

THESIS

*Approved*

"AN ECONOMIC STUDY OF THE FARM PRACTICES  
OF THE APPLE GROVE COMMUNITY"

*Approved*

Offered as a  
MINOR  
in

AGRICULTURAL EDUCATION

for the

DEGREE OF MASTER OF SCIENCE

Done under the  
direction  
of

THE DEPARTMENT OF AGRONOMY  
THE VIRGINIA POLYTECHNIC INSTITUTE

by

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VIRGINIA POLYTECHNIC INSTITUTE  
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OBJECT

TITLE

AN ECONOMIC STUDY OF THE FARM PRACTICES

OF THE APPLE GROVE COMMUNITY OF LOUISIANA white  
farmers of the Apple Grove Community.  
COUNTY

1. To determine the relative importance of the various farm enterprises of the Apple Grove Community.
2. To determine the correlation between varieties, breeds, and practices and yields and farm income.

PROBLEM

A STUDY OF THE DIFFERENT FARM PRACTICES  
REPRESENTED IN THE APPLE GROVE COMMUNITY  
AND THEIR EFFECTS ON YIELDS AND INCOME

## O B J E C T

1. To determine existing farm practices of white farmers of the Apple Grove Community.

2. To determine the relative importance of the various farm enterprises of the Apple Grove Community.

3. To determine the correlation between varieties, breeds, and practices and yields and farm income.

4. To determine standard practices worthy of recommendation for better and more efficient farming in the Community.

Tabulations and summaries were then made for analyzing the important enterprises of the forty farms.

Each farm was given an index number to prevent names appearing on the write-up sheets.

## FOREWORD

### PROCEDURE

After about eight years of operation of the Smith-Hughes Agricultural High School in the Acyle Grove Community, it seemed wise to make a survey of the entire Community in order to give some practical advice to the farmers of the Community. The Agricultural

1. Several farm survey forms were studied and digested and a form, made up of the best points of these, was devised on which to take this survey.
2. A personal visit was made to each of the forty farmers of this area and forms were filled out by the Agricultural Instructor from information obtained directly from the farmers.
3. Only white farmers were interviewed for this study, and all farms were considered in a given area. In case the farmer happened to be busy, he was not asked to stop to give the needed data, but another visit was made. No farmer refused to give the information asked.
4. Tabulations and summaries were then made for analyzing the important enterprises of the forty farms.
5. Each farm was given an index number to prevent names appearing on the write-up sheets.

C. McGill of the Agricultural Education Department, of the Virginia Polytechnic Institute, for help rendered in securing the data and in planning the write-up. The aid of Mrs. Key was of inestimable value in making summaries and tabulations of the work.

PART I  
INTRODUCTION

FOREWORD

The farm practices of the Apple Grove Community has been chosen as the subject of this paper, because it is the area served by the Smith-Hughes Agricultural High School, and has been under observation for seven or eight years in this connection. Then, too, the data collected for the study was available.

After about eight years of operation of the Smith-Hughes Agricultural High School in the Apple Grove Community, it seemed wise to make a survey of the entire Community in order to give some practical advice to the farmers of the Community. The Agricultural Instructor will be better equipped both for class room instruction and for aiding the farmers by having first hand information about the agriculture of the Community.

The nature of the work demands close co-operation on the part of each individual farmer. It may be said to their credit that none of these men refused to give the information sought. The average farmer of the Community was cordial and helpful, and expressed a desire to see the results of the study.

It is true that much of the information contained in this paper is approximate and not exact. At the same time it would seem reasonable to suppose that when forty farmers independently report the cost or yield of a particular crop or animal enterprise, the average should not be far from the truth.

In addition to the farmers themselves the writer is indebted to Professor T. B. Hutcheson of the Department of Agronomy, and Professor E. C. McGill of the Agricultural Education Department, of the Virginia Polytechnic Institute, for help rendered in securing the data and in planning the write-up. The aid of Mrs. Kay was of inestimable value in making summaries and tabulations of the work.

## PART I

### INTRODUCTION

The farm practices of the Apple Grove Community has been chosen as the subject of this paper, because it is the area served by the Smith-Hughes Agricultural High School, and has been under observation for seven or eight years in this connection. Then, too, the data collected for this paper may be used by the Agricultural Instructor in several important ways: First, it is the only sound basis on which to plan a course in Vocational Agriculture. Second, by this means objectives may be set up for a long time program of improvement for the agricultural betterment. Third, the findings of this Community may be county-wide in aspect, and may be used to convince the farmers of the County at large that some changes are needed in the whole farming system of the county.

The Apple Grove Community is located in the southeastern part of Louisa County, Virginia. The South Anna River flows through near the center of the community, and is a source of water supply and power. The soil is of good texture, and much of it highly improved. The producing qualities of the soil are rare where improved methods are employed.

The community is typically rural and compares favorably to other communities of Virginia. The Smith-Hughes Agricultural High School is near the center of the community, and is patronized by a much larger area than that over which this survey was taken. Religiously the community is well cared for, there being three churches of different denominations well located. There are three or four Rural Free Delivery Routes which distribute mail daily, and telephone services, both local and long distance are available at all times.

Only a short piece of State Aid road penetrates to the center of the community. The greater part of the roads are County and private, and in winter are often impassable. The Jefferson Highway touches the northeastern boundry of the community and connects with Richmond on the East and Charlottesville on the West. The main line of the Chesapeake and Ohio Rail Road is only eight miles from the center of the community. Thus providing ample transportation for all products going from and coming to the community.

PART IIPLAN FOR THE STUDY

The first task inviting the attention of the writer of this paper was the making of a suitable form on which to collect the data. Several survey forms were studied and worked over before a suitable form was devised for this particular Community. The survey form finally made contained pertinent questions on all important farm enterprises of the Community. The information sought was to the end of giving light on farm practices, home conveniences, and marketing practices. Those who have had to do with collecting data of this kind know how small the percentage of replies is where forms are mailed. These forms were designed with the idea of personal visits.

One of the first things each farmer was assured of was the fact that all information divulged would be strictly confidential in so far as the individual farmer was concerned. An index number given to each farm serves as an identity for that farm in the write-up. The data was collected by the Agricultural Instructor during the summer, and all of the information was secured by personal conversation. Often times an entire day would be consumed in securing data from two farms. The usual time taken for a survey was from two to three hours.

The survey was conducted on a forty farm basis. All farms were visited in a given area, except those owned by the colored farmers.

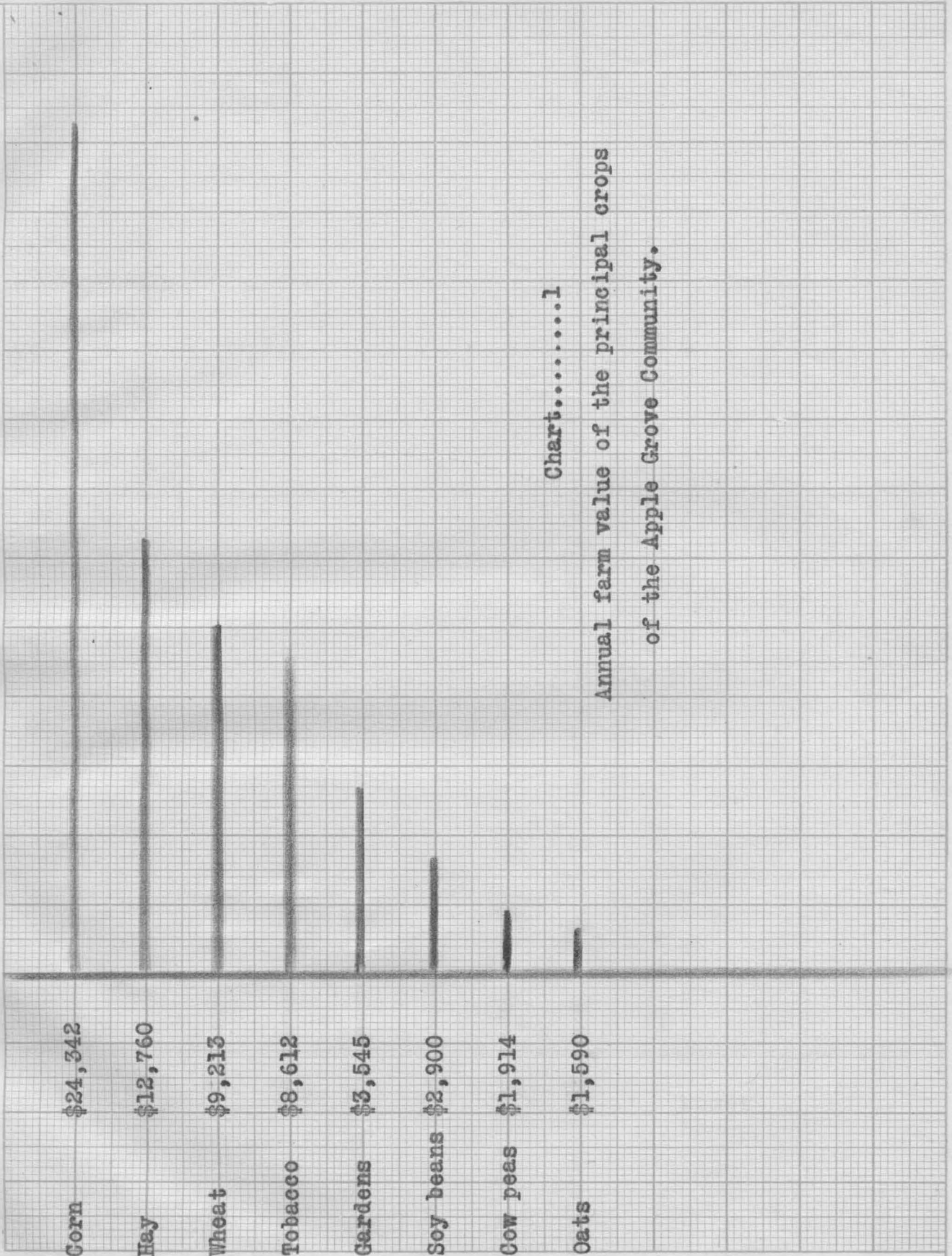


Chart.....1

Annual farm value of the principal crops  
of the Apple Grove Community.



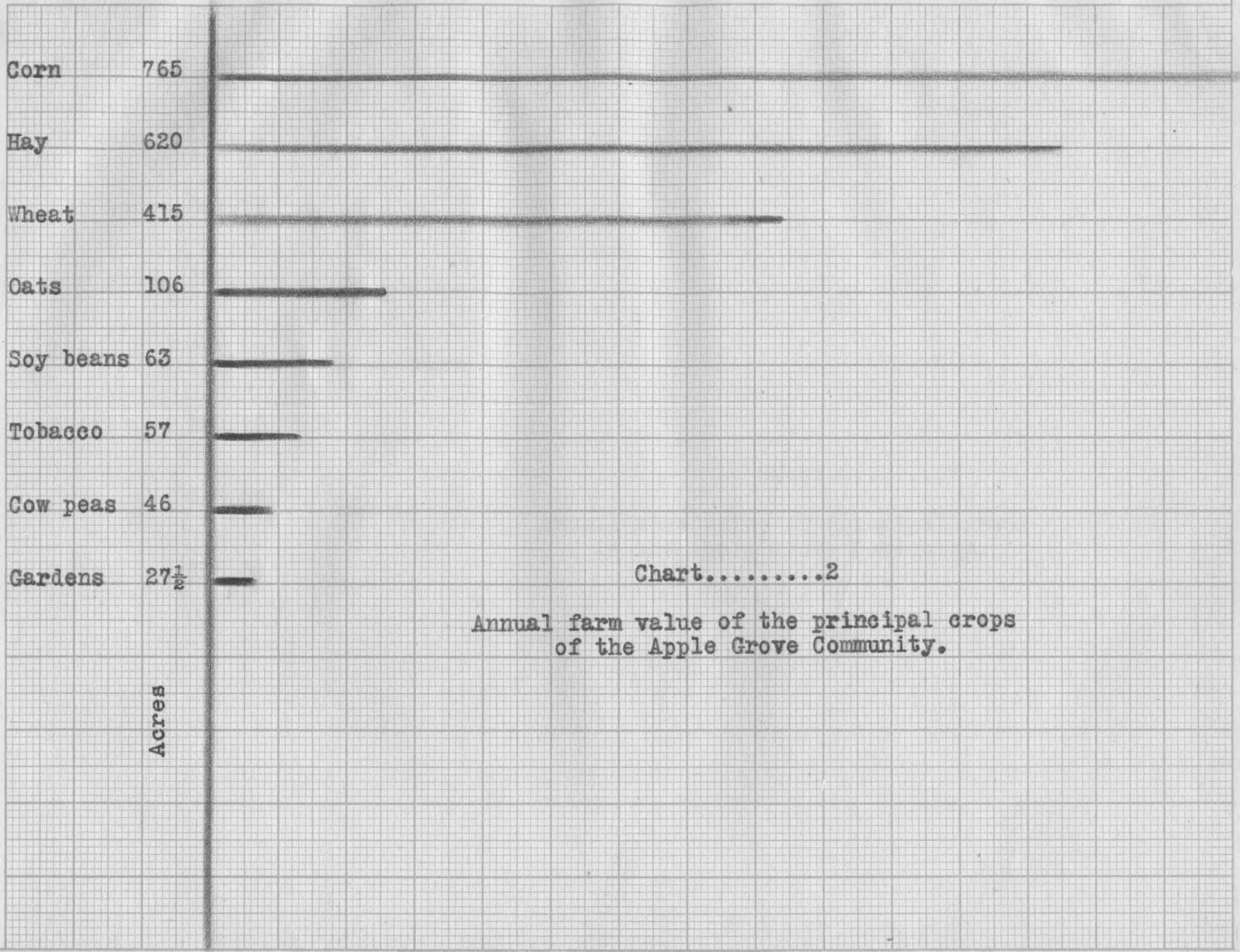


Chart.....2

Annual farm value of the principal crops of the Apple Grove Community.

