

Monte Francis McCraw. THE ALBEMARLE AREA OF NORTH CAROLINA: A STUDY IN RURAL GEOGRAPHY. (Under the direction of Dr. Ennis L. Chestang) Department of Geography, July, 1971.

The objectives of this study are to analyze the land use of the Albemarle and to present in an orderly and logical manner the factors which have contributed to the distinctiveness of the area. The present status of the study area has partially resulted from approximately 300 years of isolation from the surrounding parts of North Carolina. During this period general farming has dominated the landscape. A study of the historical and physical parameters involved in the evolution of the Albemarle warrants detailed investigation.

The Albemarle is an area which is unlike the surrounding counties, and is discussed in this study by covering those factors which make it different from its periphery. Certain specific factors covered in relation to the location of agricultural areas within the Albemarle are the farm-highway pattern, cultural and natural factors in the areal arrangement of agriculture, and the drainage pattern.

A chapter discussing the major types of agriculture elaborates on the specific nature of each crop which is peculiar to the area. It also discusses those techniques and equipment which are necessary for successful farming in the area.

The urban settlements are discussed in light of their direct relationship to and reflection of the rural agricultural areas. These

settlements are divided according to population. The first group, villages, consists of communities up to 500 in size. The second group, towns, is above 2,000 in population. No towns exist which have a size between 500 and 2,000 people.

The final chapter is both a summary and a treatment of prospects for the future of the Albemarle. It presents the character of the area through the medium of both an hypothetical farm and also a typical farm. The future prospects include proposed developments and changes.

THE ALBEMARLE AREA
OF NORTH CAROLINA:
A STUDY IN
RURAL GEOGRAPHY

A Thesis

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by

Monte Francis McCraw

July 1971

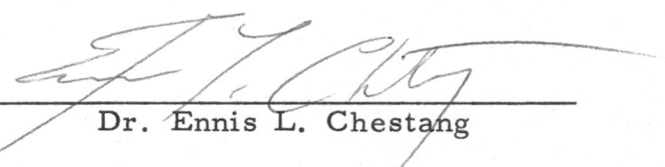
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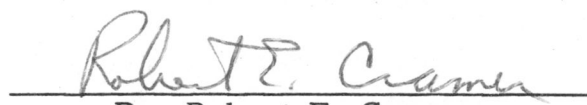
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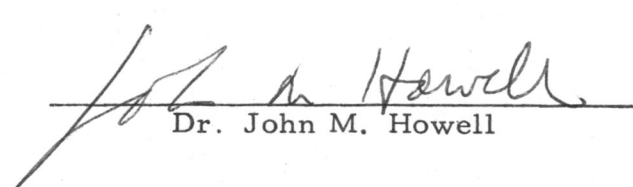
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INTRODUCTION

The area of North Carolina, north of the Albemarle Sound and east of the Chowan River has been referred to as the Albemarle since the first permanent settlements in the 1650's.¹ The Albemarle has also been labelled as the "Lost Provinces" of North Carolina.² This nickname refers to the isolation created by the physical barriers of the Albemarle Sound and the Chowan River, which until the 1940's restricted travel and contact of Albemarle citizens with the rest of the state.³ The purpose of this paper is to analyze the land use of the Albemarle in order to determine the character and viability of the area. Isolation has contributed to the general distinctiveness of the area and an attempt will be made to evaluate its role in the overall development of the area.

The surrounding areas concentrate on either the production of cattle, peanuts, and/or tobacco, while the study area is one of diverse agriculture. It is a zone where the rural people derive their livelihood from the production of a crop combination of peanuts, white

¹ William S. Powell, ed., North Carolina, A Student's Guide to Localized History, (New York: Bureau of Publications, Teacher's College, Columbia University, 1965), p. 10.

² Bill Sharpe, A New Geography of North Carolina, Vol. III, (Raleigh: Sharpe Publishing Company., 1965), p. 1185.

³ Sharpe, A New Geography, Vol. IV, p. 1874.

potatoes, field corn, soybeans, livestock, and fruits and vegetables (APPENDIX A, SINGLE FACTOR MAPS).

