine continues to grow among the farmers of the county. Each year finds new breeding stock being brought in and new herds being started. Farmers are finding it profitable to sell their surplus grain thru hogs. Also, due to the early breeding and rapid increase they find swine production to be one of the quickest types of livestock to get into and get out of without much loss. Although good fences are necessary, housing and feeding arrangements are less expensive and more of a temporary nature than for other types of livestock. This is evidenced by the fact that during the year seven choice males and eleven females, all registered Berkshires, were placed in the county, and ten of them went to start new herds. Of this number nine were purchased from leading Berkshire breeders in South Carolina.

R. O. Caldwell and son, Concord # 2, one of the oldest and largest swine breeders in the county, purchased a choice registered Berkshire male and female from Clemson College to add to his large herd. Mr. Caldwell is a firm believer in the addition of new blood from time to time and realizes from his experiences that it pays to do so.

Paul Barahardt, Concord # 4, who is becoming one of the leading Berkshire breeders in the county purchased a choice registered male this year from an outstanding Berkshire breeder in South Carolina to add to his herd. Paul and his father, M. L. Barahardt, Concord # 4, each have a good herd of Berkshires, and produce pigs for sale either as feeder pigs or for pork. They have also sold quite a few for breeding stock. Both Paul and his father use self-feeders and temporary pastures enclosed with electric fence for growing out their pigs. They find this the most satisfactory way of feeding their hogs a balanced ration.

Quite a number of self-feeders were built this year for feeding hogs and good results reported. Farmers are finding it profitable to feed their surplus grain to hogs. Among them was Ralph Morrison, Concord # 4, who fed out 12 shoats on a self-feeder to a weight of 220 lbs., which when sold early in March topped the Charlotte at \$7.20 per 100 lbs. These shoats were fed home grown corn supplemented with fish meal and meat meal. Mr. Morrison states that he made a nice profit by marketing this corn through hogs over selling it as grain. Mr. Morrison now has another group of pigs being fed out in a similar way to utilize his home grown feeds.

Parasite Control has received considerable attention

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throughout the year. Many farmers are becoming conscious of the fact that internal parasites are taking a heavy toll of the feed being given their hogs and are desirous of learning how to rid them of these parasites.

On January 20, 1939, a "pig-worming" demonstration was held at the farm of A. M. Penninger, Mt. Pleasant #1, and 15 pigs were wormed by the capsule method. Twenty three farmers from that section attended the meeting and showed much interest by asking questions and taking part in the discussions pertaining to swine management, including better breeding, housing, feeding balanced rations, pastures and parasite control.

The following picture shows W. H. Williams, Assistant County Agent demonstrating the capsule method of worming pigs at meeting held at farm of A. M. Penninger, Mt. Pleasant #1.



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Disease control is a paramount problem in Cabarrus at all times. Kannapolis, one of the largest unincorporated towns in the world, affords a ready market for hogs to be shipped in over night resulting in threatened outbreaks of cholera continuously. Only constant and ready attention prevents it from spreading among nearby farmers.

While there are but few farmers in the county breeding hogs on a commercial or semi-commercial basis, practically every farmer keeps a few hogs in order to produce his home supply of meat.

## 4-H Club Pigs

One of the most interesting phases of 4-H Club work in Cabarrus county this year, was the further development of purebred Berkshire hogs. This was made possible by Sears, Roebuck Co. of Charlotte, through an essay contest, conducted by the company. This contest was open to all 4-H Club member of Cabarrus county and quite a number entered from each club.

The subject of the essay was "The Advantages Received from the Cow-Hog-Hen Plan of Farming". As a reward for the best essays submitted, eight registered Berkshire gilts were given to the eight boys writing the winning essays. In these essays, the boys brought out the benefits a farmer receives from having pigs, hens and cows on his farm. This contest will be conducted on the order of a "chain" contest. The winners of the contest each year will give a pig from their first litter, to be used as prizes in the contest the following year.

Much interest was shown in this work in each club and in time it will prove to be very valuable. The following boys wrote the winning essays: Hayden Vanderburg, Concord # 4 from the A. T. Allen Club; Hoy Moss, Concord # 3 from the Cline School club; Billy Ray Russell, Concord # 1 from the Harrisburg School club; Joe Ben Black, Midland # 1, Bethel club; Earl Goodman, Concord # 2, the Winecoff club; J. C. Wallace Jr., Davidson # 2, Odell club; Reece Alexander Klutts, Rockwell # 1, Mt. Pleasant club; John Scott, Mt. Pleasant # 1, Mt. Pleasant Club.

Seven of the eight winners of the contest and their fathers attended a banquet in Charlotte on Friday night, May 5th, 1939. This banquet was given by Sears, Roebuck and Company as the climax of the "Cow-Hog-Hen" contest. Approximately 150 attended this banquet. For many of the boys this was the first banquet they had ever attended, therefore it was not only educational but enjoyable as well. Some very inspiring speeches were made encouraging the boys in their farm life.

The real highlight of the contest, for the Cabarrus county boys, was really receiving their registered Berkshire gilts. This was carried out at a meeting of 30 interested parents and friends at the home of the County Agent on June 2, 1939, at which time Mr. W. C. McArthur, Manager of Sears, Roebuck and Company of Charlotte, was present to meet and talk to the boys prior to delivering the pigs to them.

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The picture shows Mr. McArthur with hat in hand talking to the group.



Here we see the Assistant County Agent ready to deliver pigs to boys.





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Each pig was weighed when given to the boys and has been weighed at intervals three times since by the Assistant County Agent. This aroused much interest in the boys as they anxiously looked forward from one weighing until the next, each doing everything possible to make his pig show a good gain.

Record of weight of 4-H Club pigs with dates of weighing.

	Pigs wt. 6-2-39	Pigs wt. 7-7-39	Pigs wt. 8-8-39	Pigs wt. 10-9-39
Hayden Vanderburg	76#	94#	165#	280#
Earl Goodman	85#	120#	169#	253#
John Scott Jr.	49#	106#	158#	
Billy Ray Russell	36#	72#	122#	234#
J. C. Wallace Jr.	57#	98#	168#	278#
Reese A. Klutts	44#	66#	100#	166#
Joe B. Black	53#	65#		
Hoy L. Moss	50#	78#	121#	199#

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Early in October, the pigs were weighed for the last time. As two of the best pigs were to be exhibited at the Southern States Fair in Charlotte, Mr. R. O. Caldwell, of Concord # 2, a local Berkshires breeder, was asked to assist in selecting the two pigs. The pigs owned by Hayden Vanderburg, Concord # 4, and Earl Goodman, Concord # 2, were selected to go. These pigs were entered in competition with a like number of pigs entered from five other counties participating in the Sears "Cow-Hog-Hen" contest and made a good showing. The pig owned and exhibited by Hayden Vanderburg ranked second, while the one owned and exhibited by Earl Goodman, ranked sixth. These pigs were also shown in the open class of Berkshires at the Fair where the Vanderburg pig took second place and the Goodman pig third.

Each boy has submitted a written summary of the record he has kept of his pig project. These summaries will be mailed to Mr. McArthur of Sears, Roebuck and Company, in order that he will have an estimate of the result of his efforts to help the farm boy. This is to be an annual occurrence in Cabarrus in the future and the 4-H Clubs of Cabarrus owe much to Sears, Roebuck and Company for the beginning of an outstanding project.

Two of these summaries follow:

#### 4-H Pig Project

By

Reece Klutts

I have enjoyed some of the happiest days of my life as being a 4-H Club member for the past two years. I began my club work in school in 1937-38, with one and one-half acres of Coker's Strain # 100 cotton. I had a profit of \$75.00, which was a great success I thought. I have put the money in the bank and am planning to buy a purebred registered Guernsey heifer with it later.