Acres

MANUFACTURED BY PAPER UTILITIES CO. PHILADELPHIA  
20 LINES = 1 INCH

Tobacco	\$151.80
Gardens	\$129.00
Soy beans	\$41.76
Cow peas	\$36.00
Corn	\$31.80
Wheat	\$22.20
Hay	\$20.58
Oats	\$15.00

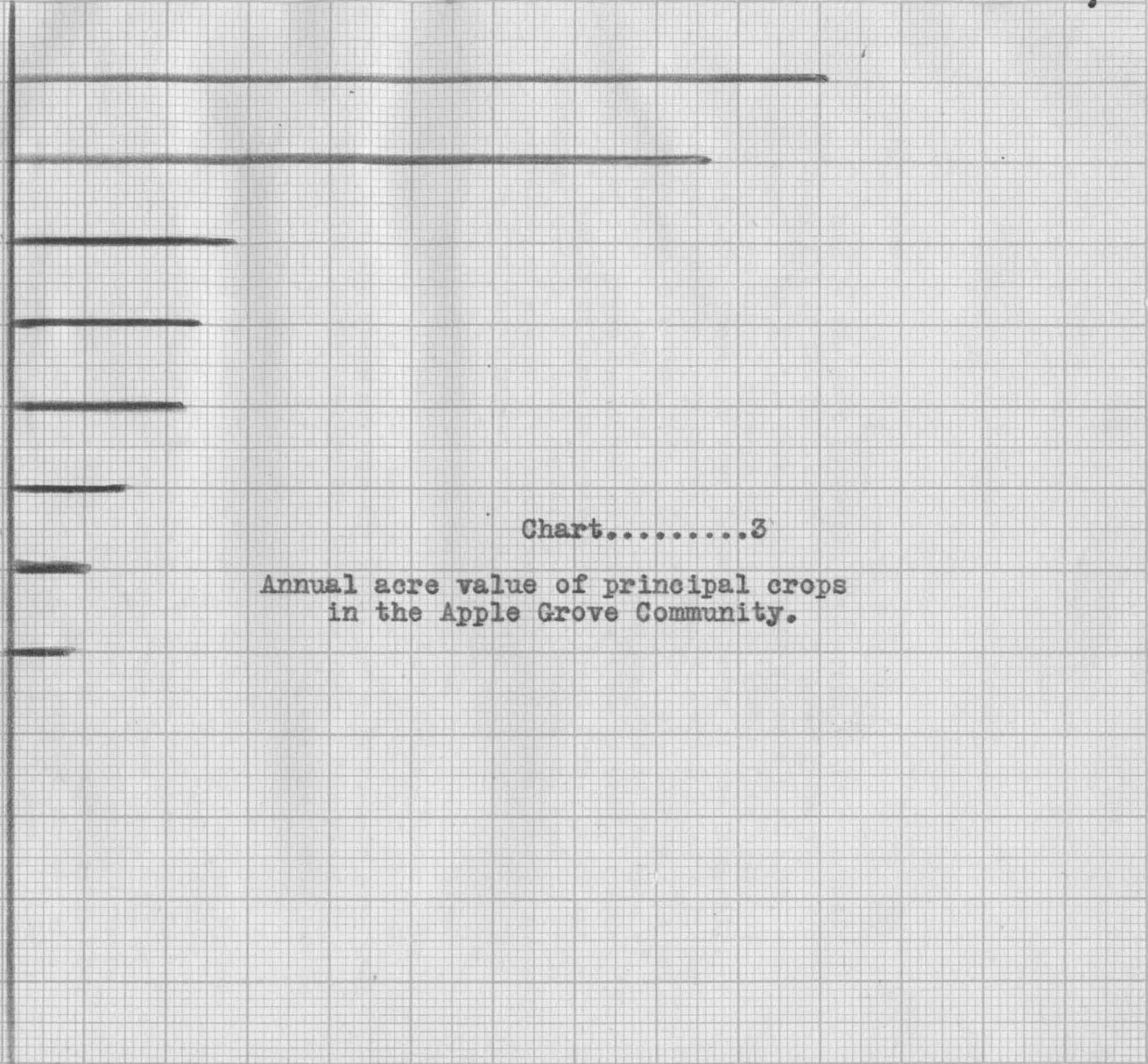


Chart.....3

Annual acre value of principal crops  
in the Apple Grove Community.

## C O R N

The best information from the farmers of the community seems to be that Caseys Pure Bred is the best variety to grow here when everything is considered.

Probably the most serious mistake made by the farmers of this

Corn is the most important crop grown in this Community. It leads all of the farm crops in total acres grown yearly and in money value at the farm. All of the farmers grow corn, and there is an annual acreage of 765 acres with a farm value of \$24,342.30. There are four important crops of the Community, tobacco, gardens, soy beand, and cow peas, which bring a larger income per acre than corn. Despite this fact, corn is king and the most prevalent crop. This is because corn is the base of all of the grain feeds and at the same time is used for human food, and is of some importance as a forage crop. There are other reasons for corn receiving first attention, such as soil, certainty of a crop, favorable weather conditions, and as a rule a good local market for the surplus.

Practically all of the corn is grown for grain, there being only two farmers who at present have silos filled. The yield per acre is 31.82 bushels per acre, which is 2.82 bushels more than the state average for 1923, and 8.82 bushels more than the Louisa County average for the same year. This yield is gratifying, but there is no reason why the average should not be thirty-five.

Variety of corn planted has an important bearing on yields. Twenty-eight of the forty farmers plant a mixed corn. Twelve plant pure bred seed. There is a difference of about ten bushels per acre where pure seed was used over the mixed seed. All of this increased yield cannot be attributed to good seed, because as a rule the man who is careful about seed is also careful about other practices. At the same time a well adapted variety will produce better than one which is poor in that respect. It will be seen by referring to table 1. that there are eight farmers who grow Caseys Pure Bred, three grow Boone County White, and one Reids Yellow Dent. Reids gave the largest yield per acre, but it cannot be recommended that every farmer should grow this variety. One instance will not prove the worth of a variety. Three grow Boone County and the average yield is ten bushels per acre over the local varieties. Eight farmers grow Caseys P. B. and the yield is only three bushels above the local varieties. There is much in favor of the Boone County in so far as the yield is concerned, but the objection to Boone County was the fact that if cut and shocked as soon as ripe in the fall it would rot in the shock. This is due to the heavy growth made by this variety.

The best information in hand from the farmers of the community seems to be that Caseys Pure Bred is the best variety to grow here when everything is considered.

Probably the most serious mistake made by the farmers of this locality in connection with corn is the fact that only two farmers select seed corn in the field. There are five others who buy seed paying little attention to the adaptability of the strain to the local conditions, the remaining thirty-three bin select seed. The yield is practically the same for bin selection and bought seed. The yield for the field selection is 17 bushels more than the better of the other two methods. It is not the belief of the writer that all of this difference is due to the method of seed selection, but at the same time the data show conclusively that the better yields are obtained from the more improved methods of seed selection.

It is interesting to note the comparative cost of producing a bushel of corn as the yield varies. Where the yield is 28 bushels per acre the cost per bushel is \$.51; where the yield is 45 bushels per acre, the cost of production is \$.38. Without an exception, the higher per bushel costs followed the poorer methods of production, and the lower costs followed the higher yields.

The use of commercial fertilizer and manure directly on corn is not practiced generally here. The custom is to put manure and fertilizer on some crop in the rotation ahead of the corn. However, there were a few who used commercial fertilizer on corn. No difference existed in the method of application, but there was considerable variation in the kinds and amounts used. Acid Phosphate was the most prevalent kind. 3--8--3, 2--8--2, Basic Slag, and Lime were all used. While it was shown that 3--8--3 gave the largest yield, at the same time Acid Phosphate was the most prevalent and gave decided increase in yield over the check farmers. Slag was used by too few farmers to prove its true worth, while lime gave practically the same as the farmers who used no fertilizer.

It seems that we must conclude from the data shown in Table 1. that Acid Phosphate is the most economical and practical kind of fertilizer to use. The amount advised is about 300 lbs. sown broad cast at planting time.

Fall plowing seems to be productive of greater results than spring plowing. There is a difference of 8 bushels per acre, and the number who fall plow is conclusive evidence.

Fall Plowing ----- bushels per acre 39 bu.  
Spring Plowing ----- " " 31 bu.

T A B L E I

YIELDS OF CORN FROM DIFFERENT PRACTICES

Varieties	Number Growing Each Variety	Yield per Acre
Casey's P.B.	8	30 bu.
Boone Co. White	3	37 bu.
Reid's Yellow	1	60 bu.
Dent P. B. Mixed (local)	28	27 bu.

Seed Selection

Method of Selection	No. of Farmers in each Case	Yield per Acre	Cost per Bu. to Produce
Field	2	45 bu.	\$.38
Bought	5	28 bu.	.51
Bin Selected	33	27.5 bu.	.51

Fertilizer

Kind	Amount	How and When Applied	Yield per Acre
Acid Phosphate	275	Broad cast at planting time.	36.5 bu.
3-8-3	200	Broad cast at planting time	50 bu.
Slag	300	Broad cast at planting time.	40 bu.
2-8-2	200	Broad cast at planting time.	25 bu.
Lime	500	Broad cast at planting time.	25 bu.
No Fertilizer			24 bu.

Fall Plowing ----- Yield per acre 39 bu.  
 Spring Plowing ----- " " " 31 bu.

Farm No.	No. A. Corn	Variety	Yield per A.	Fertilizer			How Seed Selected.	How harvest-ed.	How disposed of.	Corn bought per year.	Cost to prod. 1 A.	Per bu. cost of prod.	Cost corn bought per yr.	Value corn sold per yr.	Is corn test. for germi.	
				Amt. per A.	Kind Used	How Appl.										When Appl.
1	8	Unknown	25 bu.	---	---	---	---	Bought	Cut by hand.	Fed	100 bu.	12.00	48 ¢	100.00	---	No
2	2	Unknown	35 bu.	---	---	---	---	Bought	Cut by hand.	Fed	50 bu.	12.00	40 ¢	50.00	---	No
3	10	Unknown	30 bu.	---	---	---	---	Bought	Cut by hand.	Fed	50 bu.	10.00	33.3 ¢	50.00	---	No
4	18	Caseys P.B.	30 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	10.00	33.3 ¢	---	75.00	No
5	20	Unknown	30 bu.	---	---	---	---	Bin	Top cut	Fed	None	10.00	33.3 ¢	---	40.00	No
6	12	Boone C. W.	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	10.00	40 ¢	---	---	No
7	12	Reids & Boone	25 bu.	---	---	---	---	Bin	Top & stalk	Fed	None	15.00	60 ¢	---	---	No
8	60	Reids Y.D.	60 bu.	---	---	---	---	Bin	Cut by hand.	Sold -local	None	15.00	37.5 ¢	---	450.00	No
9	25	Unknown	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed & sold	None	12.00	48 ¢	---	30.00	No
10	14	Caseys P.B.	40 bu.	500	Basic Slag	Broadc't	Planting	Bin	Cut by hand.	Fed & sold	None	15.00	37.5 ¢	---	40.00	No
11	15	Mixed	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	10.00	40 ¢	---	25.00	No
12	12	Mixed	20 bu.	---	---	---	---	Bought	Cut by hand.	Fed	100 bu.	9.00	45 ¢	100.00	---	No
13	25	Mixed	10 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	9.00	90 ¢	---	---	No
14	25	Boone Co. W.	55 bu.	300	A.P.	Broadc't	Planting	Seed patch	Cut by binder.	Fed	None	25.00	45 ¢	---	---	Yes
15	60	Mixed	30 bu.	---	---	---	---	Bin	Cut by hand.	Fed & sold	None	15.00	50 ¢	---	80.00	Yes
16	20	Mixed	40 bu.	---	---	---	---	Bin	Cut by binder.	Fed & sold	None	15.00	37.5 ¢	---	60.00	Yes
17	12	Caseys Mixed	30 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	12.00	40 ¢	---	---	No
18	35	Caseys P.B.	35 bu.	---	---	---	---	Field & bin	Snapped	Fed & sold	None	14.00	31.3 ¢	---	100.00	Yes
19	10	Mixed	40 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	16.00	40 ¢	---	40.00	Yes
20	18	Mixed	30 bu.	---	---	---	---	Bin	Top cut.	Fed	None	12.50	41.3 ¢	---	---	No
21	12	Caseys P.B.	40 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	22.50	56 ¢	---	40.00	No
22	12	Caseys Mixed	45 bu.	---	---	---	---	Bin	Cut by hand.	Fed & sold	None	20.00	44 ¢	---	100.00	Yes
23	75	Mixed	50 bu.	200	3-8-12	Drill	Planting	Bin	Cut by binder.	Fed	None	10.00	33.3 ¢	---	---	No
24	20	Mixed	30 bu.	200	A.P.	Drill	Planting	Bin	Cut by hand.	Fed	None	20.00	66.7 ¢	---	70.00	No
25	20	Boone Co. W.	30 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	25.00	83.3 ¢	---	---	No
26	10	Mixed	25 bu.	200	A.P.	Broadc't	Planting	Bin	Cut by hand.	Fed	None	10.00	40 ¢	---	---	No
27	11	Mixed	25 bu.	200	2-8-2	Drill & "	Planting	Bin	Cut by hand.	Fed	None	20.00	80 ¢	---	---	No
28	10	Casey's	15 bu.	---	---	---	---	Bin	Cut by hand.	Fed	50 bu.	15.00	100 ¢	50.00	---	No
29	10	Mixed	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	14.00	56 ¢	---	---	No
30	7	Mixed	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	50 bu.	25.00	100 ¢	50.00	---	No
31	5	Unknown	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	50 bu.	15.00	60 ¢	50.00	---	No
32	25	Caseys P.B.	25 bu.	500	Lime	Broadc't	Planting	Bin	Cut by hand.	Fed & sold	None	20.00	80 ¢	---	60.00	No
33	12	Mixed	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	14.00	56 ¢	---	40.00	Yes
34	25	Casey's	35 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	14.50	32 ¢	---	80.00	No
35	40	Mixed	20 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	25.00	100 ¢	---	---	No
36	10	Mixed	25 bu.	---	---	---	---	Bin	Cut by hand.	Fed	25 bu.	15.00	100 ¢	25.00	---	No
37	8	Mixed	20 bu.	---	---	---	---	Bought	Cut by hand.	Fed	50 bu.	18.00	90 ¢	50.00	---	No
38	10	Mixed	20 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	12.00	60 ¢	---	---	No
39	20	Casey's P.B.	25 bu.	400	A.P.	Broadc't	Planting	Bin	Cut by hand.	Fed	None	18.00	72 ¢	---	100.00	No
40	20	Mixed	20 bu.	---	---	---	---	Bin	Cut by hand.	Fed	None	18.00	72 ¢	---	---	No