The study area is partially bordered on the north by Nansemond County, Virginia, a part of the Virginia-North Carolina peanut belt. The cities of Virginia Beach, and Chesapeake, Virginia complete the northern boundary. Certain sections of these two cities are rural areas, which specialize in dairying. The eastern border is Currituck Sound. The Chowan River to the west separates the Albemarle from the prime peanut producing region of North Carolina. To the south the tobacco belt forms a broad boundary extending for over 100 miles.¹ The counties of the Albemarle include a total of 1525 square miles² of which forty-five per cent is in farmland (Figure 1).³

The dominant types of agriculture of the Albemarle are livestock, soybeans, and corn production. The production of fruits and vegetables and peanuts closely follows the leading types of agricultural production in importance. White potatoes and cereal grains

¹Walter H. Pierce, Trends in the Development of Agriculture in North Carolina, (Raleigh: Department of Agricultural Economy, North Carolina State University, 1965), p. 25.

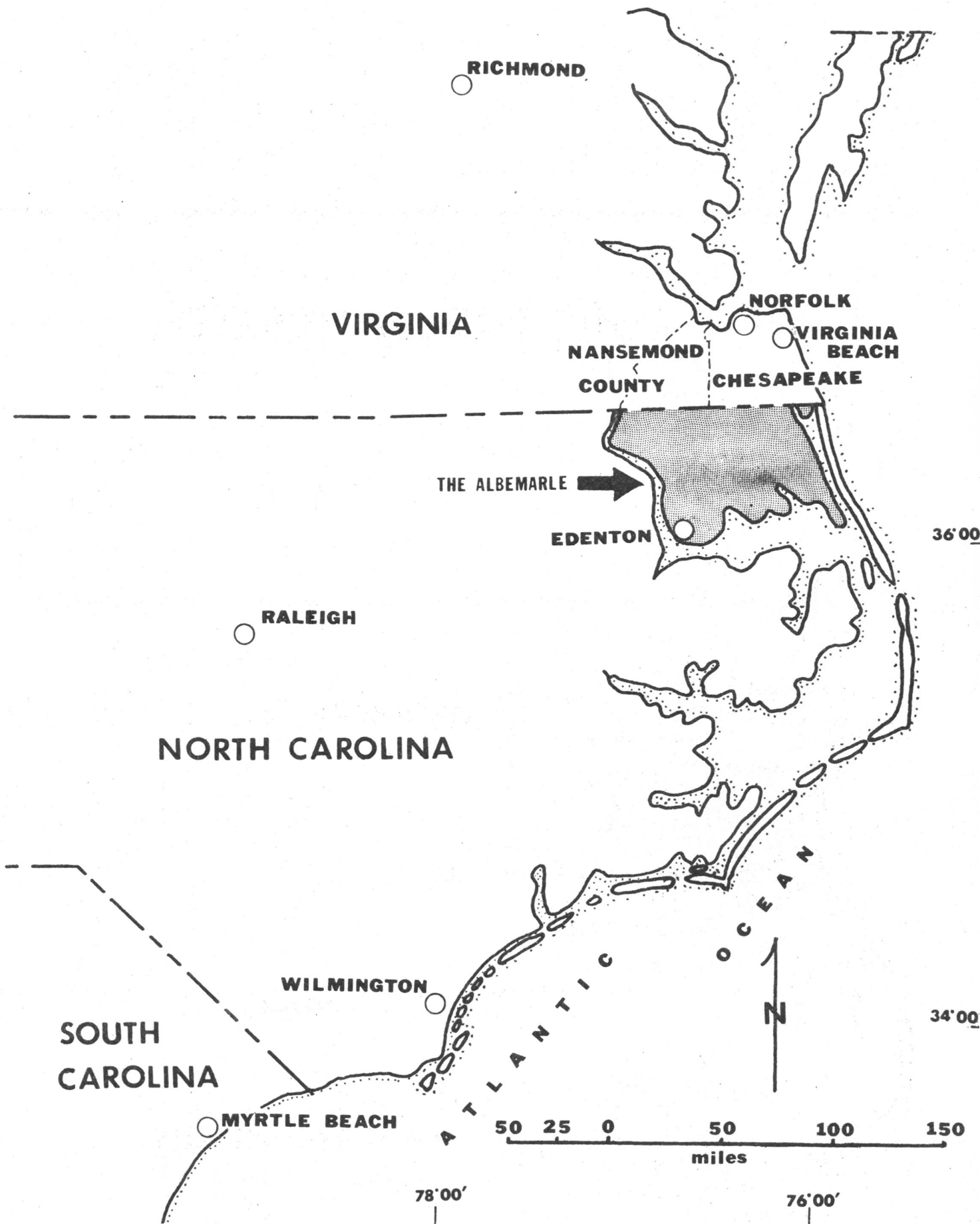
²Federal-State Crop Reporting Service, North Carolina Agricultural Statistics, (Raleigh: Annual #119, 1968), p. 86.