In the year 1938-39, I entered an essay contest with two other boys from our club. This contest was sponsored by the Sears, Roebuck and Company of Charlotte, N. C. The subject of the essay contest was the "Cow-Hog-Hen" plan of Farming. I won first place with my essay in our school and another of our club members won second place. As a reward for writing the best essay I was given a registered Berkshire gilt, of which I am very proud.

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On June 2, 1939 I was given my club gilt, which had been purchased from Mr. Paul H. Barnhardt of Concord # 4. It was farrowed April 4, 1939. At the age of eight weeks, she weighed 44 pounds. My pig's name is Klutta's Dairy Mae and is purebred and registered. I am raising my pig by feeding it by hand. I have a good farrowing house with guard rails. My pig runs in a one-acre pasture with plenty of water and shade.

Feeds that I have bought for my pig are bran, shorts, and fish meal while the home grown feeds are wheat, oats, barley, rye and corn.

I give my pig 3 gallons of milk daily. This milk is used to make the ground feeds into a thick slop. I value the feed given to my pig at \$12.15.

My Assistant County Agent, W. H. Williams comes to weigh my pig once a month. On June 2, 1939, when I got my pig, she weighed 44 pounds. Until July 7, she had gained 22 pounds then weighing 66 pounds. By August 9 she had gained 34 pounds, weighing on that date 100 pounds. She gained more at each weighing and on October 19, she weighed 163 pounds, gaining 63 pounds. At the present time I would judge my pig would weigh 200 pounds making a total gain of 156 pounds, which I think is very good.

My pig is free of lice and cholera and has not seen a sick day since I have had her. I have already had people to speak for one of her pigs when she farrows.

I think the 4-H Club has gotten me off on the right start toward making a good farmer, and that it will mean more to me and other club members in the future.

I want to thank the 4-H Club and Sears, Roebuck and Company for what they have done for me.

#### 4-H Pig Project

By  
John Scott, Jr.

When I won my pig I bought some wire and put up a lot. I also made a self-feeder. The wire and feeder cost me \$12.50.

My pig was farrowed March 11, 1939. When I got her, she weighed forty-nine pounds. I got her on June 2, 1939.

Feed for first two months bought June 8th., 12 $\frac{1}{2}$  pounds fish meal, 15 pounds wheat shorts, 15 pounds ground corn, cost \$1.35. This feed was fed in self-feeder. Gain first month fifty-six pounds, gain second month fifty-three

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pounds. While she was on the self-feeder, she ate two bushels of corn costing \$.60 per bushel.

At the beginning of the third month, I took her off the self-feeder and began to feed her by hand.

Feed bought September 22, 1939; 61 lbs. wheat and oats ground. This was fed in a slop, cost \$1.25. Feed bought October 3, 1939; 68 lbs. of ground wheat and oats. This was fed in a slop, cost \$1.50. By this time she had eaten a bushel of corn fed by hand costing \$.60. She was too fat, so I cut off the corn.

Feed bought October 14, 1939; 75 lbs. wheat and oats. This was ground and fed in a slop, cost \$1.35. Feed bought October 24, 1939; 75 lbs. oats and corn. This was ground and fed in a slop, cost \$1.10. Total cost of feed up to date \$21.46.

## Workstock

The farmers of the county continue to show their interest in the production of workstock. This is evidenced by the fact that 3 jacks were purchased early in the year, making a total now of 7 good jacks in the county. These are Missouri bred jacks, and besides being excellent individuals they have plenty of size and quality. The oldest of the 3, a 4 year old weighing approximately 1,100 lbs. was purchased by Cannondale Farm, Concord # 1, as pictured here, while a 3 year old, weighing approximately 1,000 lb. was bought by J. J. Honeycutt, Gold Hill # 2, and a 2 Year old whose weight is estimated at 850 lbs. was bought by W. A. Brown and Brother, Concord.



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Farmers of the county have continued to buy good mares from which to produce their farm workstock. During the year 125 colts were dropped and 320 mares bred to foal next year.

It is a common sight throughout the county now to see a good colt following its mother at work or on pasture.



## POULTRY

## Breed Improvement

Cabarrus county farmers are realizing more and more each year that a good farm flock of poultry is not only an important factor in the production of staple food products, but also in increasing the revenue from the farm. Most farmers now appreciate the fact that a well kept flock pays as well relatively, as most other branches of farming, and as a result interest in farm poultry raising has become widespread.

Poultry farming has been practiced over Cabarrus county for years, however, there has been a noticeable increase in semi-commercial poultry production during recent years, due to the fact that it fits into the diversified system of farming, practiced in this county.

The farmers of this county by virtue of their location and climate, are splendidly situated for the production of fowls and eggs. The late falls and mild winters makes the production of eggs an easy matter when prices are high. On many farms throughout the county the money derived from the sale of poultry and eggs, buy the groceries and clothes for the entire family.

Poultrymen throughout the county are interested in and are demanding birds with a high breeding record. They realize more each year that birds bred for production pay. This is especially noticeable in the fact that two years ago 800 birds, Parmenter Reds, were bought from one of the outstanding breeders in the country. These poultrymen were so well pleased with the results that all except one, ordered chicks from this same breeder this year and this one poultryman hatched his own eggs. This year 18 farmers combined their chick orders and ordered 3475 high bred Parmenter Reds chicks through the County Agent's office. A savings of \$69.50 was realized by ordering cooperatively.

There was a total of 10,000 high bred blood tested chicks ordered directly from outstanding breeders of the country through the County Agent's office at a price ranging from 15¢ to 30¢ each, with a total saving of nearly \$200.

Over 90% of the chicks purchased were either Leghorns or Parmenter Reds. A very small number of these were grown out and sold as broilers while the majority of them are being kept for layers or breeders.

Mr. Fred Taylor of Kannapolis, who owns a local hatchery, sold for the first time this year, blood tested chicks under State supervision.

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With the quality of chicks purchased over the county last spring, the poultrymen should be able to secure high bred chicks at a much lower cost next spring, by hatching their own eggs.



## Broiler Production

Mr. F. A. Barnhardt, Concord # 3, finds it profitable to secure baby chicks early in the spring to produce an early supply of broilers. He realizes that prices are usually better during May, and he finds it a profitable way to use his brooder houses before they are needed to raise his fall layers. This eliminates some of the overhead cost, as well as provides work at a season when the weather is usually bad for general farm work.

The following is a summary of Mr. Barnhardt's broiler records for 1939. At convenient intervals throughout the year Mr. Barnhardt bought a total of 3,850 day old chicks to be grown into broilers. Of this number he lost 300 mostly out of one lot, and kept 750 for layers. He values the layers at \$1 each. The broilers were sold by the bird rather than by the pound at an average price of 57¢ each. The total cost of production, not including labor amounted to \$1399. This allowed Mr. Barnhardt a profit or labor income of \$947 on the project.

The demand for broilers being greater than the supply grown out, Mr. Barnhardt bought 3223 broilers from other poultrymen and sold them on his retail route. The average cost per bird was 41¢ while the average selling price was 58¢ per bird. In this project he made a labor income of \$847.91. Mr. Barnhardt sells all his broilers dressed and dressed. He says that since he started selling dressed poultry last year, he can no longer sell live birds.

Another outstanding broiler project was carried out by two 4-H Club boys, Frankie and Tommie Hiblock of Concord.

Their operations was based on buying 50 day old chicks per week, which they grew out in a battery brooder. They did not keep cost of production for individual lots but did keep a total cost from start to finish.