## CHICKENS

Of the forty farmers interviewed, thirty-nine are growers of chickens. Eight flocks are of sufficient size to be classed as commercial. White Leghorns are found to compose four of the commercial flocks, while the other flocks in this class are composed of mixed breeds. The average home flock is composed of the dual purpose breeds chiefly, Barred Rocks, Rhode Island Reds, and Wyandottes. Flocks of 100 birds or over are considered of commercial importance. All others count as farm or home flocks. The vast majority of the flocks are mixed breeds. When the average is taken for the community there are 73 birds per farm. Poultry is fourth in importance among the animal enterprises of the community. Dairy cows, swine, and work stock are ahead.

### Feeding Practices

Only one-third of the farmers growing poultry is feeding a suitable ration for egg production. Included in those using good feeding practices are the farmers with the larger flocks. This means that of the farm flocks about one in every five is fed a suitable ration. The use of green feed is not practiced by the majority of farmers. In fact there are seven growers of chickens who provide any green feed during the winter months at all. It is found by actual computation that the flocks which were fed on a balanced ration show a higher production. Those hens fed an unbalanced ration laid 89 eggs per bird per year, and those fed a balanced ration laid 114 per bird per year. If eggs are worth 35 cents per dozen and there are 73 birds per farm the loss on the 26 farms where a poor ration is fed will be in round numbers \$1300.00 dollars. If the poorest fed flocks are compared with the best fed flocks, this difference will be much greater. A very definite relation exists between the feeding practices followed and the number of eggs produced.

### Other Practices

All of the difference in egg production cannot be attributed to feeding practices. Culling the flock, breeds kept, and housing methods are vital factors in egg production. The practice of culling the flock is not at all common in the Apple Grove Community. However, there are a few growers who do cull and report good results. While there is no definite relation between culling and egg production as in feeding, the highest producing flocks are those which were culled. In the community surveyed probably housing the flock is of more importance than culling. Not more than one flock in five is adequately housed to meet the demands of light, ventilation, and sanitation. The information in hand is not in detail sufficient to show a true relation between housing and egg production, but it is true

that the best producing birds are in flocks which are well housed.

The average farm flock is of the dual purposes breeds and in the main is not a bad practice. It is true that there could be an improvement made in the purity of the strain kept. There are twenty six farmers who keep grade chickens exclusively, and some of the other thirteen have some Pure Bred and some grade stock in their yards. The thing that is most gratifying about the breeds kept is the fact that very few farmers keep the egg producing birds for general farm use. There are few who keep both Leghorns and dual purpose birds together for the home flock. Those who have Pure Bred Barred Rocks and those who have Pure Bred Rhode Island Reds report practically no difference in the two breeds for farm use. The difference between the Pure Bred and the grade birds of the same breed is noticeable and always in favor of the Pure Bred birds.

All farmers produce fertile eggs for the market except one. Two farmers purchase baby chicks and all of the others incubate eggs by the natural process. Only a few buy eggs for incubation, the home product is used instead. No particular care is taken of the breeding pen in the community. In most cases there are too many hens kept on the yard for the number of males. It is probably due to this fact that very poor hatching is reported for the majority of cases.

In the light of the foregoing data, there are some timely recommendations to be made. The feeding of the home flock may be greatly improved upon by using a ration composed chiefly of corn, wheat, and oats. The addition of a little meat scrap will greatly add to this ration and will not cost a great deal more than the ration in use at the present time. This ration will give better results for egg production, and by giving an additional part of corn and less of each of the other feeds a suitable ration may be made for fattening chickens. Some green feed should be used in the winter ration. This may be cabbage or beets and other things which may be easily grown on the farm. Culls should be removed from the flock early in the fall in order that the best hens may get proper attention before time for high priced eggs. Constructing of new or rearranging of the old houses should be done on most of the farms visited. Houses giving the proper amount of sunlight and air, and at the same time not allowing undue drafts to circulate, will increase egg production and guarantee healthy birds. Frequent cleaning of quarters is much advised.



Chart No. 2 CHICKENS.

Farm No.	No. kept	Breed kept	Quality of birds	Is culling done	Eggs fertile or infertile.	How hatched-hen or incubator.	Chicks bought.	Yearly egg prod. per hen.	Are eggs candled & graded?	Where marketed?	How market fryers & where	Nature of ration.	Feed bought or raised?	Is green feed provided?	Poultry prod. purchased	Is there profit.	Value of Prod. sold per yr.
1	75	G. P. Rock	Fair	No	Fertile	Hen	---	106.80	No	Local	---	Unbal.	Both	Summer only	None	Yes	\$145.50
2	15	Minorca	High qual.	Yes	"	"	---	143.30	No	Richmond	Live; Rich.	Bal.	Bought	Yes	None	Yes	17.40
3	30	G.P. Rock	Fair	No	"	"	---	73.00	No	Local	---	Unbal.	Raised	Summer only	None	Yes	18.40
4	75	R.I. Red	High qual.	Yes	"	"	---	48.60	No	Local	---	Bal.	Both	Summer only	None	Yes	84.81
5	125	G. P. Rock	High qual.	No	"	"	---	87.60	No	Local	Live; local.	Bal.	Both	Summer only	None	Yes	237.40
6	65	W. Leghorn	High qual.	No	"	"	---	84.20	No	Local	Live; local.	Unbal.	Raised	Summer only	None	Yes	100.50
7	50	R.I. Red	Fair	No	"	"	---	106.00	No	Richmond	---	Bal.	Both	Summer only	None	Yes	68.58
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	50	G. Leghorn	Fair	No	"	"	---	87.60	No	Local	---	Unbal.	Raised	Summer only	None	Yes	54.90
10	100	W. Leghorn	High qual.	No	"	"	200 yr.	91.25	No	Local	Local sale	Bal.	Raised	Yes	None	Yes	182.52
11	75	G. Rock	Fair	Yes	"	"	---	98.70	No	Local & R.	Local & R.	Unbal.	Raised	Summer only	None	Yes	127.50
12	60	G. Leghorn	Poor	No	"	"	---	73.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	45.60
13	65	G. Rock	Fair	No	"	"	---	102.90	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	149.19
14	75	G. Rock	Good	Yes	"	"	---	135.40	No	Local	Local	Bal.	Both	Yes	None	Yes	208.26
15	80	G. Leghorn	Good	No	"	"	---	45.60	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	45.60
16	90	G. R.I. Red	Good	No	"	"	---	48.60	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	63.75
17	45	R.I. Red	Good	No	"	"	---	97.30	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	51.84
18	35	W. Leghorn	Excellent	No	"	"	---	104.20	No	Consumed	Consumed	Bal.	Raised	Summer only	None	Yes	27.27
19	70	B. Leghorn	Excellent	Yes	"	"	---	95.30	No	Local sale	Local sale	Bal.	Both	Summer only	None	Yes	130.50
20	100	W. Leghorn	Good	No	"	"	---	124.25	No	Richmond	Consumed	Bal.	Raised	Yes	None	Yes	283.20
21	100	G. R.I. Red	Poor	No	"	"	---	109.50	No	Richmond	Consumed	Unbal.	Raised	Summer only	None	Yes	219.15
22	200	W. Leghorn	Excellent	Yes	Infertile	"	500 yr.	136.80	No	Richmond	Live; Rich.	Bal.	Both	Yes	None	Yes	656.70
23	300	G. R.I. Red	Poor	No	Fertile	"	---	97.30	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	665.85
24	125	P. Rock	Good	No	"	" & incub.	---	146.00	No	Rich. mark.	Richmond	Bal.	Both	Yes	None	No	401.64
25	75	P. Rock	Good	No	"	Hen	---	98.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	119.85
26	60	G. R.I. Red	Poor	No	"	" & incub.	---	103.10	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	127.35
27	85	W. Leghorn	Good	Yes	"	Hen	---	111.70	No	Local	---	Bal.	Both	Yes	None	Yes	121.06
28	30	G. R.I. Red	Poor	No	"	"	---	106.00	No	Local	---	Unbal.	Raised	Summer only	None	No	52.20
29	60	G. Leghorn	Poor	No	"	"	---	73.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	91.50
30	25	G. R.I. Red	Poor	No	"	"	---	106.40	No	Local	---	Unbal.	Raised	Summer only	None	Yes	30.18
31	35	G. Rock	Fair	No	"	"	---	106.40	No	Local	---	Unbal.	Raised	Summer only	None	Yes	75.09
32	125	G. Rock	Fair	No	"	"	---	73.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	109.68
33	60	G. R.I. Red	Fair	No	"	"	---	101.10	No	Local	---	Unbal.	Raised	Summer only	None	Yes	106.05
34	50	G. Leghorn	Fair	No	"	"	---	106.00	No	Local	Local	Bal.	Both	Summer only	None	Yes	50.58
35	35	R.I. Red	Good	No	"	"	---	105.50	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	74.31
36	30	R.I. Red	Good	No	"	"	---	106.00	No	Local	---	Unbal.	Raised	Summer only	None	Yes	33.90
37	30	G. R.I. Red	Poor	No	"	"	---	73.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	9.15
38	60	G. R.I. Red	Poor	No	"	"	---	73.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	73.20
39	60	G. R.I. Red	Fair	No	"	"	---	85.00	No	Local	Local	Unbal.	Raised	Summer only	None	Yes	91.20
40	60	G. Rock	Fair	No	"	"	---	85.00	No	Local	---	Unbal.	Raised	Summer only	None	Yes	72.90

## W H E A T

There is a definite relation between the yield per acre and the cost of production. The higher the yield the lower the cost of production.

Wheat is the most important of the small grain crops grown in this community. While wheat is not the leading crop of the community, it is of great importance and can be grown with as much ease and success as any of the grain crops. Practically all of the wheat grown is cut for grain. The average yield for the community is 13.4 bushels per acre. Where improved methods are employed the yield goes as high as 18 bushels. The low yield for the community is 8 bushels per acre. There is doubt in the minds of some of the farmers surveyed as to whether or not a man can afford to grow wheat at as low a yield as 8 bushels.

The most prevalent variety of the community is the Purple Straw. Practically none of this variety is Pure Bred. The yield is about up to the average for the community, but much lower than the V. P. I. #131 and the Stoner varieties. There are two farmers who grow V. P. I. #131 Pure Bred, and their yields are the highest in the territory surveyed. Lieps Prolific and Fultz are also grown by a few farmers. Probably the best varieties for the community are the V. P. I. #131 and Purple Straw.