³United States Department of Commerce, Bureau of the Census, Census of Agriculture: 1964, Statistics for the State and Counties, (Washington, D.C.: Vol. I, part 26, Government Printing Office, 1967), pp. 274-281.

REGIONAL SETTING

3

Fig.1



are also of some relative importance to the Albemarle (Figure 2).¹ Farms of the region tend to vary in size. However, the majority of the farms are larger than 100 acres, which is a greater area than that of most of the farms in the rest of the state (Table 1).²

The first settlements of this area predate the Albemarle land grant by Charles II of England to eight of his friends. The Albemarle was united politically in 1663 and named the "Countie of Albemarle."³ It was divided into four precincts in 1672. A precinct is a self-governing area, which at the time of first colonization of the Albemarle was of a lesser degree of importance, than a countie in the English system of government. The precincts were named as follows: Chowan, Perquimans, Pasquotank, and Currituck. Each of these precincts was given county status in 1739. Camden County was formed from Pasquotank County in 1777 and in 1779 Gates County was created from Chowan County.⁴

¹Calculated from: North Carolina Agricultural Extension Service, Estimated Income from Food, Fiber, and Related Raw Products and Government Payments for 1967, 1968, and 1969 by Counties, (Raleigh: 1970), and from North Carolina Department of Agriculture, Division of Statistics, North Carolina 1969 Farm Census Summary--Preliminary Report by Counties, (Raleigh: 1969), for the counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

²United States Department of Commerce, Bureau of the Census, Census--1964, pp. 274-281.

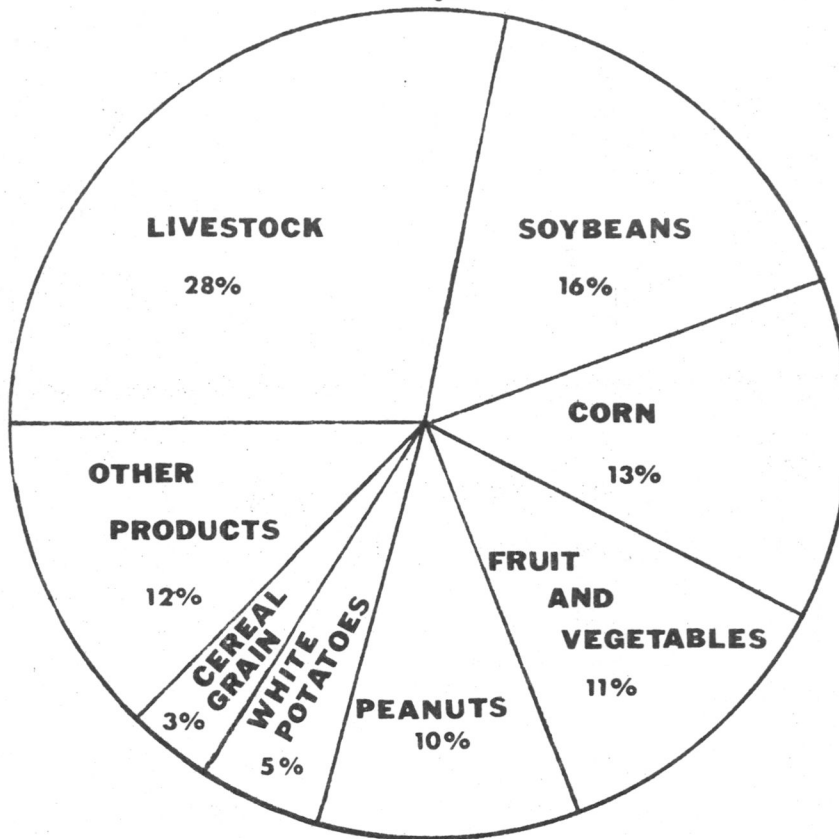
³Powell, North Carolina: A Student's Guide, p. 10.