The boys bought 900 chicks at a cost of \$75.50. The value of broilers sold or used at home was \$341.90. The total cost of feed and fuel was \$206.60. A labor income of \$133.50 was realized.

The first of January 1939 Leonard Hatchery of Charlotte, N. C. put on a "Livability Contest" and offered a series of three prizes. The Hiblock brothers entered the contest with four lots of chickens and at the close of the contest they won the first prize of \$100.00 in cash and also the third prize of \$25.00 in merchandise.

## Capon

What started out as a hobby with J. C. Carriker, Harrisburg # 1, is now turning into a source of farm income. For several years Mr. Carriker has been growing a few capons, but finding it a profitable as well as an interesting hobby, he decided to increase his flock last year. This was done and he grew out 150 fine capons that averaged 9 lbs. each. These capons were sold at 27¢ per pound, which gave Mr. Carriker a sale value of \$364.50. The total cost of producing these capons, including amount paid for chicks, mash and grain fed was \$128, which gives Mr. Carriker a labor income of \$236.50.

Mr. Carriker thinks there are great possibilities in the growing of capons, especially if the general public will only realize the true value of capons as a producer of meat in the highest flavor.

Pictured is Mr. Carriker's prized flock of capons.



## Flock Records

For several years a number of poultrymen in the county have been keeping accurate records of costs and receipts on their flocks. These reports are sent to the County Agent's office monthly for checking then forwarded to the Extension Poultry Department of State College for summarizing.

According to the Annual Summary of poultry records for the entire State this year Cabarrus had more poultrymen keeping demonstration flock records than any other county in the State. It showed poultrymen from 84 counties keeping records on 359 flocks, 21 of which were from Cabarrus.

From the Annual Summary it may also be noted that the average number of eggs produced per bird in the Cabarrus flocks was 191 or 23 above the State Average, while the average return above feed cost per bird was \$2.16 or 21¢ above the average for the State.

The full county summary as compared with the State summary for the past year is as follows:

Summary of 1938-1939 Demonstration Flock Records

	County Average	State Average
No. farms keeping records	21	359
Total No. birds all farms	3,862	66,147
Total birds per farm	185	184
Total eggs produced all farms	739,160	11,121,265
No. eggs per bird	191	168
Percent production	52.3	46.0
Feed cost per farm	351.42	516.99
Feed cost per dozen eggs	.112	.123
Sale price per dozen eggs	.245	.266
Value of eggs produced per farm	729.35	656.07
Return above feed cost per farm	397.91	341.08
Return above feed cost per bird	2.16	1.95

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Outstanding among the flocks on which records were kept in 1939 was the flock of White leghorns owned by Mrs. T. E. Query, Harrisburg # 1. While this is the first year that Mrs. Query has kept accurate cost of production records on her poultry flock, she is well pleased with the information gained and expects to continue record keeping.

The report on Mrs. Query's flock for 1939 as summarized by the State Extension Poultry Department is as follows:

Average no. birds	102
No. eggs produced	26592
No. eggs per bird	261
Total feed cost for year	\$212.37
Sale price per dozen eggs	\$ .247
Total value of eggs produced	\$647.57
Total return above feed cost	\$335.20
Return above feed cost per bird	\$ 3.28

Several 4-H Club members chose poultry as their project for 1939. Of this number two submitted their flock record reports to the County Agent's office monthly for checking. The flock of Farmerter Reds belonging to Arthur Lee Klutts, Mt. Pleasant, made an unusually good record. Arthur had his flock blood-tested under State supervision and sold eggs for hatching.

A summary report of his enterprise is given below:

Average no. birds	60
No. eggs produced	13304
No. eggs per bird	222
Total feed cost	\$150.54
Sale price per dozen eggs	\$ .316
Total value eggs produced	\$361.24
Total return above feed cost	\$220.70
Return above feed cost per bird	\$ 3.67

From these demonstration flock records one may readily see why farmers of Cabarrus county are manifesting interest in the poultry industry. With the ready market for poultry and poultry products furnished by the industrial sections of the county, farmers are rapidly learning that with the proper care, poultry may serve as an important source of income on the farm.

## Disease and Parasite Control

The poultrymen of Cabarrus county find one of the most important and persisting problems is combating diseases and parasites, which menace their flocks. Parasites and ailments cause high mortality in their flocks, which affect the egg production and stunt the growth of the birds affected.

The poultrymen realize that sanitation is the important factor in keeping down diseases and parasites among poultry. Poultry houses and yards must be cleaned regularly and systematically. The runs should be changed each year and the old ones put into cultivation. The drinking vessels and feeding equipment must be cleaned and sterilized regularly.

Since most of the chicks over Cabarrus county are from blood tested flocks very little pullorum disease has been noted.

Approximately 5,000 chickens were vaccinated for chicken pox and treated for worms through the County Agent's office.

The most common treatment for mites used in the county is a mixture of equal parts of kerosene and burnt cylinder oil. The most effective and common method used for controlling lice is painting the top surface of the roosts with undiluted 40% nicotine sulphate. The painting is done for three consecutive nights within half an hour before the chickens go to roost and the fumes of the nicotine sulphate kill the lice.

Below is a picture of two 4-H Club boys, Frankie and Tommie Niblock, Concord, vaccinating their birds for chicken pox.



## Houses and Equipment

In Cabarrus county, poultrymen have found that adequate housing and equipment are essential requirements in successful poultry production. The modern poultry houses, in this county have been carefully planned and properly constructed to maintain the health of the flock and to provide comfortable quarters during the colder part of the year, when the greatest profits are made from egg production.

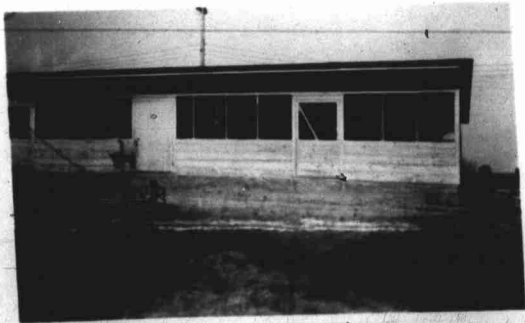
There are various designs of poultry houses in Cabarrus county, some have been built specifically for poultry, while some are remodeled farm buildings. These buildings vary in size, construction, and type of roof.

Every poultryman has tried to select a location for his house that is high, well drained, and sheltered from the cold winds. Practically all poultry houses over the county face south, in order to obtain a maximum amount of sunshine within the houses and to protect the birds from the cold winds.

Eighteen poultry houses have been constructed in the county during the past year, consisting of range shelters, brooder houses and laying houses.

All the laying houses are stationary and range in size from a 20'x20' house, accommodating one hundred birds, to a three story house 28'x56', that has a capacity of one thousand birds.

The common type poultry laying house they may be seen on a large number of farms in the county where poultry is being considered as an income producing enterprise is shown below.



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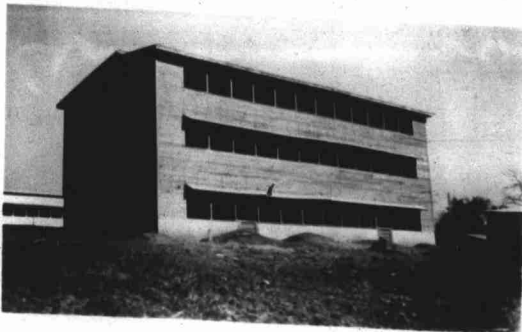
As the poultry industry expands in the county a few farmers are enlarging their flocks and going into it on a semi-commercial basis. In order to keep down overhead costs of buildings and labor, they are constructing types of poultry houses as shown below.