It is the custom of the community to seed a hay mixture of clover, timothy, red top, orchard grass, and meadow fescue, in the wheat crop either in the fall or spring. The use of commercial fertilizer is general. The idea is that all of the fertilizer left from growing the wheat goes to produce hay. The most common analysis is 16% Acid Phosphate. Nineteen of the thirty-one growing wheat use Acid Phosphate. The resultant yield is 13.7 bushels per acre when Acid is used. Three farmers use Basic Slag and get a yield of 12.5 bushels per acre. One farmer uses 3-8-3 and obtains a yield of 18 bushels per acre. One farmer uses 3-8-3 and reports 15 bushels per acre. There are seven farmers who use no fertilizer at all on wheat, and the average yield is 10.57 bushels per acre. It is interesting to note that the per bushel cost to produce is less where Acid Phosphate is used than in any other condition under which wheat is grown. The highest cost of production is where there is no fertilizer used and where the yield is lowest.

Practices Followed by Wheat Growers of  
the Apple Grove Community.

There is a definite relation between the yield per acre and the cost of production. The higher the yield the lower the cost of production.

The method of application of fertilizer is the same in practically every case. It is the custom to broadcast all of the fertilizer at seeding time. The average application is 250 to 300 pounds per acre. It is not a practice here to sow nitrate of soda on wheat in the spring, nor is the fertilizer often applied at that time.

One of the most serious handicaps to successful production of wheat is the practice of seeding wheat which has not been treated. The local miller is willing to pay better price for wheat, but is prevented from doing so because of the inferior quality of the product. Smutty grain does not make a standard product. There are thirteen of the farmers surveyed who treat their seed wheat for smut diseases. Different means of smut control are reported, the bluestone, the formalin, and the copper carbonate treatments are the most common.

The wheat crop should not be neglected in Louisa County, because it is an important grain for human food and for live stock, it is a good cover crop for the young hay crop, and the straw is valuable for bedding and a scratch litter for chickens. It may be said further that a good deal of the wheat grown in Louisa is shipped out of the County and at the same time there is brought into the County a great amount of high priced feeds composed chiefly of wheat, corn, and oats. Would it not be good business to use up this inferior wheat along with other home grown grains to feed our own animals, instead of buying at a premium, selling at a loss, and thereby losing the profit which is justly the farmer's?

Seed Treatment and Yield

No. farmers growing wheat	No. farmers who treat seed wheat	Yield per acre wheat treated	Yield of untreated wheat
31	13	16 bu.	13.75 bu.

Practices followed by Wheat Growers of  
the Apple Grove Community.

Varieties and Yields

Variety	No. who plant each variety.	Rate of seed- ing per acre.	Yield per acre.
V.P.I. Pure Bred.	2	5 pks.	16.5 bu.
Lieps Prolific P.B.	3	5 pks.	12.34 bu.
Purple Straw not pure.	16	4½ pks.	13.35 bu.
Stoner, not pure.	2	5 pks.	15 bu.
Fultz Pure Bred.	1	5 pks.	10 bu.
Unknown va- rieties.	7	4½ pks.	13.25 bu.
Totals & averages	31	4-3/4 pks.	13.4 bu.

Fertilizer and Yields

Kind of ferti- lizer used.	Amount per acre.	No. of farmers using.	Yield per acre.	Cost per bu. to produce.
Slag	400 lbs.	3	12.5	\$ .93
Acid Phos.	325 lbs.	19	13.7	.84
3-8-3	350 lbs.	1	15.00	.86
3-8-12	350 lbs.	1	18.00	.88
No fertili- zer used.	-----	7	10.57	.96

Seed Treatment and Yield

No. farmers growing wheat	No. farmers who treat seed wheat	Yield per acre when treated	Yield of un- treated wheat.
31	13	16 bu.	11.75 bu.

Farm No.	Acreage	Yield per Acre.	Variety	Fertilizer		Manure used?	How applied	Amt. seed sown per A.	How disposed of.	Is seed treated?	Cost to produce an A.	Per bushel cost of production.	
				Kind Used	Amt. per Acre.								Time sown
1	8	10	Unknown	---	---	---	Yes	Top D.	5 pks.	Consumed	No	\$8.00	80 ¢
2	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---	---
4	10	18	P.S.	A.P.	300 lbs.	Seeding	Yes	Top D.	5 pks.	Local sale	Yes	3.00	16.6 ¢
5	10	15	Unknown	A.P.	300 lbs.	Seeding	Yes	Top D.	5 pks.	Local sale	Yes	5.00	33.3 ¢
6	---	---	---	---	---	---	---	Top D.	---	---	---	---	---
7	7	15	Unknown	3-8-3	350 lbs.	Seeding	No	---	5 pks.	Consumed	Yes	6.00	40 ¢
8	---	---	---	---	---	---	---	---	---	---	---	---	---
9	10	15	L.P.	A.P.	300 lbs.	Seeding	Yes	Top D.	5 pks.	Local sale	No	7.00	46.4 ¢
10	---	---	---	---	---	---	---	---	---	---	---	---	---
11	6	12	Unknown	A.P.	350 lbs.	Seeding	No	---	4 pks.	Consumed	No	10.00	83.3 ¢
12	---	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---	---
14	7	18	Stoner	A.P.	350 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	Yes	15.00	83.3 ¢
15	25	10	P.S.	Slag	400 lbs.	Seeding	No	---	4 pks.	Consumed	No	10.00	\$1.00
16	20	18	P.S.	A.P.	400 lbs.	Seeding	Yes	Top D.	4 pks.	Local sale	Yes	10.00	55.5 ¢
17	9	15	P.S.	A.P.	300 lbs.	Seeding	Yes	Top D.	4 pks.	Consumed	No	6.00	40 ¢
18	15	15	V.P.I.-131	A.P.	350 lbs.	Seeding	Yes	Top D.	5 pks.	Local sale	Yes	13.50	90 ¢
19	9	12	Unknown	Slag	400 lbs.	Seeding	Yes	Top D.	4 pks.	Consumed	Yes	8.00	65 ¢
20	7	12	Stoner	A.P.	250 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	No	11.50	96 ¢
21	12	17	P.S.	A.P.	400 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	Yes	15.00	82 ¢
22	10	18	V.P.I.-131	3-8-12	450 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	Yes	10.00	55 ¢
23	50	18	P.S.	A.P.	350 lbs.	Seeding	Yes	Top D.	4 pks.	Consumed	Yes	8.00	44 ¢
24	20	10	P.S.	A.P.	350 lbs.	Seeding	No	---	5 pks.	Consumed	Yes	10.00	\$1.00
25	10	10	Fultz	A.P.	300 lbs.	Seeding	No	---	5 pks.	Consumed	No	15.00	\$1.50
26	6	15	Unknown	A.P.	400 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	Yes	8.00	53 ¢
27	7	11	P.S.	A.P.	200 lbs.	Seeding	No	---	4 pks.	Consumed	No	10.00	90 ¢
28	---	---	---	---	---	---	---	---	---	---	---	---	---
29	5	8	P.S.	A.P.	300 lbs.	Seeding	No	---	5 pks.	Consumed	No	12.00	\$1.50
30	5	10	P.S.	A.P.	300 lbs.	Seeding	No	---	4 pks.	Consumed	No	15.00	\$1.50
31	5	15	P.S.	---	---	---	Yes	Top D.	4 pks.	Consumed	No	9.00	60 ¢
32	20	12 $\frac{1}{2}$	P.Fultz	A.P.	350 lbs.	Seeding	Yes	Top D.	5 pks.	Local sale	No	15.00	\$1.20
33	6	12	L.P.	A.P.	300 lbs.	Seeding	Yes	Top D.	5 pks.	Consumed	No	10.00	83 ¢
34	30	15	P.S.	Slag	400 lbs.	Seeding	Yes	Top D.	6 pks.	Local sale	Yes	12.00	\$1.25
35	30	10	P.S.	---	---	---	No	---	5 pks.	Local sale	No	10.00	\$1.00
36	10	10	L.P.	---	---	---	No	---	5 pks.	Local sale	No	9.00	90 ¢
37	---	---	---	---	---	---	---	---	---	---	---	---	---
38	10	8	P.S.	---	---	---	No	---	5 pks.	Consumed	No	9.00	\$1.12
39	15	10	P.S.	---	---	---	No	---	5 pks.	Local sale	No	12.00	\$1.20
40	20	11	P.S.	---	---	---	Yes	Top D.	5 pks.	Local sale	No	12.00	\$1.10

## H A Y

When all of the crops grown for hay are considered together, the hay crop is the second crop enterprise in the community. There are 620 acres of land cut over for hay annually on thirty-seven farms. This acreage produces about \$12,760.00 dollars worth of hay each year. The greater part of this crop is composed of mixed hay consisting of old clover, timothy, red top, and orchard grass. Practically all legumes will grow well on the soil in Louisa County. Despite this fact legumes are scarce when old clover is excepted. The use of cow peas, soy beans, sweet clover, and alfalfa, is not general in the Apple Grove Community. However, there are a few farmers who grow small quantities of all of these crops with best results.

Chart \* shows that three farmers of the community do not grow hay for their own use. Four other farmers produce hay in too small quantities to supply themselves. There are seven farmers who buy hay for their stock each year. Ten farmers or 25% report a little surplus hay which may be sold. All surplus is disposed of locally. These data do not reveal the true situation about the hay crop in the County as a whole. It appears here that there is as much or more hay produced in the County than is consumed here. This is not the case at all. There are eight or ten hay dealers in the County, and all of them do good business in hay. This means that the County is not producing hay (one of the easiest crops to grow) enough to feed the live stock grown. This condition cannot by any means bring revenue to the farmer of Louisa County.

HAIS

Fall sown oats for grain is an important crop in the Apple Grove Community and in Lewis County at present.

It is the custom of the Community to sow the mixed seed in the wheat and oats crops. This is a well recommended method by the most up-to-date farmers of the community. When all hays are averaged together for amount grown per acre, it is found that the tonnage varies from three quarters of a ton to one and one-half tons per acre. The grass mixtures range lower than alfalfa and soy beans and a few other crops when seeded alone. However, the clover mixture is desirable, because it is clean of dirt, fits well into the prevailing rotation of crops, and is very easily and cheaply seeded.

With the present condition of soil and adaptability of important hay crops, there is no reason why the farmers of the community should not produce sufficient hay for home use and a little to sell under normal crop conditions. This may be done by increasing plantings to regular clover and timothy crop, by planting legumes like soy beans, cow peas, alfalfa, and vetch. Lime should be used for alfalfa and is beneficial for other crops. Sweet clover should be planted more as a land improver.

The best land on the farm. The kind of fertilizer is Acid Phosphate 16% in all cases except two. The amount used per acre is little more than is used on wheat. Application of fertilizer is made in the fall at seeding time for wheat.

It is recommended here that there be a greater use of the oat grain in the rotation of live stock of the community, that more oats be seeded than are at present sown. That earlier sowing be practiced by those farmers who now sow late, the use of the V. P. I. variety that oats be used for a winter cover crop, and where a cow raises sheep the oats may be grazed. The growing of artificial sod is being recommended for a number of the best farmers. The adoption of two or three of these recommendations would tend to put the oat crop in its proper relation to Lewis County farming.

## O A T S

Fall sown oats for grain is an important crop in the Apple Grove Community and in Louisa County as a whole. The yield is good and the uses to which this grain may be put on the average farm are many. The uses made of both grain and straw would justify heavier plantings than are common in this locality at present. Oats are well adapted to weather and soil conditions in this County. The yield per acre compares favorably with wheat, and the price per bushel is not bad when compared to other grains. Consistent use of oats in stock feed is not practiced nor appreciated.

Reference to Chart # 5 will reveal many facts about oats in this locality. Seven farmers grow V. P. I. #1; three grow Virginia Grey Winter; and two grow unknown varieties. One man produces the certified seed and grows the V. P. I. oats. So far as yield is concerned, the V. P. I. oat has the lead by far. The seed are heavier per bushel measure and the bushels of measured oats per acre are higher than the other varieties grown locally.

The use of commercial fertilizer on oats is more general than on wheat. This may be due to the fact that oats are seeded to the poorest land and wheat gets the best land on the farm. The kind of fertilizer is Acid Phosphate 16% in all cases except two. The amount sown per acre is little more than is sown on wheat. Application of fertilizer is made in the fall at seeding time broadcast.

It is recommended here that there be a greater use of the oat grain in the ration of live stock of the community, that more oats be seeded than are at present sown, that earlier sowing be practiced by those farmers who now sow late, the use of the V. P. I. variety, that oats be used for a winter cover crop, and where a man raises sheep the oats may be grazed. The growing of certified seed is also recommended for a number of the best farmers. The adoption of two or three of these recommendations would tend to put the oat crop in its proper relation to Louisa County farming.



Chart No. 4 HAY.