⁴Albemarle Area Planning Commission, A Region in Transition, Elizabeth City, North Carolina: 1967), p. 9.

AGRICULTURAL PRODUCTS

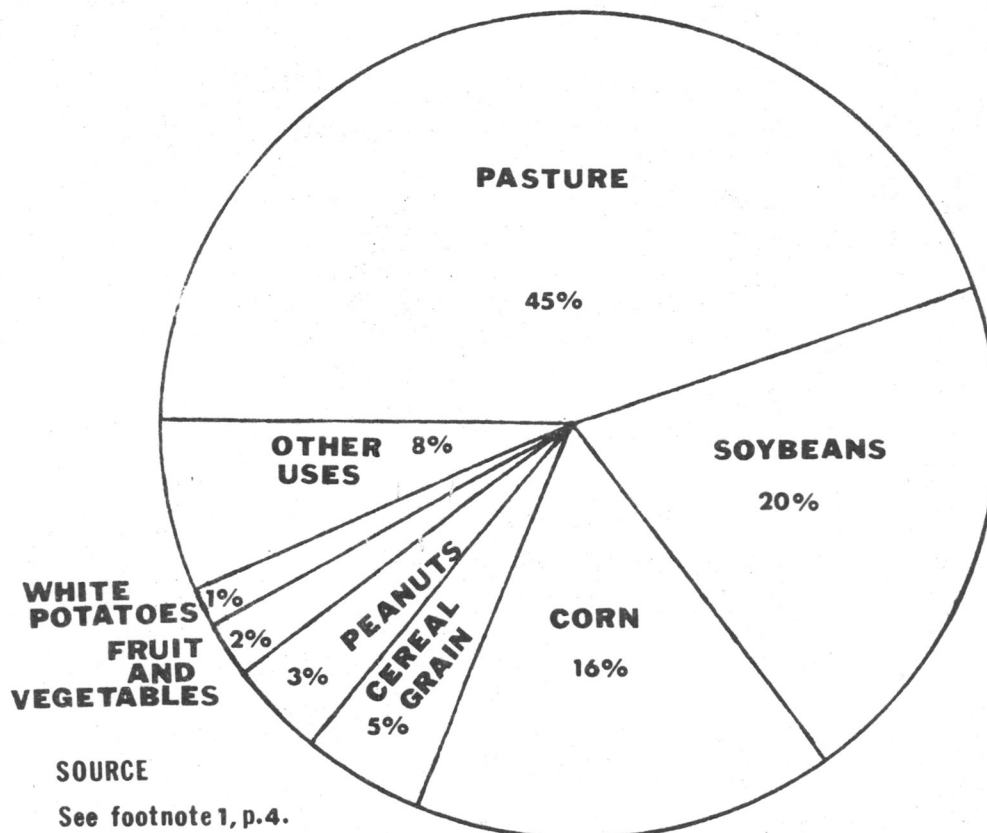
1969 — VALUE — \$54,240,865

Fig.2



FARMLAND

1969 — ACREAGE — 570,025



SOURCE

See footnote 1, p.4.