Two story poultry laying house constructed by Mrs. R. F. Kindley, Mt. Pleasant # 1, in 1938.

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Three story poultry laying house just recently completed by W. H. Williams, Harrisburg.



In some of the houses the floors are concrete, which prove very economical and satisfactory. These floors are permanent, dry, easy to clean and practically ratproof. Wood is the material used to construct the majority of the houses.

Mr. F. A. Barnhardt, Concord # 3, one of the leading poultrymen of the county constructed a laying house 24'x56'. This house has two rooms 24'x24' and one 6'x24' on the main floor. The small room is used as a feed room. This house was built on a slope and with very little excavating a room 24'x32' was built as a basement.

Most of the laying houses in the county are well equipped. Aside from regular equipment some of them have automatic water fountains and electric lights, with time clocks for turning on the lights in the early morning.



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The brooder house most commonly used in the county is of the small shed roof type, accommodating about three hundred chicks. These houses are built only high enough to accommodate the height of the worker. The walls and roof are tightly constructed to keep out drafts. Ventilation is provided through the use of small-covered window frames or a substitute for glass is used, which allows the ultra-violet rays of the sun to penetrate.

The types of brooder used are wood, kerosene and electric with wood-burning type most common.

There are more home made brick brooders used than any other type. These have proved to be both economical and satisfactory. However, electricity for brooding purposes is rapidly coming into use where power is available. With electricity within reach of many rural homes and at a very reasonable price electric brooders should prove practical, as well as economical. One factor that makes electric brooding appeal to the Cabarrus poultrymen, is the convenience and ease of operation. Once the equipment is installed and regulated to the proper temperature, it requires no more attention.

Four electric brooders were purchased through the county agent's office to be used for demonstration purposes the past season. Those buying these brooders were; Mrs. G. L. Barrier and Mr. L. B. Barrier of Mt. Pleasant and W. H. Williams, of Harrisburg.

These poultrymen were well pleased with the results obtained from using these brooders. The cost of operation was no more than the cost of the oil burning brooders and one hour was saved each day that had been spent in cleaning the oil type.

On the following page is a chart giving the results obtained from the four electric brooders.

	KWH	No. of Chick	KWH per chick	Cost per Flock	Cost per Chick	No. of Weeks	Average Outside Temperature	Wattage of Brooder
Mrs. G. L. Barrier	182	300	.50	\$3.80	\$1.26	8	55.4°	440
Mrs. G. L. Barrier	216	400	.54	\$5.41	\$1.35	8	55.4°	660
Mr. L. B. Barrier	156	300	.50	\$3.90	\$1.30	8	55.4°	440
	(Cost	of	current	was	estimated	at 2 1/2		per KWH)
W. H. Williams	156	300	.50	\$3.90	\$1.30	4	54.0°	660
W. H. Williams	144	400	.36	\$3.80	\$.90	4	58.6°	660

### The World's Poultry Congress

A number of interested poultrymen from Cabarrus county attended the World's Poultry Congress held July 28th. through August 7th. in Cleveland, Ohio. Those attending the Congress were Mr. and Mrs. Paris Kidd, Concord, Mr. and Mrs. R. F. Kindley and daughter, of Mt. Pleasant, Mr. M. R. McLeod, Vocational Teacher, of Mt. Pleasant, Arthur Klutts, Gold Hill # 2, and W. H. Williams, Assistant County Agent of Cabarrus county.

Several hundred thousand poultry breeders, fanciers, and farmers from all over the world attended the Congress, called by Cleveland Newspapers and Congress authorities, "the greatest agricultural event ever held in the history of the world".

Addresses by world-famous poultry authorities were heard during the Congress, some of which were: Dr. Ernst Mangold, of Germany, who spoke on "Poultry Nutrition and its Contribution to the Development of the World's Poultry Industry". Professor R. C. Punnett, of England, who spoke on "Contributions of Genetics to the World's Poultry Industry". Dr. H. C. L. E. Berger of the Netherlands who spoke on "World-wide Significance of Poultry Diseases and their Control", Dr. E. W. Benjamin, an American, discussed developments of marketing and their influences on the industry.

Many other notable speakers from all parts of the world talked on various subjects pertaining to the development of poultry.

Professor James E. Rice, General chairman of the congress and his scores of assistants made the seventh World's Poultry Congress and event long to be remembered in the annals of the industry with the seven-fold purpose of promoting international friendliness through mutual poultry interest, of pooling the best available world knowledge on the subject, of encouraging more scientific research in producing and marketing poultry products, of improving standards of flocks, of graphically showing progress already made in the industry, of increasing popular demands for poultry products, and of affording to poultrymen an opportunity of meeting to discuss their common problems.

The Congress in its entirety was most interesting and highly educational, while the demonstrations and exhibits were almost beyond human conception.

## AGRICULTURAL ENGINEERING

### Soil Conservation

Terracing has had an important place in soil conservation activities in Cabarrus county. This is especially noticeable since the county bought a Terracing Unit in March 1936.

The Cabarrus farmers realize that terracing is but one of the means to attain erosion control. When properly constructed, maintained and used in conjunction with the best possible cropping practices, terraces become one of the best known methods of soil conservation. However, terraces alone cannot substitute for vegetative cover, neither do they alone add fertility to the soil but merely hold the soil in place while it is being improved by other means. When used in combination with a soil building rotation, contour cultivation, or strip cropping, terraces save fertile topsoil. The discharge from a properly designed and protected terrace with a good sod, will be almost clear even after a heavy rain.

Due to the bad weather in December, January and February, the county Terracing Unit was unable to do any work until the latter part of March 1939, but has been working steadily since that time. Work is always scheduled for several weeks in advance. The dry summer and fall has been very favorable for work of this kind and 67 miles of good terraces have been built.

Terracing is not the only type of work done by the County Unit. In addition to the terraces which is also used for drainage work they have a subsoiler and heavy disk harrow and considerable time is spent operating these on farms not equipped for such work. Farmers are beginning to realize that subsoiling is an excellent way to conserve the rainfall and at the same time assist in checking erosion.

Since March 23, 1939, the following work has been done by the County Unit.

Acres terraced	1,070
Linear feet terraced	358,183
Hours of terracing	804
Hours of road work	119
Hours of other work	483
Hours of road travel	168
Total tractor hours	1,574
Number of farms on which work was done	138
Number of farms--terracing	71
Number of farms--road work	48

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Number of farms--heavy disking	37
Number of farms--drainage work	24
Number of farms--gully work	20
Number of farms--pulling stumps	9
Number of farms--sub-soiling	5
Number of complete jobs done	214
Per cent of time spent in terracing	51.1
Per cent of time spent in road work	7.5
Per cent of time spent all other work	30.7
Per cent of time spent in road travel	10.7

The greater part of the time the County Unit has worked, has been spent in terracing, which is to be expected. The largest terracing job was done on the farm of Dr. T. W. Spencer, Concord # 1. This farm was owned by Mr. Joe Cannon of Concord at the time of the terracing, and was managed by Dr. Spencer. However, Dr. Spencer now owns the farm jointly with Mr. Cannon.

Mr. Cannon had recently purchased this badly eroded farm and had fenced it. It had in the past been terraced but the terraces had been neglected, which was causing the waste of much soil. Even though Dr. Spencer plans to keep his farm in pastures, he thought it profitable to have it terraced. Approximately 4 miles of terraces were built at a total cost of \$208. Dr. Spencer expressed his satisfaction with the work done on his farm by the County Outfit and feels that in time it will be well worth the money spent.