Farm No.	Acre-age.	Yield per Acre.	Per Acre Cost of Production.	Per ton cost of prod.	Hay sold per yr.	Hay bought per yr.
1	16	3/4	\$ 3.50	\$ 4.67	None	None
2	6	3/4	2.00	3.00	---	2 tons
3	4	3/4	12.00	16.00	None	None
4	15	1	2.00	2.00	3 tons	---
5	20	1 1/2	3.00	3.00	8 tons	---
6	2	3/4	14.00	9.34	---	1 ton
7	7	1	6.00	8.00	---	2 tons
8	---	---	---	---	---	---
9	12	1	8.00	8.00	None	None
10	8	3/4	6.00	8.00	None	None
11	12	3/4	8.00	10.66	3 tons	---
12	10	1	10.00	10.00	---	3 tons
13	2	3/4	7.50	10.00	None	None
14	25	1 1/2	15.00	10.00	10 tons	---
15	50	1 1/2	10.00	6.66	20 tons	---
16	20	1	9.00	9.00	8 tons	---
17	10	1	6.00	6.00	None	None
18	50	1	11.25	11.25	10 tons	---
19	10	1	7.00	7.00	None	None
20	10	1	7.50	7.50	None	None
21	8	1	10.00	10.00	None	None
22	20	1 1/2	10.00	6.66	8 tons	---
23	50	1	8.00	8.00	None	None
24	20	1	5.00	5.00	None	None
25	10	1 1/2	15.00	10.00	None	None
26	12	3/4	6.00	8.00	None	None
27	5	3/4	10.00	13.34	None	None
28	9	1	7.00	7.00	---	4 tons
29	10	1	12.00	12.00	None	None
30	---	---	---	---	---	5 tons
31	---	---	---	---	---	1 ton
32	45	1	10.00	10.00	None	None
33	6	1	10.00	10.00	None	None
34	30	1 1/2	9.00	6.00	12 tons	---
35	60	1 1/2	10.00	20.00	None	None
36	10	1	7.00	7.00	None	None
37	12	1	9.00	9.00	None	None
38	6	3/4	5.00	6.66	None	None
39	10	1	10.00	10.00	3 tons	---
40	30	3/4	8.00	10.66	None	None

Chart No. 5 OATS.

Farm No.	Acre-age.	Yield per Acre.	Variety.	Kind used.	Amt. per Acre	Time sown	Per Acre Cost of prod.	Per bu. cost of prod.	Amt. seed sown per A.
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	10	12	V.P.I.-1	A.P.	300	Seeding	\$ 3.00	25 ¢	6 pks.
5	9	14	V.P.I.-1	A.P.	300	Seeding	5.00	35 ¢	6 pks.
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	7	20	Unknown	Slag	350	Seeding	\$ 5.50	27.5 ¢	8 pks.
11	6	10	Va.G.Winter.	A.P.	350	Seeding	10.00	\$1.00	6 pks.
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	18	35	V.P.I.-1	A.P.	350	Seeding	15.00	43 ¢	5 pks.
15	5	20	90 Day	Slag	400	Seeding	10.00	50 ¢	5 pks.
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	10	25	V.P.I.-1	A.P.	350	Seeding	13.50	54 ¢	6 pks.
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	3	30	V.P.I.-1	A.P.	300	Seeding	10.00	33.3 ¢	6 pks.
23	20	30	Va.G.Wint.	3-8-12	350	Seeding	8.00	26.6 ¢	6 pks.
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
32	13	15	V.P.I.-1	A.P.	350	Seeding	15.00	\$1.00	6 pks.
33	---	---	---	---	---	---	---	---	---
34	5	20	V.P.I.-1	Slag	400	Seeding	12.00	60 ¢	8 pks.
35	---	---	---	---	---	---	---	---	---
36	---	---	---	---	---	---	---	---	---
37	---	---	---	---	---	---	---	---	---
38	---	---	---	---	---	---	---	---	---
39	---	---	---	---	---	---	---	---	---
40	10	15	Va.G.Wint.	---	---	---	\$11.00	73 ¢	6 pks.

## SWINE

Swine, as an animal enterprise, ranks third in importance in the Apple Grove Community. Two other classes of livestock take first and second places, and they are the cattle and work stock in the order named. Thirty-eight farmers of the forty surveyed grow swine. Six men grow hogs in sufficient numbers to be classed as commercial raisers. The other growers produce hogs for home use primarily, though a few of these have meat to sell occasionally. It appears that the needs of the community may be furnished in so far as pigs are concerned. There are 28 brood sows on the 38 farms. At a normal rate of increase it seems that there should be sufficient pigs and some to spare each year. The average weight of fat hogs killed is 229 pounds. The number killed per farm for home use is on an average of 4 hogs, this figures up to be 916 pounds of pork per family in the community.

The Duroc is the most important breed of hogs in the community, being grown by 23 farmers of the community. While there are only two or three registered hogs in the community, there are many more entitled to registration in the Duroc breed. Three farmers report Pure Bred Poland China and a few others prefer this breed. The Berkshire breed has gained less popularity here than any of the breeds formerly named. Eleven farmers of the thirty-eight pay no attention to breed. Their stock is mixed and consists chiefly of mixed blood of the Duroc and Poland China. It is interesting that these data show the greatest gains per day to be made by the Poland China, second best by the Duroc, and third place to be made by the mixed breeds. It is true that all of the differences in gains cannot be attributed to the breed characteristics, but there is good evidence that some of the differences may duly be placed to the credit of the breeds standing highest.

Corn is the base of every man's hog ration in the community. This is good practice, and there is no good reason for advising a change in this particular. The use of skim

milk in the hogs' diet is general here and much to be recommended. Many farmers feed shipped stuff to hogs. Four report the use of tankage as a supplement of the home grown feeds. Slightly better and more economical gains are reported where this is the practice. Pasture is provided for the breeding stock in nearly every case where breeders are kept. There are eight of the growers of swine who are accustomed to sowing some crop to be hogged down. Soy beans, corn, and rape are the crops used for this purpose. Woven wire fences are essential for this practice.

There are 10 Pure Bred sires in the Community; 8 Duroc, 1 Poland China, and 1 Berkshire. Some co-operation is practiced in the use of sires in the community, though not so much as might be. Breeding is done at such a time as to bring the pigs either in the fall or spring. Those who grow swine for market have their sows farrow in the spring and those who grow exclusively for home use prefer the fall farrowed pigs.

Due to the adaptability of this section to grain farming and to the ease with which hogs may be grown, there is at present no reason why more hogs should not be grown. At the present time there seems to be no doubt but that the farmer will have to turn to something other than tobacco for a money enterprise. Some of the farmers of the county could find this needed cash enterprise in the line of producing hogs. Markets are near at hand demand is good, transportation facilities are first class, and prices are relatively high.

There seem to be no reasons for recommending any changes in breeds. It is very likely that the breeds now common to the locality are well adapted, and with some improvements of the same breeds kept, will adequately meet the needs for lard type of hogs. There are some recommended changes in practices. Better Housing methods, more hog fence, more crops for hogging down, use home grown grain, buy only tankage to supplement feeds grown at home, and feed a balanced ration. To this may be added better care of the farrowing sows that a larger percent of the pigs may be raised.

Chart No. 6 SWINE.

Farm No.	No. Brood Sows Kept.	Breed kept	Age at which pigs killed.	No. fat hogs killed yearly	Age fat hogs killed	Wt. of fat hogs	Daily gain in lbs.	Is pasture provided	Summer ration	Finishing ration.	In what form marketed	Value of prod. sold.	Char. of houses	Method to improve herd	Time of farrowing.
1	---	Duroc	---	5	10 Mo.	200 lbs.	.66	No	C. & grass	C. slop	---	---	Poor	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3	---	Duroc	---	2	10 Mo.	200 lbs.	.66	No	C. & grass	C. M. chop	---	---	Poor	---	---
4	2	Duroc	6 wks.	12	10 Mo.	150 lbs.	.50	Yes	Milk & C.	C. & slop	Cured	\$162.00	Poor	P.B.Sire	Feb.
5	1	Duroc	6 wks.	6	12 Mo.	225 lbs.	.61	Yes	Milk & C.	C. M. slop	Cured	108.00	Poor	---	Nov.
6	1	Duroc	6 wks.	5	12 Mo.	200 lbs.	.54	Yes	Milk & C.	C. M. slop	---	---	Poor	P.B.Sire	Nov.
7	1	Duroc	---	7	12 Mo.	225 lbs.	.61	Yes	Milk & C.	C. M. slop	---	---	Poor	---	Nov.
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	---	Duroc	---	5	10 Mo.	200 lbs.	.66	Yes	Corn & grass	C. slop	---	---	Poor	---	---
10	2	P.C.	8 wks.	6	10 Mo.	200 lbs.	.66	Yes	C. M. & tank.	C. T. slop	---	---	Poor	P.B.Sire	Feb.
11	---	Grade D.	---	4	11 Mo.	200 lbs.	.59	No	C. and milk	C. slop	---	---	Poor	---	---
12	---	Grade D.	---	4	12 Mo.	275 lbs.	.75	Yes	C. & grass	C. T. slop	---	---	Poor	---	---
13	1	P.C.	6 wks.	2	15 Mo.	250 lbs.	.54	Yes	C. & grass	C. M. slop	Cured	\$ 27.00	Poor	---	Sept.
14	2	Duroc P.B.	---	12	10 Mo.	225 lbs.	.75	Yes	C. T. & grass	C. M. T. slop	On hoof	204.00	Good	P.B.Sire	Feb.
15	4	Duroc	---	15	13 Mo.	275 lbs.	.69	Yes	C. & grass	C. M. slop	Cured	360.00	Good	P.B.Sire	Nov.
16	2	Duroc	---	11	18 Mo.	300 lbs.	.55	Yes	C. & grass	C. M. slop	Cured	240.00	Good	---	Mar.
17	---	Duroc	---	3	18 Mo.	325 lbs.	.59	Yes	C. & grass	C. M. slop	---	---	Poor	---	---
18	5	Duroc & P.C.	---	4 & 30	10 Mo.	200 lbs.	.66	Yes	C. M. grass	C. M. slop	On hoof	390.00	Poor	P.B.Sire	Feb.
19	---	Duroc	---	4	12 Mo.	200 lbs.	.54	No	C. M. grass	C. slop	---	---	Poor	---	---
20	1	Duroc	6 wks.	2	17 Mo.	400 lbs.	.78	No	C. M. grass	C. M. slop	---	---	Poor	P.B.Sire	Mar.
21	---	Grade P.C.	---	3	18 Mo.	400 lbs.	.73	No	C. M. grass	C. M. slop	---	---	Poor	---	---
22	---	Grade	---	5	9 Mo.	200 lbs.	.74	Yes	C. M. T.	C. M. T. slop	---	---	Poor	---	---
23	4	Berkshire	---	20	12 Mo.	200 lbs.	.54	Yes	C. M. grass	C. M. slop	On hoof	\$330.00	Good	P.B.Sire	Nov.
24	---	Grade	---	5	10 Mo.	350 lbs.	1.16	No	C. M. grass	C. M. T. slop	---	---	Poor	---	---
25	---	Duroc	---	5	12 Mo.	150 lbs.	.41	Yes	C. M. grass	C. slop	---	---	Poor	---	---
26	---	Duroc	---	4	12 Mo.	175 lbs.	.47	Yes	C. slop	C. slop	---	---	Poor	---	---
27	---	Duroc	---	10	8 Mo.	150 lbs.	.62	Yes	C. M.	C. M. slop	As pork	108.00	Poor	---	---
28	---	Duroc	---	2	15 Mo.	350 lbs.	.77	No	C. M.	C. M. slop	---	---	Poor	---	---
29	---	Grade	---	2	12 Mo.	250 lbs.	.68	No	C. M.	C. M. slop	---	---	Poor	---	---
30	---	Grade	---	3	12 Mo.	200 lbs.	.54	No	C. M.	C. slop	---	---	Poor	---	---
31	---	Duroc	---	2	9 Mo.	250 lbs.	.91	No	C. M.	C. M. slop	---	---	Poor	---	---
32	---	Duroc	---	8	14 Mo.	200 lbs.	.47	No	C. M. grass	C. slop	---	---	Poor	---	---
33	---	Grade	---	4	14 Mo.	300 lbs.	.70	No	C. M.	C. M. slop	---	---	Poor	---	---
34	1	Duroc	8 wks.	6	14 Mo.	325 lbs.	.76	Yes	C. M. grass	C. M. slop	---	---	Poor	P.B.Sire	Sept.
35	---	Duroc	---	2	12 Mo.	300 lbs.	.82	Yes	C. M. grass	C. M. slop	---	---	Poor	---	---
36	1	Duroc	6 wks.	4	12 Mo.	175 lbs.	.47	Yes	C. grass	C. slop	---	---	Poor	P.B.Sire	Nov.
37	---	Duroc	---	2	10 Mo.	200 lbs.	.66	No	C. grass	C. M. slop	---	---	Poor	---	---
38	---	Grade	---	4	10 Mo.	200 lbs.	.66	No	C. grass	C. M. slop	---	---	Poor	---	---
39	---	Grade	---	4	10 Mo.	200 lbs.	.66	No	C. M.	C. M. slop	---	---	Poor	---	---
40	---	P.C.	---	6	10 Mo.	250 lbs.	.83	No	C. M. grass	C. M. slop	---	---	Poor	---	---

## T O B A C C O

Tobacco is the most important money crop grown in the area surveyed. Fifty per cent of the farmers reported tobacco in the crops grown. At the time of this survey the competing money crops were corn, wheat, and hay. In the majority of instances where tobacco is not grown there is no real money crop grown. Forest products are about the only source of money income on many of the smaller farms. There is no crop in the community which pays so large a return per acre as tobacco. Where the farm is small, or where the amount of improved land is limited, the use of tobacco is very much in favor.

The practices followed in connection with growing tobacco need but little comment here. Little Orinoco is the variety grown by all who raise tobacco. This variety is well adapted to soil, climate, and curing conditions. When cured and handled properly it brings fair prices on the market. Curing is done entirely by sun and air. So far as the information obtained from farmers is concerned, there seems to be no reason for changing.

The fertilization of tobacco is interesting, though not at all complicated. Reference to Table # will show that five different analyses of fertilizer are used for tobacco. The most prevalent analysis is 3-8-3. Under normal conditions in the community, there is no other fertilizer which gives the desired results of a good tobacco fertilizer as does the 3-8-3. Farmers differ greatly in the amount applied per acre. Three hundred pounds per acre is the minimum, and twelve hundred pounds per acre is the maximum. There is no definite correlation between the amount of fertilizer used per acre and the cost per pound of the finished product. Conclusions shown by the data are borne out by the best farmers of the community on the point of how much fertilizer should be used. Where manure is used it is recommended that there be 900 to 1000 pounds of 3-8-3 applied. If manure is not available more liberal applications of fertilizer should be employed. Nitrate of soda is good when the soil needs more nitrogen. Pounds of tobacco per acre also varies a great deal. Where quality and quantity are both kept in mind, it may be wise to go not far over twelve hundred pounds per acre. Half of the tobacco growers produce less than 1000 pounds per acre. If tobacco pays at all, it will pay better at eleven or twelve hundred pounds per acre, than at seven or eight hundred.

## THE HOME GARDEN

The home garden is found on every farm of the community. An annual estimate was placed on these gardens by the owners, which ranged from \$25.00 to \$300.00 dollars per garden. The size of gardens varied from 1/8 acre to 1-1/2 acres per farm. It may be said in defence of those reporting so small an area, that many of the most important vegetables are grown outside of the garden and this area was not included in their estimate. Gardens are second only to tobacco in farm value per acre. Generally the gardens of the community are fenced, a few, however, undertake to carry on a garden enterprise without a sign of a fence.

Not a great variety of vegetables are planted in the majority of the gardens. Very little idea of intensified methods seems to be abroad in the community. There are good gardens on about one-fifth of the farms. Buying of vegetables is practically unknown in the community, except in the case of four farmers. And, strange as it may seem, these very farmers have the best gardens and buy vegetables a part of the year. This state of affairs means that ninety per cent of the people of the community have too few vegetables in their diet in the spring and winter months. Too little attention is given to late fall, winter, and early spring vegetables.

In view of the fact that vegetables are of vital importance to the health of the farmer and his family, there are a few recommendations offered here:

1. Every home should have at least 3/4 acre of well fenced garden.
2. More intensive use of the land planted to garden.
3. The garden should be planned, plowed, and planted on a year basis, with the view of having vegetables at the time when most needed in the diet.
4. The use of more vegetables in the diet of practically all of the farmers.

Chart No. 7 TOBACCO.

Farm No.	Acres	Variety	Lbs. per Acre	Kind fert. used	Mnt. fert. used per A.	How and when appl.	Is manure used	Net inc. per A.	Cost prod. per A.	How market-ed.	Cost per lb. to prod.
1	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---
7	3	L30	700	3-8-3	600	B.C.Pl.	Yes	\$75.00	50.00	Pool	7.14 ¢
8	---	---	---	---	---	---	---	---	---	---	---
9	3	L O	800	3-8-3	500	B.C.Pl.	Yes	120.00	50.00	Pool	6.25 ¢
10	2	L O	1000	4-8-4	700	B.C.Pl.	Yes	160.00	45.00	O.F.	4.5 ¢
11	3	L O	900	3-8-3	600	B.C.Pl.	Yes	162.00	100.00	O.F.	11.0 ¢
12	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---
16	4	L O	1200	4-8-4	1000	B.C.Pl.	Yes	168.00	120.00	Pool	10.0 ¢
17	---	---	---	---	---	---	---	---	---	---	---
18	3	L O	1000	3-8-3	600	B.C.Pl.	Yes	120.00	50.00	Pool	5.0 ¢
19	1	L O	1000	3-8-3	450	B.C.Pl.	Yes	140.00	50.00	Pool	5.0 ¢
20	4	L O	800	3-8-3	300	B.C.Pl.	Yes	120.00	35.00	O.F.	4.4 ¢
21	3	L O	1000	3-8-3	800	B.C.Pl.	Yes	150.00	75.00	O.F.	7.5 ¢
22	---	---	---	---	---	---	---	---	---	---	---
23	3	L O	1000	4-8-4	600	B.C.Pl.	Yes	150.00	75.00	Pool	7.5 ¢
24	6	L O	1200	2-8-2	600	B.C.Pl.	Yes	300.00	60.00	Pool	5.0 ¢
25	2	L O	800	3-8-3	650	B.C.Pl.	Yes	120.00	75.00	Pool	9.4 ¢
26	3	L O	800	A.P.	400	B.C.Pl.	Yes	80.00	30.00	Pool	3.8 ¢
27	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---
30	2	L O	800	3-8-3	800	B.C.Pl.	Yes	120.00	75.00	O.F.	9.4 ¢
31	1 1/2	L O	1000	3-8-3	700	B.C.Pl.	Yes	150.00	40.00	O.F.	4.0 ¢
32	2	L O	1000	5-8-5	400	B.C.Pl.	Yes	200.00	150.00	O.F.	15.0 ¢
33	4	L O	900	3-8-3	1000	B.C.Pl.	Yes	126.00	60.00	O.F.	6.6 ¢
34	2 1/2	L O	800	3-8-3	1000	B.C.Pl.	Yes	120.00	55.00	Pool	6.8 ¢
35	---	---	---	---	---	---	---	---	---	---	---
36	---	---	---	---	---	---	---	---	---	---	---
37	---	---	---	---	---	---	---	---	---	---	---
38	1	L O	800	3-8-3	400	B.C.Pl.	Yes	---	60.00	O.F.	7.5 ¢
39	4	L O	1000	3-8-3	500	B.C.Pl.	Yes	---	45.00	Pool	6.8 ¢
40	---	---	---	---	---	---	---	---	---	---	---

Chart No. 8 GARDEN.

Farm No.	No. A. in garden	Fenced?	Is use Intensive?	Is manure used?	Fert. used?	Value per year.	Is there prof.	Any veg. boutht.?
1	1	Yes	No	Yes	Yes	\$200.00	Yes	No
2	1/8	Yes	No	Yes	No	50.00	Yes	No
3	1/4	Yes	Yes	Yes	Yes	200.00	Yes	No
4	1	Yes	No	Yes	Yes	150.00	Yes	No
5	1/2	Yes	Yes	Yes	Yes	150.00	Yes	No
6	1/2	Yes	No	Yes	Yes	100.00	Yes	No
7	1/2	Yes	Yes	Yes	Yes	200.00	Yes	No
8	1/4	Yes	Yes	No	Yes	150.00	Yes	No
9	1	No	No	Yes	Yes	100.00	Yes	No
10	1/2	Yes	Yes	Yes	Yes	100.00	Yes	No
11	1/4	Yes	Yes	Yes	No	25.00	Yes	No
12	1/2	No	No	Yes	No	100.00	Yes	No
13	1/4	Yes	No	Yes	No	90.00	Yes	No
14	3/8	Yes	Yes	Yes	Yes	200.00	Yes	Yes
15	3/4	Yes	Yes	Yes	Yes	300.00	Yes	Yes
16	1/4	Yes	Yes	Yes	Yes	100.00	Yes	No
17	1 1/2	No	No	Yes	No	75.00	Yes	No
18	1	Yes	Yes	Yes	Yes	75.00	Yes	No
19	3/4	Yes	No	Yes	Yes	75.00	Yes	No
20	1/2	Yes	Yes	Yes	Yes	75.00	Yes	No
21	1	Yes	Yes	Yes	Yes	100.00	Yes	No
22	1 1/2	Yes	Yes	Yes	Yes	150.00	Yes	Yes
23	1 1/4	Yes	Yes	Yes	Yes	75.00	Yes	Yes
24	1	Yes	Yes	Yes	Yes	75.00	Yes	No
25	1	Yes	No	Yes	No	100.00	Yes	No
26	1/2	Yes	No	Yes	No	100.00	Yes	No
27	1/3	No	No	Yes	No	100.00	Yes	No
28	1/4	No	No	Yes	Yes	100.00	Yes	No
29	1/2	Yes	No	Yes	No	75.00	Yes	No
30	1/2	No	No	Yes	No	60.00	Yes	No
31	1/4	Yes	No	No	Yes	100.00	Yes	No
32	1	Yes	Yes	Yes	Yes	100.00	Yes	No
33	3/4	Yes	Yes	Yes	Yes	150.00	Yes	No
34	1 1/2	Yes	Yes	Yes	Yes	200.00	Yes	No
35	1	Yes	No	Yes	Yes	50.00	Yes	No
36	1/2	Yes	No	Yes	Yes	100.00	Yes	No
37	1/2	Yes	No	Yes	Yes	60.00	Yes	No
38	1/2	Yes	No	Yes	Yes	90.00	Yes	No
39	1	Yes	Yes	Yes	Yes	120.00	Yes	No
40	1	Yes	No	Yes	Yes	125.00	Yes	No

## DAIRY CATTLE

Probably the feeding practices are of greater importance than the breeds kept in the production of milk. The data show the dairy cow did not have a commercial importance in Louisa County until comparatively recent years. It was the custom in the sixties and shortly thereafter to grow many beef cattle in the western portion of the County. These animals were grown for the eastern markets principally. When Railroad transportation reached into the corn belt states and brought the mid western states into competition with the east, the herds of beef cattle rapidly disappeared. In the place of these herds of beef cattle have come the dairy herds in recent years. Whole milk and cream are produced for the near by markets of the east. Because of the proximity to the great masses of population this section of the state can compete favorably in the field of milk and cream production.

The Apple Grove community has a few dairy herds which have reached the proportions of commercial enterprises. Thirty-eight of the forty farmers surveyed have dairy cattle on their farms. A total of 161 or slightly over 4 cows per farm, are found in the community. Reference to Chart # will show that there are only a few herds other than those kept for home use. Keeping of records is not practiced in the community by more than two or three farmers. The estimates given are not accurate, but should represent very nearly the true production. Some farmers estimated the milk production too high, and others were exceedingly conservative in their figures and when averages are made a fair estimate should be obtained.

There are but few Pure Bred animals found in the community. A good many high grade animals are to be seen and remarkably few poor scrubs. The breed does not necessarily account for all of the difference in production, but there is a difference in favor of the Pure Bred animal nearly every time. The Pure Bred Guernsey has the greatest milk record. Milk production is figured on a nine months basis for all breeds. It would be unwise to advocate the Pure Bred Guernsey as the only suitable cow for the community, when only two farmers keep this breed. Nineteen farmers keep 68 grade Jerseys. This cow is the most popular of all dairy breeds kept, regardless of the small milk record indicated by Table # 9. The grade Holstein is the second most popular breed, there being 48 cows kept by 16 farmers. These cows have a higher milk record than the grade Jerseys, but nothing was determined concerning the per cent of butter fat. It is true that the Holstein as a breed has a lower butter fat test than the Jersey or the Guernsey.



Probably the feeding practices are of greater importance than the breeds kept in the production of milk. The data show conclusively that feeding practices are of more importance than breeds kept. Table #        disregards breeds entirely and gives feeding practices and milk production. There are fifteen farmers who use cotton seed meal with corn meal as the concentrate with the highest milk production of any other feed common to the community. There are five who use wheat bran with corn meal with a fair result, though not near so good as cotton seed meal. Eleven farmers feed corn alone either ground or on the cob. The milk production is correspondingly lower. Those who fed no concentrate were seven in number and the milk production was lowest of all. There were no farmers who bought the high grade mixed cow feed. Several buy the mill feed from the dealers with not very good results.

The practice of producing a calf each year and allowing the cow to go dry from two to three months of that time is common in this community. By far the more farmers have their cows bred to freshen in the spring than any other time of the year. There is a continuous milk supply on most of the farms, but a few have all of the cows to freshen at the same time, and consequently have to pass over a certain period without milk for the family. There are no community owned bulls. In the whole community there were four Pure Bred Bulls. There is a decided lack of appreciation of the Pure Bred cow in the community as a whole. Calves are mainly vealed and old cows are killed for beef. Many of the cows are kept to be too old for best results.

At present there seems to be every reason to believe that the community and county could stand more herds of dairy cattle than are now here. From the data it seems that a few Pure Bred sires would do much to improve the dairy herds of the community. Better rations are needed for higher and cheaper yields of milk and butter. The most satisfactory protein rich concentrate is cotton seed meal. It is recommended that more generous use be made of home grown feeds, corn, wheat bran, oats, and legume hay. Better stables for winter use are needed. Milk the whole year round for the family is greatly needed. Community buying of concentrates and selling of surplus would be a great step forward. Testing for butter fat, elimination of boarders and old cows, and keeping of records of the herd would be to the advantage of all and especially to those who produce milk commercially.

Breeds of Cattle Kept and Amounts  
of Milk Produced.