Another outstanding job was done on the farm of Mr. Zeb Barrier, Concord # 4. Mr. Barrier had a badly eroded field containing approximately 14 acres, which had been disbanded due to gully erosion. The gullies were scraped shut and the land terraced by the County Outfit. 6,540 feet of terraces were built at a total cost of \$4.45 per acre. Mr. Barrier was well pleased with the work and stated that he would not have been able to put the field into condition suitable for cultivation with his small tractor and equipment.

Mr. P. W. Lady, Concord # 1, purchased a very badly eroded farm, joining his present farm. This farm was really a sore-eye to his place. It had practically been abandoned for farming purposes. The County Terracing Outfit did a \$119.25 job for Mr. Lady on this farm. Gullies were dragged shut, hedges cleaned up, trees pulled down and ditches dragged, aside from this 7,800 feet of terraces were built. All of this tends to make the farm more attractive as well as more suitable for farming purposes.

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R. M. Miller, colored, Concord # 3, has recently purchased a farm through the Farm Security Administration. The Administration had secured a loan of \$150 for soil conservation purposes only. The county unit is going to shape up the fields, drag gullies shut and terrace this farm. Already 4,200 feet of terraces have been built, quite a bit of ditching done and some road banks dragged back, which helps the general appearance of the farm. Due to the fact that crops are still on part of the land and Mr. Miller does not get possession of the land until the first of the year, we were unable to complete the job. In the near future this job will be completed as outlined.

Mr. H. L. Cline, Concord # 4, notified the County Outfit to subsoil his seven acre, young apple orchard. Before we left Mr. Cline's farm we had, terraced 71 acres or 18,000 feet; sub-soiled approximately 9 acres; diked harrowed 9 acres; built a new farm road; dragged gullies shut and made one big ditch. The number of hours spent on Mr. Cline's farm was 86 1/2 hours at a total cost of \$166.50. This is just an example of many farmers who have more work done than originally planned, once they see the outfit in operation and realize the savings in time and money they are receiving.

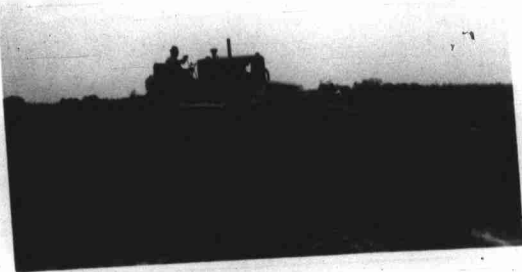
The primary job of the County Terracing Outfit is to build terraces. However, at a certain time during the year, when farmers have most of their land planted either in corn, cotton, or small grain, there is very little terracing to be done, and many jobs other than terracing can be done. Some of these are harrowing, sub-soiling, pulling stumps and trees, dragging ditches shut, and cleaning hedge rows.

A hedge row 800 feet long with an average width of 15 feet was cleared away on the farm of Mr. Chas. E. Boger, Concord # 4, by the County Outfit. In the course of several years honeysuckle vines, briars, thorn bushes, and young trees had grown up. Some of the trees were 10 to 12 feet high. In 3 hours all this was cleared away. This job would have required many days had it been undertaken by man labor alone.

Mrs. J. P. Allison, Concord # 2, one of the large land-owners of the county, had 14,830 feet of terraces built on her farm, last June, by the County Terracing Outfit. More time was spent in dragging the ditches shut, in order that the terraces could be built, than was spent in really building the terraces. Since this time the Cabarrus County Soil Conservation Association has added a bull-doser to its equipment which makes work, such as that done on Mrs. Allison's farm much easier. The work can be done in less

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time, which will be an additional saving to the farmer. We hope to reach more farms in the future with this time saver.



The above picture shows the bulldozer the first day of operation, November 8th, 1939, on the farm of H. L. Cline, Concord # 4, pushing shut an old farm road that had been in use for many years. This road was through a large field, and by closing it the two fields were joined making one large field.

Since the tractor used by the County Outfit is older and has been in such constant use the upkeep has been greater, yet during the year just closing a net amount of \$1,187.42 was cleared, enabling the Association to complete payment on the outfit originally purchased, amounting to \$5,225, and have a balance of \$341.35 which will be applied on purchase of "bulldozer" recently made. When this has been done the remaining indebtedness of the Association on December 1, 1939 will be \$635.68, to be carried over into 1940.

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The estimated value of equipment owned by the Soil Conservation Association of Cabarrus county on December 1, 1939 is \$2965.00, which consists of the following equipment:

Caterpillar tractor	\$1,100.00
Bulldozer	975.00
Heavy disk harrow	300.00
Terracer	300.00
Sub-soiler	175.00
Large trailer, used to move equipment	100.00
Small trailer, used to carry fuel etc.	<u>15.00</u>
Total	\$2,965.00



## Soil Conservation Service

Early in the year a series of group meetings were held to acquaint the farmers with the proposed Middle Yadkin Soil Conservation District which was later put to a vote in a Referendum held on February 11th, resulting in 82% of those voting favoring the organization.

As soon as the necessary formalities could be dispensed with, plans were made for the location of a CCC Camp in Cabarrus. On July 27th. at a meeting of the Concord Board of Alderman, County Commissioners and County Agent, plans were perfected for leasing the necessary land to the War Department to be used as a camp site. The site selected is very desirable and has access to water, lights, and sewage.

The CCC Camp moved to Concord on October 1st. and began operations immediately. It consists of 200 negro world war veterans manned by a staff of white technicians. To date Farmer-District agreements have been written on 31 farms containing 4,460 acres, additional agreements are being written as rapidly as the necessary details can be worked out. With this enrollee labor the Camp promotes various types of work on the farms, with land improvement and soil conservation as the underlying motive.

The following picture shows a demonstration of bush dams built on badly eroded land for soil conservation on the farm of J. W. Beckham, Harrisburg # 1. Mr. Beckham, shown in picture, is well pleased with the work being done on his farm.



## Rural Electrification

Since the expansion of rural electrification a few years ago, Cabarrus has increased its miles of rural lines rapidly. In 1935 there were only 20 miles of strictly rural electric lines serving 120 customers. Today there are 162.6 miles serving 1074 customers. In 1937 Cabarrus ranked 44th. among the 100 counties of the state in number of miles, while in 1939 she ranks 39th. in number of miles but 33rd. in number of customers on her rural lines.

Aside from the many conveniences made possible in the home as a result of rural electrification, it is being used to lift many a burden from the farmer's shoulders and lessen his hours of toil. Pumping water for livestock is a common practice wherever electricity has been installed. Poultrymen are realizing that brooding their chicks by electricity means considerable saving in time and labor at no greater expense, while many dairymen are modernizing their business by installing sterilization and cooling systems.

Early in the year, A. F. Quay, Harrisburg # 1, installed a complete electric sterilization and cooling unit which he finds not only to lessen the amount of work required every day on a dairy farm, but to greatly increase efficiency.

## Machinery and Equipment

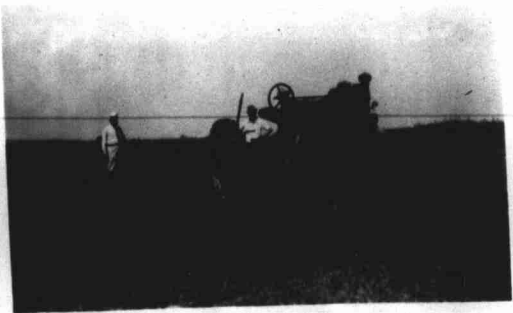
The farmers are rapidly realizing that improved machinery and farm equipment is just as necessary in the cost of producing farm crops as it is in carrying on other business.