Breeds Kept	No. who keep breeds named	Number of animals	Lbs. of milk daily	Lbs. milk annually
P. B. Guernsey	2	4	22	5940
P. B. Holstein	1	10	16	4320
G. Guernsey	2	9	17.5	4752
G. Jersey	19	68	8.5	2235
G. Holstein	12	48	7	1958
Unknown	4	16	9	2493

Feeding Practices Followed and Amounts  
of Milk Produced.

Ration used.	No. farmers using ration.	Lbs. of milk daily.	Lbs. milk in 270 days.
C. S. M. and corn	15	14.5	3775
Corn alone	11	7	1890
Corn & bran	5	9	2430
No concentrate	7	6	1620

Chart No. 9 DAIRY COWS.

Farm No.	No. Cows Kept	Breed	Quality of stock kept.	Lbs. milk per day per yr.	Lbs. milk per yr. of 9 Mo.	How butter is used.	How milk is disposed of.	Continuity of supply.	Disposal of young.	Freshening time of year.	Freshening frequency	Summer ration.	Winter hay ration.	Winter concentrates	Type of sire used.
1	4	Grade J.	Fair	8	2160	Family	Family	All year	Veal	Spring	Yearly	Grass	Stover	Corn	P.B. Guer.
2	2	P.B. G.	Fine	24	6480	Local sale	Local s.	" "	" Male	"	"	C.S.M.	" & hay	C & C.S.M.	P.B. "
3	2	Grade H.J.	Good	8	2160	Family	Family	" "	"	"	2 yrs.	Grass	Chop & hay	Chop	P.B. "
4	4	Grade H.	Good	8	2160	Local sale	Local s.	" "	"	"	Yearly	Grass	" & hay	Corn	P.B. Hol.
5	5	Grade H.	Fair	8	2160	Local sale	Local s.	" "	"	"	2 yrs.	Grass	" " "	Corn	P.B. Hol.
6	3	Grade H.J.	Fair	8	2160	Ship. C.	Family	" "	"	"	Yearly	Grass	" " "	Mill F.	P.B. Hol.
7	2	Grade J.	Poor	4	1080	Family	Family	" "	"	"	Yearly	Grass	" " "	Bran	Grade J.
8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	4	Grade J.	Poor	8	2160	Ship. R.	Family	All year	Veal	Spring	Yearly	Grass	Stover & hay	---	Grade J.
10	5	Grade J.H.	Fair	6	1620	Local sale	Family	" "	"	"	"	"	" " "	B. & C.S.M.	P.B. Hol.
11	3	Grade H.	Fair	8	2160	Local sale	Family	" "	"	"	"	"	" " "	C. & C.S.M.	Grade Hol.
12	3	Hereford	Fair	8	2160	Family	Family	" "	"	"	"	"	" " "	Mill F.	Grade Her.
13	2	Grade H.	Poor	6	1620	Local sale	Family	" "	"	"	"	"	Hay	Mill F.	Grade Hol.
14	10	P.B. H.	Excellent	16	4320	Fat S.R.	Family	" "	"	"	"	C.S.M.	Hay	C. & C.S.M.	P.B. Hol.
15	6	Grade J.H.	Fair	8	2160	Local sale	Family	" "	"	"	"	Grass	Hay- legume	C. & C.S.M.	P.B. Hol.
16	10	Grade Hol.	Fine	8	2160	Local sale	Local s.	" "	"	"	"	"	Hay- stover	Bran	Grade Hol.
17	5	Grade Hol.	Poor	8	2160	Family	Family	" "	"	"	"	"	Stover & hay	Corn	Grade Hol.
18	6	Grade Guer.	Fine	24	6480	Family	Family	" "	"	"	"	C.S.M.	" " "	C. & C.S.M.	P.B. Guer.
19	3	Grade J.H.	Good	12	3240	Local s.	Local s.	" "	"	"	"	Grass	" " "	Chop	Gr. Jer.
20	4	Grade J.	Good	12	3240	Ship. R.	Local s.	" "	"	"	"	C. & grass	" " "	C. & C.S.M.	Gr. Jer.
21	2	Grade Hol.	Poor	6	1620	Family	Family	" "	"	"	"	Grass	" " "	C. & bran	Grade Jer.
22	4	Grade J.G.	Fine	20	5400	Ship. R.	Family	" "	"	"	"	C. "	" " "	C. & C.S.M.	P.B. Guer.
23	12	Short. H.P.B.	Fine	16	4320	Ship. R.	Calves	" "	All kept	"	"	C. & grass	" & silage	C. & C.S.M.	P.S. Short.
24	5	Grade J.	Good	8	2160	Family	Family	" "	Veal	"	"	C. "	" & hay	C. & C.S.M.	Gr. J.
25	6	Grade H.	Poor	4	1080	Family	Family	" "	"	"	"	Grass	Stover	Corn	Gr. Hol.
26	3	Grade J.	Fair	8	2160	Local s.	Family	" "	"	"	"	Grass	" " "	"	Gr. J.
27	4	Grade J.	Poor	4	1080	Family	Family	" "	"	"	"	"	" & silage	C. & C.S.M.	Gr. J.
28	1	Grade J.	Fine	16	4320	Family	Family	9 months	"	"	"	"	" & hay	Chop	Gr. J.
29	2	Grade H.	Poor	4	1080	Family	Family	All year	"	"	"	"	Stover	Corn	Gr. Hol.
30	2	Grade H.	Poor	4	1080	Local s.	Family	" "	"	"	"	"	" " "	"	Gr. Hol.
31	1	Grade J.	Fair	8	2160	Family	Family	9 months	"	"	"	"	" & hay	"	P.B. Hol.
32	7	Grade J.	Poor	4	1080	Family	Family	All year	"	"	2 yrs.	"	Stover	B. & C.S.M.	Gr. Jer.
33	3	Grade G.	Fair	8	2160	Family	Family	" "	"	"	2 yrs.	"	" & hay	Corn	Gr. Guer.
34	2	P.B. Guer.	Fine	20	5400	Local s.	Local s.	" "	"	"	Yearly	C. grass	" " "	C.S.M.	P.B. Guer.
35	6	Grade Guer.	Poor	8	2160	Family	Family	" "	"-Male	"	"	Grass	Stover	C. & C.S.M.	Gr. Guer.
36	3	Grade Her.	Fine	12	3240	Family	Family	" "	"	"	"	"	" & hay	C. & bran	Gr. Her.
37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
38	3	Grade J.	Poor	4	1080	Family	Family	" "	Veal	Spring	Yearly	Grass	Stover	None	Gr. Jer.
39	4	Grade J.	Poor	4	1080	Local s.	Local s.	" "	"	"	"	"	" " "	Corn	Gr. Jer.
40	8	Grade J.	Fair	6	1620	Local s.	Family	" "	"	"	"	"	" & hay	C. & bran	Gr. Jer.

## D I S T R I B U T I O N O F F A R M A N I M A L S

According to G. F. Warren, "Farm Management" page 211, a farm to be moderately stocked should have one animal unit to every five to seven acres. Judging on the basis of Mr. Warren, there are three or four farms of the community well stocked, the other farms are, in the main, very poorly stocked. The farm which has the greatest number of acres per animal unit contains 53.3 acres per animal unit. The least number of acres and the greatest number of animal units is 7.04 acres to the animal unit. This wide variation in numbers of animals kept indicates that there is very little interest in live stock for commercial purposes, except with a very few people. Without exception, the better stocked farms are the best kept farms, and the owners seem more prosperous. This is doubly true if the entire income is from the farm. To do crop farming here seems to be impractical. There seems to exist a definite relation between the amount of live stock kept and the fertility of the soil.

Another very important point which has an important bearing upon farm income and net profits is the number of acres cultivated by horse or mule. In other words, the efficient use of horse labor rather indicates efficiency in other things as well. The keeping of two or more horses in addition to the farm needs will result in a complete loss for the year rather than a substantial gain. One farmer reports 100 acres of land for every horse kept. This is because there are two tractors to supplement the horse labor needed. The other extreme is where a man reports five acres per horse. It is very doubtful whether this will be high enough where general farming is done. The average number of acres per horse for the community is 23. This means cultivatable acres of course.

Sheep are very scarce in the community. This is due largely to the fact that there is so little good fencing in the community. Those who keep sheep report them the most profitable enterprise on the farm. Only six farmers keep sheep.

Hogs are well distributed, but are grown for home use chiefly. Chickens are kept by practically all of the homes. Beef cattle are unknown at all of the farms except two. Dairy cattle hold an important place among the animal enterprises of the community. Horses and mules are well distributed and afford practically the only source of farm power.

Chart No. 16, Showing distribution of animals and total animal units per farm.

No. of farm	No. Acres in Farm	No. Acres in Pasture	Quality of Pasture	No. Dairy Cows	No. Beef Cattle	No. Mules & Horses	No. Sheep	No. Chickens	No. Hogs	No. Acres per Animal Unit	Total Animal Units	Cultivated Acres per Horse
1	118	100	Very poor	4	---	3	---	75	5	31.5 A.	3.75	13.33
2	30	3	Good	2	---	---	---	15	---	14.0 A.	2.15	---
3	100	50	Poor	2	---	1	---	30	2	27.03 A.	3.70	10.00
4	350	200	Fair	4	---	4	25	75	14	22.1 A.	15.25	12.5
5	286	200	Poor	5	---	6	---	125	7	20.1 A.	13.65	20.5
6	114	15	Poor	3	---	2	---	65	6	16.6 A.	6.85	12.5
7	50	50	Poor	2	---	3	---	50	8	7.04 A.	7.10	13.3
8	106	20	Poor	---	---	---	---	---	---	---	---	---
9	250	70	Poor	4	---	4	---	50	5	26.3 A.	9.50	13.7
10	110	110	Fair	5	---	7	---	100	8	7.53 A.	14.60	5.0
11	280	150	Poor	3	---	3	---	75	4	37.00 A.	7.55	16.6
12	97	30	Very poor	3	---	1	---	60	4	17.3 A.	5.60	15.0
13	271	50	Very poor	2	---	2	12	65	3	37.3 A.	7.25	75.0
14	225	195	Well improved	10	---	3	30	75	14	10.34 A.	21.75	55.0
15	616	316	Very good	6	35	8	---	80	19	11.4 A.	53.80	50.0
16	155	80	Very good	10	---	8	---	90	13	7.4 A.	20.90	12.5
17	300	200	Poor	5	---	2	---	45	3	37.7 A.	7.75	20.0
18	440	210	Well improved	6	---	5	85	35	9	13.6 A.	32.35	60.0
19	100	65	Fair	3	---	2	---	70	4	14.9 A.	6.70	22.5
20	90	75	Poor	4	---	3	---	100	3	10.4 A.	8.60	20.0
21	60	---	---	2	---	2	---	100	3	12.5 A.	5.60	15.0
22	112	90	Fair to good	4	---	4	---	200	5	10.2 A.	11.00	12.5
23	2500	2250	Fair to good	12	100	10	60	300	24	18.4 A.	138.00	100.0
24	360	285	Fair	5	---	10	---	125	5	20.8 A.	17.25	10.0
25	337	94	Poor	6	---	5	---	75	5	26.4 A.	12.75	25.0
26	120	60	Poor	3	---	2	---	60	4	18.2 A.	6.60	30.0
27	86	72	Poor	4	---	3	---	85	10	8.7 A.	9.85	16.6
28	50	15	Poor	1	---	2	---	30	2	14.3 A.	3.50	15.0
29	60	20	Poor	2	---	3	---	60	2	10.3 A.	5.80	16.6
30	50	35	Poor	2	---	2	---	25	3	11.1 A.	4.50	7.5
31	48	20	Poor	1	---	---	---	35	2	30.9 A.	1.55	---
32	300	220	Fair	7	---	5	---	125	8	21.4 A.	14.50	30.0
33	72	17	Good	3	---	3	---	60	4	9.4 A.	7.60	13.3
34	215	140	Good	2	---	4	---	50	6	26.9 A.	8.00	26.0
35	100	75	Good	6	---	3	---	35	2	10.2 A.	9.95	26.0
36	85	75	Poor	3	---	3	---	30	4	11.6 A.	7.30	18.3
37	80	35	Poor	---	---	1	---	30	2	53.3 A.	1.50	25.0
38	120	78	Very poor	3	---	2	---	60	4	18.2 A.	6.60	20.0
39	200	150	Good	4	---	3	---	60	4	23.2 A.	8.60	23.3
40	300	200	Fair	8	---	14	40	60	6	10.1 A.	29.60	6.4

## F A R M M A N A G E M E N T

Many of the farmers practice good farm management in some particulars. The majority practices a very inefficient farm management. Few phases of farming have a more important bearing upon income and profits than management.

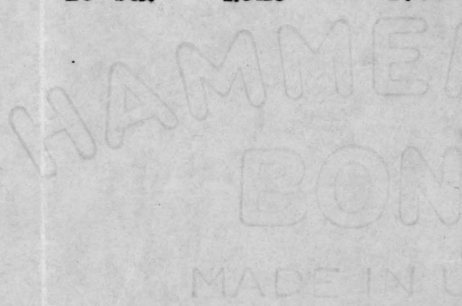
Fifteen farmers report a five year rotation; fourteen a four year rotation; five a three year, and six no rotation. Fourteen farmers use burnt lime at the rate of 1000 lbs. every four, five, or six years. Good results are obtained from this amount and there seems to be no good reason for using more. Twenty-six of the forty do not use lime at any time. The order of crops is: Corn, small grain, grass for hay, grass for pasture. It is the custom with a few of those practicing the five year rotation to graze two years instead of one. The four year rotation is practically the same as the five, except the grass or hay crop is plowed up one year earlier. The three year rotation employs the same crops, but cuts the hay one year and returns to corn in the fourth year. It is doubtful whether this practice is to be recommended, particularly where land is as plentiful as in this locality.

Eleven farmers make a most serious mistake in the handling of the barn-lot manure. The manure is allowed to leach and waste on the outside as well as pile up under the stock to the detriment of the animals and harm of the manure. The practices followed by the other farmers are in the main good. Manure is hauled directly to the field, or is cared for in good shape. It is the common practice to put the major part of the manure on the tobacco crop where a man grows tobacco. Where this is done the manure is used on a very small area. Outside of rye there is but little green manure returned to the soil.

Soy beans and cow peas are grown by only a small number of farmers. The Virginia variety of soy beans is the popular bean, only one grower sows the Laredo. A few farmers grow soy beans for hogging down and report good and economical gains for swine. Seed beans are not produced in sufficient quantities to supply local demand for seed beans. Nine farmers grow soy beans for seed at present. There are many beans imported to the locality at seeding time. Cow peas are grown by six farmers for seed purposes. Practically all of the beans are mixed and there is no special emphasis placed on the pure bred seed. Groyt peas are grown by one farmer, all of the rest plant mixed seed. The yield is small for both beans and peas per acre.

In the light of the fact that a great many beans and peas are brought into the community each year, it seems reasonable to suggest that double as many beans and peas could be grown to good advantage. Larger use of both beans and peas for land improvement and more beans for hogging down are the recommendations.

Farm No.	First Year.	Second year.	Third Year	Fourth Year	Fifth Year	How often limed	Form used.	Leg. inoc.	Manure hauled promptly.	Any Seed test. for germ.	Imp. housed well?	Farm No.	Acre- age.	Yield per A.	Variety	Rate of seeding per A.	How harvested	Seed used	Seed sold	Per bu. cost to prod.
1	Corn	Peas	Wheat	Hay	Grass	None	---	No	No	No	Poor	5	7	5 bu.	Va.	3 gals.	B. Harvester	35 bu.	None	\$ .80
2	Corn	Hay	Corn	Hay	Corn	None	---	No	No	No	Yes	6	2	5 bu.	Va.	2 pks.	Pulled up	1 bu.	9 bu.	1.60
3	Corn	Wheat	Hay	Corn	Wheat	None	---	No	No	No	Yes	14	10	25 bu.	Va.&Lar.	3 gals.	Binder	45 bu.	205 bu.	1.00
4	Corn	Wheat or oats.	Hay	Grass	Corn	None	---	No	Yes	No	Yes	17	10	5 bu.	Va.	1 pk.	Harvester	10 bu.	40 bu.	1.20
5	Corn	Beans	Wheat or oats.	Hay	Grass	4th yr.	Burnt	No	Yes	No	Yes	18	10	10 bu.	Va.	3 gals.	Harvester	80 bu.	20 bu.	1.20
6	Corn	Wheat & oats.	Hay	Corn	Wheat	5th yr.	Burnt	Yes	Yes	No	Yes	19	2	10 bu.	Va.	2 pks.	Harvester	10 bu.	10 bu.	1.20
7	Corn	Peas	Wheat	Hay	Hay	5th yr.	"	No	Yes	No	Yes	20	2	10 bu.	Va.	2 pks.	Hand cut.	5 bu.	15 bu.	1.20
8	No rotation.	---	---	---	---	None	---	No	---	No	Yes	23	10	12 bu.	Va.	5 pks.	Mower	120 bu.	None	1.20
9	Corn	Wheat	Hay	Hay	Hay	None	---	No	Yes	No	Poor	34	10	12 bu.	Va.	3 gals.	Harvester	20 bu.	100 bu.	.833
10	Corn	Wheat	Hay	Hay	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
11	Corn	Wheat	Hay	Hay	Corn	5th yr.	Burnt	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
12	No rotation.	---	---	---	---	6th yr.	"	No	No	No	Poor	"	"	"	"	"	"	"	"	"
13	No rotation.	---	---	---	---	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
14	Corn	Wheat & oats.	Hay	Hay	Pasture	5th yr.	Burnt	Yes	Yes	Yes	Yes	"	"	"	"	"	"	"	"	"
15	Corn	Wheat & oats.	Hay	Hay	Pasture	4th yr.	"	Yes	Yes	No	Yes	"	"	"	"	"	"	"	"	"
16	Corn	Wheat & oats.	Hay	Hay	Pasture	4th yr.	"	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
17	Corn	Beans	Wheat	Hay	Corn	None	---	No	No	No	Yes	"	"	"	"	"	"	"	"	"
18	Corn	Beans	Wheat	Hay	Hay	5th yr.	Burnt	No	Yes	Yes	Yes	"	"	"	"	"	"	"	"	"
19	Corn	Wheat	Peas	Hay	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
20	Corn	Peas	Wheat	Hay	Pasture	None	---	No	No	No	Yes	"	"	"	"	"	"	"	"	"
21	No rotation.	---	---	---	---	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
22	Corn	Peas	Wheat	Hay	Corn	4th yr.	Burnt	No	Yes	Yes	Yes	"	"	"	"	"	"	"	"	"
23	Corn	Wheat	Hay	Hay	Pasture	5th yr.	"	No	Yes	Yes	Yes	"	"	"	"	"	"	"	"	"
24	Corn	Wheat	Hay	Grazing	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
25	Corn	Peas	Wheat	Hay	Hay	None	---	No	No	No	Poor	7	6	6 bu.	Mixed	1 pk.	Mower	36 bu.	None	\$1.00
26	Corn	Wheat	Hay	Hay	Corn	5th yr.	Burnt	Yes	Yes	No	Yes	15	4	15 bu.	Mixed	2 pks.	Mower	40 bu.	20 bu.	.533
27	Corn	Peas	Wheat	Hay	Corn	None	---	No	Yes	No	Yes	16	5	10 bu.	Groyt	3 gals.	Hand picked	50 bu.	None	1.20
28	Corn	Wheat	Hay	Com	Wheat	5th yr.	Burnt	No	Yes	No	Yes	20	2 1/2	9 bu.	Mixed	2 pks.	Hand picked	5 bu.	17.5 bu.	1.33
29	Corn	Peas	Wheat	Corn	Peas	None	---	No	No	No	Poor	23	25	12 bu.	Mixed	5 pks.	Harvester	300 bu.	None	1.00
30	Corn	Peas	Wheat	Hay	Corn	None	---	No	No	No	Poor	26	5	2 bu.	Mixed	3 gals.	Mower	10 bu.	None	4.00
31	Corn	Peas	Wheat	Hay	Hay	None	---	No	No	No	Yes	"	"	"	"	"	"	"	"	"
32	Corn	Peas	Wheat	Hay	Hay	5th yr.	Burnt	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
33	Corn	Peas	Wheat	Corn	Peas	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
34	Corn	Peas	Wheat	Hay	Hay	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
35	Corn	Wheat	Corn	Wheat	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
36	Corn	Wheat	Hay	Hay	Pasture	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
37	No rotation.	---	---	---	---	None	---	No	No	No	Poor	"	"	"	"	"	"	"	"	"
38	No rotation.	---	---	---	---	None	---	No	No	No	Poor	"	"	"	"	"	"	"	"	"
39	Corn	Wheat	Hay	Hay	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"
40	Corn	Wheat	Hay	Hay	Corn	None	---	No	Yes	No	Yes	"	"	"	"	"	"	"	"	"



## WORK STOCK AND SHEEP

Horses or mules, or horses and mules are kept on thirty-seven of the forty farms surveyed. There are three work animals per farm for the thirty seven which keep work animals. The number ranges from one to fourteen. It is doubtful whether there are too many horses and mules in the community as a whole. However, it may be said that there should be more land worked with the number of work stock kept at present. There seems to be quite a lack of efficiency in the use of farm animals.

The estimate given by the owners of horses and mules ranged from fifty to two hundred work days per horse per year. It is exceedingly doubtful whether a horse can earn enough in fifty days to pay his board for 365 days. The maximum price for a day's labor for a horse, as set by the farmers themselves, was \$1.50 if hired. This would give only \$75.00 for the horse working 50 days. When this figure is compared to the price set by the farmers for the keep of a horse through twelve months it will be seen that the horse which works only fifty days does not pay his own board. From \$90.00 to \$95.00 is the cost for keeping a horse in this community. This cost will be greater if there is no grazing done during the time the horse is idle.

In the opinion of the farmers and based upon their figures, the number of horses is steadily decreasing in the community. The number of acres of crops cultivated per horse is increasing even with more rapidity than the number of horses is decreasing.

More efficient use of horse labor, better distribution of labor for the horse through the year are recommended. Better grazing lands for the time when work is scarce will also materially reduce the annual cost of keeping horses.

Sheep are grown by six farmers of the community. The growers of sheep report a greater income from their flocks than from any other single enterprise. The income from sheep has a greater net profit than any other enterprise. This is because sheep are great rustlers and require comparatively little labor for care. Because of the great amount of untilled, cheap farm land, which produces a good grazing for sheep, it is true that many more sheep could be grown in the community with profit. The one hindrance to the successful growing of sheep is the number of prowling dogs of the community. With this pest out of the way, there is no reason why the farmers of this community could not produce sheep as cheaply and as economically as any other section of the state. Many more flocks could be grown without any danger of crowding the market.

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Chart No. 13 HORSES and MULES.

Farm No.	No. kept	Increasing or Decreasing Number.	Kind of pasture provided	Day's work per horse per year	Value per day hired	Yearly cost to keep
1	3	Decreasing	Fair	100	\$1.50	\$100.00
2	---	"	---	---	---	---
3	1	"	Poor	70	1.00	98.00
4	4	"	Poor	60	1.00	60.00
5	6	Same	Fair	65	1.25	100.00
6	2	Same	Poor	60	1.00	98.00
7	3	Increasing	Fair	150	1.00	90.00
8	---	---	---	---	---	---
9	4	Decreasing	Fair	125	1.25	110.00
10	7	Increasing	Fair	125	1.25	70.00
11	3	Decreasing	Poor	80	1.25	70.00
12	1	Same	Poor	100	1.00	150.00
13	2	Same	Poor	80	.50	40.00
14	3	Decreasing	Good	100	1.00	160.00
15	8	Same	Good	150	1.50	40.00
16	8	Decreasing	Good	150	1.50	120.00
17	2	Same	Fair	100	1.50	115.00
18	5	Increasing	Good	70	1.00	100.00
19	2	Same	poor	100	1.50	125.00
20	3	Increasing	Fair	200	1.25	100.00
21	2	Increasing	Poor	200	1.50	70.00
22	4	Same	Good	110	1.50	100.00
23	10	Decreasing	Good	200	1.25	100.00
24	10	Same	Good	75	1.25	60.00
25	5	Same	Poor	150	1.25	50.00
26	2	Increasing	Poor	120	1.25	180.00
27	3	Increasing	Poor	80	1.25	60.00
28	2	Decreasing	None	100	1.00	100.00
29	3	Same	None	100	1.00	80.00
30	2	Same	None	90	1.25	100.00
31	---	---	---	---	---	---
32	5	Same	Fair	100	1.25	125.00
33	3	Same	Fair	200	1.25	180.00
34	4	Same	Good	100	1.00	100.00
35	3	Same	Good	60	.50	50.00
36	3	Decreasing	poor	120	1.00	120.00
37	1	Same	None	90	1.00	75.00
38	2	Same	Poor	80	1.25	90.00
39	3	Decreasing	Fair	90	1.25	85.00
40	14	Decreasing	Fair	50	1.25	70.00

Chart No. 14 SHEEP.

Farm No.	No. Ewes kept	Breed	No. lambs per year.	Age at Selling.	Wt. at selling.	Time of shearing.	Char. of pasture	Char. of house used.	Kind of Buck Used.	Value of sold products per yr.
1	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---
4	25	Gr. S.D.	20	105 da.	65 #	June 1.	Unimp.	Shed	Grade S.	\$184.00
5	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---
13	12	Gr. S.D.	12	90 da.	50 #	June 1.	Unimp.	Shed	Grade S.	\$ 91.20
14	30	Gr. Shrop.	27	90 da.	70 #	June 5.	Improved	Shed	P.B. Shrop.	274.80
15	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---
18	85	Gr. Shrop.	90	100 da.	75 #	June 1.	Improved	Barn	P.B. Shrop.	\$846.00
19	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---
23	60	Gr. Shrop.	70	105 da.	75 #	June 1.	Improved	Barn	P.B. Shrop.	\$726.00
24	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---
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27	---	---	---	---	---	---	---	---	---	---
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31	---	---	---	---	---	---	---	---	---	---
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37	---	---	---	---	---	---	---	---	---	---
38	---	---	---	---	---	---	---	---	---	---
39	---	---	---	---	---	---	---	---	---	---
40	40	Gr. Shrop.	35	90 da.	65 #	June 1.	Poor	Shed	Gr. Shrop.	\$337.00