According to statistics Cabarrus with 566 tractors ranks tenth in the State in number of tractors being operated. While all of these are not being operated on farms, a large majority are, and more are being purchased annually by farmers for doing the heavy farm work.

In a tour over the county one can see many different types and models of improved machinery in operation. For example we present the mower being operated under three types of motivation.



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The farmers are purchasing better type farm equipment as fast as their incomes will permit. Among the number of better type machines and other farm equipment purchased this year by farmers in the county are:

Combines.....	8
Tractors:	
1. Crawlers.....	4
2. Wheel.....	36
Tractor Plows.....	12
Tractor Harrows.....	40
Disc Harrows.....	4
Drag Harrows.....	70
Bog Harrows.....	3
Mowing Machines.....	52
Grain Drills.....	13
Manure Spreaders.....	2
Planters.....	20
Riding Cultivators.....	6
Farm Trucks.....	10

## AGRICULTURAL CONSERVATION PROGRAM

## I General

For a number of years the agricultural leaders of Cabarrus county have striven to make the county soil conservation conscious and to develop a system of farming not dependent wholly on one cash crop.

Realizing that to change and improve the system of farming in a county and to raise the standard of living on the farm was a longtime job, the County Agent a number of years ago began experimenting to find some crop which would be adaptable, cheaply grown, soil building, soil conserving, and suitable for feed for livestock. It was felt that such a crop would provide more and better feed for farm workstock and also be a basis for the growth of the dairy and beef cattle industry thereby affording another source of income on the farm. This would aid materially in the two-fold purpose set up of building and conserving the soil and raising the standard of living on the farm.

The result of this experiment and study was lespedeza for the county. Lespedeza in the county has fully justified itself in the two purposes for which it has been grown, conserving the soil and preparing the way for an increase in the livestock industry.

Giving great impetus to the purpose of conserving our soils and diversifying our crops so as to produce sufficient food and feed for the farm needs, the soil conservation program was inaugurated by the U. S. Department of Agriculture in 1936. The programs have greatly aided our efforts to educate the farmers of the county in soil conservation by adding a very powerful incentive, cash payments. Some producers who would not learn the value of soil building crops and terraces voluntarily have been led to learn their value by a desire for a government payment. In fact, we feel that one of the most valuable and lasting results of the soil conservation program will be the educational value that has been brought about.

In our efforts to administer the soil conservation program, we feel that we have made considerable progress in 1939 over previous years.

To begin with, our cotton allotments were in the hands of the farmers during the first week in December. This was of great advantage over 1938. The farmers knew their allotments in time to get any errors corrected

-2-

before planting time and with the early knowledge of their allotments were better able to comply with the program.

During December and January the office force was busy preparing applications under the 1938 program. A total of 1861 applications under the 1938 Soil Conservation Program were prepared and sent to the State Office. On the 1861 applications a total of 5134 checks were received during March and April, amounting to \$144,400.41, or \$77.69 per farm and \$46.07 per individual check.

During the first part of March the County Committee undertook to make an equitable division of the general allotment among the farmers of the county. The total general allotment to our county seemed to be adequate. But it was a rather difficult task to divide the allotment among the producers justly. The underlying principles on which the county committee apportioned the general allotment were acres planted to general crops the previous year, type of soil, number of families on farm, and farm needs for home consumption. The general allotments were mailed to the producers on the 15th of March in order that producers might know their allotment before corn planting time.

The first week in May the local committeeman set in each township and gave producers an opportunity to join the Conservation program by signing Forms ECR-516-N. C. At this time each producer was given an explanation of the Soil Conservation program as it applied to his individual farm. We feel that these meetings were very valuable in helping the farmers to better understand the program and to insure fuller compliance.

The farmers in the county seem to be well pleased with the soil conservation program in 1939. They will earn between 85 and 90% of their soil building allowance and the compliance on cotton has been better than ever before.

Under the 1939 program producers on 1976 farms in the county planted 12,226.1 acres of wheat, 20,438.8 acres of corn, 10,410.5 acres of oats, 481.4 acres of barley, 335.1 acres of rye, 8.6 acres of tobacco, 12,120.7 acres of cotton, 1,629.1 acres of other soil depleting crops. According to our first check of the county there were 28,211.3 acres of soil conserving crops alone and 36,551.8 acres of soil conserving crops in combination with, or

-3-

following depleting crops, making a total of 64,773.1 acres of land in soil conserving crops, or 67% of our total cropland.

The fact that lespedosa counted only  $\frac{1}{2}$  unit per acre toward reaching the soil building goal caused producers to increase their acres of winter cover crops and other conserving crops. In addition to the conserving crops shown above, we estimate that more than 2000 acres were sown to Kentucky Blue Grass, Italian Ryegrass, alsike clover, red clover, vetch, austrian winter peas, and alfalfa since that check was made.

In addition to the production of soil building crops, farmers interest in other soil building practices has increased. During the year 1,143 tons of lime was used, 347,908 linear feet of approved terraces made, and 12 $\frac{1}{2}$  acres of land reforested.

One of the most difficult phases of the conservation program is compliance. However, we feel that a better job of compliance was done in the county this year than ever before.

During the latter part of April and May the office force identified each farm in the county on the map. During the latter part of May, 20 supervisors and 5 rotometer operators were chosen and trained in handling photographs. We began actual work in the field the first week in June and completed field checking on the majority of farms by August 1st. By August 15th. the acreage on all farms had been computed by the rotometer operators in the office and farmers were immediately notified of their crop acreages.

The compliance work for the wheat price adjustment had already been done in January.

Records from our compliance check indicate that farmers made a greater effort to cooperate with the Soil Conservation program in 1939 than ever before. In 1938 there were 208 farms which were overplanted on cotton, while in 1939 only 114 overplanted and 83 of these destroyed a total of 99.9 acres of cotton to come into compliance, leaving only 31 farms in the county which were not completely in compliance on cotton. The total collection of taxes on 1938 penalty cotton to date amounts to \$1,019.33. We think that the taxes due on cotton in 1939 will be much smaller.



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## II Wheat Price Adjustment

The wheat price adjustment program was a new feature of the farm program. For the year 1939 we had 100 commercial wheat farms with a total allotment of 2,157.9 acres and 665 non-commercial wheat farms with a total allotment of 6,963.3 acres.

Since the wheat price adjustment program applied only to commercial wheat farms, these farms were checked in January. Of the 100 commercial wheat farms in the county in 1939, seventy-seven qualified for a price adjustment payment. The total wheat price adjustment payment for the county amounted to \$2,296.03.

One great obstacle to full compliance on wheat in 1939 was the fact that wheat allotments were not received by farmers before wheat sowing time.

However, for the 1940 program the wheat allotments were mailed the producers early in August in ample time for them to make plans for compliance. For 1940 we have 103 commercial wheat farms with a total allotment of 2,580.2 acres and 397 non-commercial wheat farms having a usual acreage above 10 acres with a total allotment of 6,051.2 acres.

We anticipate better compliance in 1940 among wheat farmers than in 1939 because of an earlier knowledge of allotments and better understanding of the program.

## III Wheat Crop Insurance

A new feature of the farm program for 1940 is the wheat crop insurance program. In preparation for the wheat crop insurance program we attended a meeting to study this program in Charlotte on June 17. After this meeting we chose 12 key wheat farms, representing the various sections of the county and secured the wheat yields on these farms for the past 9 years. On the basis of this data, crop insurance rates were set up in the county. Since the crop loss on wheat in Cabarrus county is very low, only 3 producers could be interested enough to take out wheat crop insurance in the county.

## IV Cotton Price Adjustment

One of the attractive features of the farm program is the price adjustment payment on cotton. The fact that complete compliance on cotton was required in 1939 to participate in the price adjustment payment was a great help in getting full compliance on cotton. The

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change of paying the CAP payment on the 1939 crop instead of the 1938 crop caused some confusion, however, we feel that this was a good change especially in helping to locate shifting tenants who were eligible for these payments.

Under the 1939 cotton price adjustment program the farmers in the county have received \$57,370.72 on a total of 1459 farms. To date all CAP payments have not been received.

#### V Cotton Marketing Quotas

A very important division of the farm program is Marketing Quotas. It is highly necessary to have quotas on cotton to keep surpluses down somewhere near consumption. The marketing quota is the only compulsory feature of the farm program. However, this part of the program is wisely based on the democratic principle of the rule of the majority.

In preparing for the referendum on the cotton marketing program, the cotton allotments for 1939 were mailed to the producers December 2, 1938 in order that they might know what their individual cotton allotments for 1939 were before voting in the Referendum on December 10th. 1938. During the week of December 5-10 six educational meetings were held in the various sections of the county climaxed by a county-wide meeting at the Court House at which time Mr. J. Alvin Propst, District Field Officer, spoke to a large group of farmers.

After the ballots were counted it was found that 814 farmers in the county approved cotton quotas for 1939 and 402 farmers opposed quotas. Though close, it showed a 2/3 majority of those voting to be in favor of quotas for 1939.

The 1940 cotton allotments for Cabarrus farmers have been received and were mailed to the individual producers on November 25, 1939. This assures the farmer ample time to know how much cotton he may grow in 1940 and sell tax free, in case quotas are in effect, before he casts his ballot in the Referendum on December 9th. 1939.

We have already made preparation for the referendum on cotton quotas for 1940 and are of the opinion that a majority of the farmers in the county feel that a quota is just as necessary for 1940 as it was in 1939.

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## VI Conclusion

In order to put over the Farm Program in 1939 it was necessary to work hard, worry some, exercise a great deal of patience, tact, and some religion. We feel that we have had fine cooperation in our task from farmers, local office workers, committeemen, state and national officers. We feel that in view of the great educational value the Program has been to the farmers, the large measure of soil conserving it has stimulated and, last but not least, the considerable sum of \$253,867.16 that it has brought to our farmers and business men during the year 1939, all efforts that have been put forth have been worthwhile and may be classed as efforts resulting in the permanent good of all the people of our country.

## FARM MANAGEMENT

Better farm management promotes higher standards of living on the farm. As long as the one-crop system of farming was practiced little attention was given to the problem of farm management. Due to the continued low price of cotton, educational programs and additional sources of income for the farm the farmers have realized that they must operate their farms in a business like way. With crop diversification and the addition of live-stock and poultry the farmers are able to distribute their labor throughout the year and realize that the keeping of farm records is necessary in the successful operation of their business.

While many farmers are keeping cost of production records on one or more enterprises being conducted on their farms, a few are keeping complete records of income and expenses on the entire farm. Among these are the unit demonstration farms working in cooperation with the Extension service and the TVA. In the table is given a comparison of the combined averages of the 5 Cabarrus county farms with the average for the 33 farms in the area made up of Anson, Cabarrus, Stanly and Union Counties.

Factor	Combined Average	Area Average	Factor	Combined Average	Area Average
Labor Income	\$ 714.35	\$ 656.28	Acres in Cropland	58.5	67.5
Total Cash Receipts	\$2141.82	\$2045.39	Acres of Open pasture	16.2	14.8
Cash receipts per acre	\$ 21.08	\$ 14.73	Total Acres in Farm	101.6	138.9
Total Cash Expense	\$1566.42	\$1402.95	Crop returns per Acre	\$ 10.01	\$ 7.38
Cash Expense per Acre	\$ 15.32	\$ 10.10	Livestock returns per animal unit	\$ 115.28	\$116.75
Average Investment	\$9057.98	\$8413.69	Return on Investment	\$ 917.26	\$648.16

-2-

From a study of these individual records it will be noted that the ones showing a high labor income were those having several sources of income. This is very important because diversification with the proper combination of enterprises increases greatly the chances of success in farming.

The important factors which measure success of the farm business include measures of income, capital efficiency, and productivity.

Early in March a 20 ton car of triple superphosphate was received by 5 unit farm demonstrations and applied to legume crops and pastures. In the majority of cases good results have been obtained from the use of phosphate as evidenced by the continued use of it by these demonstrators.

However, H. E. Cline, Concord # 3, who has been a unit farm demonstrator since 1936, stated that as yet he could not see any outstanding results from the use of superphosphate on his lespedeza. Therefore in order to show just what benefit was being derived from the use of it a check was made the latter part of August when with the help of Mr. Cline two plots of lespedeza, each 10ft. 5 in. by 6 ft. 2 1/2 in. were measured. One plot had had phosphate applied while the other was from the check plot left for this purpose. The lespedeza on both plots appeared to be the same as far as the growth was concerned. Both plots were cut, weighed, and determination made of the approximate amount of hay an acre would yield, and the amount of nitrogen, phosphate and potash the green crop contained per acre. In calculating this we used the method recently sent out from State College and obtained the following results:

	Phosphate plot	No. phosphate
1. Pounds of green hay per acre	5,175.4 lbs.	3,861.0lbs.
2. Nitrogen per acre	134.8 "	100.5 "
3. Phosphate per acre	22.6 "	15.9 "
4. Potash per acre	58.5 "	43.8 "

In this demonstration no difference could be detected from mere observation, but the check made speaks for itself.

Already 14,700 lbs. of triple superphosphate has been received by these demonstrators to be applied on legume crops and pastures this fall.

## FORESTRY

Farmers generally are becoming more interested in the care of their timber crop. They are realizing that in addition to providing fuel for the home it may provide for them a small cash income. They are also becoming conscious of the fact that forests prove one of the best means of conserving the soil and utilizing steep and gullied land that is otherwise unfit for cultivation.

Each year a number of timber thinning meetings are held throughout the county in order to demonstrate the proper method of thinning the farm woodland as well as to stress the importance of timber stand improvement. On February 23, 1939, four such meetings were held in cooperation with Mr. E. W. Graeber, Extension Forester from State College. These meetings were held in cooperation with the Vocational Agriculture Teachers at the following places: Mt. Pleasant, Bethel, Odell and Harrisburg. After a general discussion by Mr. Graeber on the proper handling of the farm woodland, a fractional part of an acre was laid off and a timber thinning demonstration carried out at each of the meetings except Harrisburg. The thinnings from each demonstration measured from 5 to 8 cords of wood per acre. In picture form one may get a fair idea of results showing after each demonstration as follows:

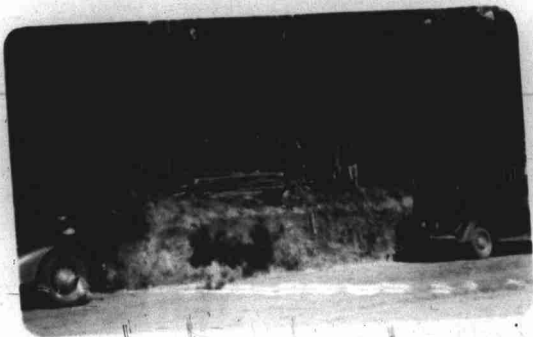
Timber Thinning demonstration at Mt. Pleasant.



Timber Thinning demonstration at Bethel.



Timber Thinning demonstration at Odell.



-3-

Present at these meetings were 150 farmers and vocational students. Mr. Gracher urged the farmers to use a thinning practice of cutting out undesirable trees for firewood rather than the clearing of more land. He also stressed the planting of pine seedlings on land undesirable for cultivation for future timber supply.

For several years considerable interest has been manifested in reforestation. In a few cases large areas have been reforested, while others follow a practice of reforesting a smaller area at intervals.

Early in the year E. L. Morrison, Jr., of Concord asked assistance in making plans for farming a 50 acre tract which he had recently purchased just east of Concord. It was very badly eroded and in poor condition for farming, so after looking it over carefully we decided that loblolly pines would be the best crop to recommend to Mr. Morrison for his farm. An order of 10,000 loblolly pines was placed for immediate planting, with the intention of adding more each year until practically the entire tract would be in woodland. These pines arrived in February and assistance was given Mr. Morrison in setting them. Due to the continuous rains from December to late March, the ground was extremely wet for planting. However, with some difficulty it was accomplished. Men are here shown as planting took place.





-4-

Part of these pines were set on cottonstalk land with first year lespedeza on it, while the others were put on land growing second year lespedeza. Later in the year Mr. Harrison decided to sell this entire tract to C. D. Cook, Concord # 3, who unfortunately pastured a part of the pines during the summer. In order to determine the survival of this demonstration forest planting as well as others that were made in the county this year, a check was made recently and results are shown on next page.

Year 1939REPORTCabarrus County

## FOREST PLANTING DEMONSTRATIONS

No.	Name of Farmer	Address	Soil Type	* Condition of Planting Site	Acres Planted	Species of Trees	No. of Trees	% of Survival
1	W. L. Ezell	Concord	Mecklenburg loam	Broomsedge	1.0	Longleaf P.	1,000	10
			Mecklenburg loam	Broomsedge	.5	Bl. Locust	500	10
(Extremely dry weather affected the above.)								
2	H. M. Moore	Mt. Pleasant, R. 1	Mecklenburg loam	Native grass	1.0	Loblolly P.	1,000	83
3	F. L. Morrison	Concord	Sandy loam	(See notes below.)	10.0	Loblolly P.	10,000	76
<p>(Part of these were planted on cottonstalk land with first-year lespedeza on it. These showed 91% livability. Some were on land in second-year lespedeza which was pastured as soon as lespedeza seed ripened. No cattle injury noticed, but survival was only about 60%. Those planted on second-year lespedeza but not pastured at all showed only about 52% survival. Land was extremely wet at time of planting.)</p>								
Totals or Averages					12.5	XXXX	12,500	68.6

\*Condition of planting site should be indicated "Gullied", "Sheet erosion", "Sedge", "Sod", "Weeds", "Dry", "Wet", etc.

\*\*Survival counts should be made during September.

SIGNED: R. D. Goodman  
County Agent.

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The old forest plantings consisting of 53,690 loblolly and slash pines at Boy Scout Camp and 29,000 loblolly pines, 2000 cypress and 2000 ash on Concord Watershed are making satisfactory growth. To date no forest fires have been reported in any of the plantings.

During the year Cabarrus County joined the Middle Yadkin Soil Conservation District, thereby getting the services of a CCC Camp which was located here on October 1st, 1939, and immediately began writing agreements on farms. Reforestation being one of the natural means of conserving the soil, the camp to date has included the planting of 67,000 loblolly pine seedlings to be made early in 1940, and held approximately 50,000 additional in reserve as an estimated need for agreements that may be written between now and March 1940.

## TOURS

The annual County Farm Tour was not held this year due to the long drought prevailing over the greater part of Cabarrus during the summer which materially affected a number of the projects planned for study on the tour. However, Cabarrus farmers made two tours outside the county.

The first of these was made to Coker's Pedigreed Seed Farm, Hartsville S. C. on May 19th. with 47 registered in the party. This was a joint tour conducted by the County Agents and Vocational Teachers of the county. Upon arrival at Hartsville the entire group gathered in the Company's assembly room and was favored with an interesting lecture by Dr. Geo. J. Wilds, President of the Company. Dr. Wilds briefly explained the work being carried on there. Following the lecture a field tour was made, being conducted by Dr. Wilds and Mr. J. A. Hinson, Secretary of the Company. The experiments shown us were most extensive and interesting--over 32,000 test rows being devoted to experimental work. Included in this number were 456 head-to-rows of oats, and 4,137 head-to-rows of wheat. There were 82 new strains of oats and 27 new strains of wheat in increase plots of from  $1/3$  to 4 acres in size. They informed us that many of these new strains of oats combine Crown rust, smut and cold resistance, and the new wheats combine Crown rust, stem rust and mildew resistance. Combined with this high resistance is high production. They, also, showed us large increase fields of new strains of Fulgrain oats and Redhart wheat that will be offered for sale this fall. The snapshot shows the party inspecting a field of oats.



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On August 10th. a group of 81 Cabarrus farmers visited Coker's Pedigreed Seed Farm, Hartsville, for the purpose of inspecting the varieties of cotton. The majority of our farmers have been using Coker cotton for a number of years and much interest was manifested in the study of the cotton varieties showing open type and very heavy fruiting--the stalks bending under the heavy crop of matured bolls. On this same trip sixty-four varieties of soybeans were inspected and the growth habits noted from a small bunch stalk of heavily fruited beans about 18 inches tall to a hay type bean about 4 feet tall. Much interest was also shown in the sugar cane being grown, and the stress on same for producing syrup for home use. One of the outstanding Guernsey herds in the State of S. C. was inspected. It was pointed out that these animals were grazed on soiling crops-- Pearl millet and one of the soybean varieties that they frequently graze several times before mowing for hay. Last but not least on this inspection tour, the members of the party were given an opportunity to demonstrate their ability to handle one of the products from the Farm--Darlington county watermelons--which the Company graciously served.



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While not considered as a tour since the party was not composed of farmers, yet of much educational value was the inspection trip made by a group of County Agents to the Piedmont Test Farms, Statesville on May 12th. Of primary importance on this trip was the study of small grain test work being carried on. The several pictures illustrate the group studying the results from these tests.



## OUTLOOK AND OBJECTIVES

The present outlook is favorable for another successful year of extension work in Cabarrus county.

While the dry weather the past summer was not so favorable for all crops yet reports from all sections of the county indicate that average production or better has been realized from all crops except cotton in a few sections where boll weevil infestation was heavy. A fair price is being received for cash crops and surplus products being sold. This means that the farmers generally are going into another year under fairly comfortable circumstances and are rather optimistic in their outlook for 1940.

The Terracing Unit continues to operate full time with numerous requests for work ahead. This indicates satisfactory work on the part of the outfit as well as the fact that the farmers are becoming more soil conscious. The outlook is for a full program in 1940.

The operations of the Soil Conservation Service through the CCC Camp located in Cabarrus should prove invaluable to the county in demonstrating the principles of controlling soil erosion.

With the majority of the farmers cooperating in the 1939 Farm Program, leads us to believe that we shall have even fuller cooperation on their part in 1940. The farmers are realizing that the benefit payments received from full compliance under the Farm Program supplements their farm income to the extent that they can no longer be without it. However, with the discrimination being shown lespedeza as a soil building practice under the AAA Program, it almost works a hardship on the poorer farmers in meeting their goal thereby enabling them to receive maximum payment.

In general the extension program will be carried on in Cabarrus county in 1940, following very much the same plan as in 1939. Emphasis will continue to be placed on (1) improved seed and better livestock; (2) more economical production through the selection of seed, fertilizer and lime adapted to soil needs, and better feeding and management of livestock; (3) production of sufficient food and feed crops for home needs; (4) increased use of soil conserving and soil building practices; (5) setting up farming operations that will distribute farm labor more uniformly throughout the year; (6) the keeping of some simple form of farm records on every farm.