TABLE 1
NUMBER OF FARMS - 1964
(sizes in acres)

	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
All Farms ...	215	448	307	620	446	603
10 ..	22	38	57	26	38	50
10-49 ..	31	126	58	161	100	148
50-69 ..	24	48	21	75	45	60
70-99 ..	31	62	28	86	44	72
100-139 ..	20	53	28	80	59	79
140-179 ..	12	29	18	54	37	53
180-219 ..	17	30	15	42	20	20
220-259 ..	7	17	11	23	19	23
260-499 ..	22	29	27	46	61	62
500-999 ..	19	9	33	22	17	20
1,000-1,999 ..	8	7	8	1	4	7
2,000 and up..	2	-	3	4	2	1

Calculated from: United States Department of Commerce, Bureau of the Census,
Census of Agriculture: 1964, Statistics for the State and Counties, (Washington, D.C.:
Vol. I, part 26, Government Printing Office, 1964), Table 3, pp. 291-297.

The populace of the Albemarle is predominantly rural. Camden, Currituck, Gates, and Perquimans Counties have no urban population.¹ Chowan County is sixty-two per cent rural and Pasquotank County is forty-five per cent rural with over half of its inhabitants living in one urban area--Elizabeth City.² The total population of the entire Albemarle was 67,990 in 1960.³ Camden, Currituck, and Pasquotank Counties have had increases in population, whereas Chowan, Gates, and Perquimans Counties have had a decline in the last decade. By only a slight majority do the whites exceed the blacks in the Albemarle. In general the ratio of the black population to the white in the Albemarle is higher than in North Carolina as a whole. For example the blacks constitute almost fifty per cent of the population of this area, whereas the state average is twenty-five per cent (Table 2).⁴

Only two settlements in the Albemarle are classified as urban, that is with a population of 2,500 or more people. One is Edenton in Chowan County with 6,000 and the other is Elizabeth City in Pasquotank County with a population of 14,000--more than fifty-two per

¹United States Department of Commerce, Bureau of the Census, County and City Data Book, (Washington, D.C.: Government Printing Office, 1965), p. 262.

²Albemarle Area Planning Commission, A Region, p. 46.

³United States Department of Commerce, Bureau of the Census, County and City Data Book, p. 262.

⁴Ibid.

TABLE 2
SELECTED POPULATION CHARACTERISTICS - 1965

	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
Total Population ..	5,598	11,729	6,601	9,254	25,630	9,178
Rural Population..	5,598	7,271	6,601	9,254	11,568	9,178
Rural Non-Farm Population	4,094	3,636	5,358	5,697	9,512	6,409
% Change 1950-1960	7.2+	6.5-	6.5+	3.2-	5.3+	4.4-
% Black	42.1	46.6	31.1	54.1	39.5	43.6
% Rural	100	62	100	100	45	100
% Rural Non-Farm	73	50	81	62	82	70
% Rural Farm.....	27	50	19	38	18	30

Calculated from: United States Department of Commerce, Bureau of the Census,
County and City Data Book, (Washington, D.C.: Government Printing Office, 1965), pp. 262-271.

cent of the county's total population.¹ It is considered that the Hampton Roads area of Virginia is the principal economic focal point of the Albemarle. Elizabeth City is economically the most important town of the area (Table 3). An examination of the Albemarle should reveal the extent of the unified character of the area. Elizabeth City which is easily accessible from all inhabited areas of the Albemarle will be examined to determine its importance to the rural community. The relationship between Elizabeth City, and the other settlements of the area, and the Hampton Roads area of Virginia will also be considered (Figure 3).²

Agricultural products constitute the major portion of the commerce of the Albemarle, equaling twice the value of manufacturing in 1965. Manufacturing values are highest in those three counties with the larger settlements; i. e. Pasquotank, Perquimans, and Chowan. The importance of manufacturing correlates directly with the population of each community, i. e. larger population, greater amount of manufacturing. Retailing and wholesaling are also most significant in those three counties with the larger settlements (Table 3).³

¹ Albemarle Area Planning Commission, A Region pp. 43-51.

² Ibid., p. 83.

³ United States Department of Commerce, Bureau of the Census, County and City Data Book, pp. 266-270.

THE ALBEMARLE

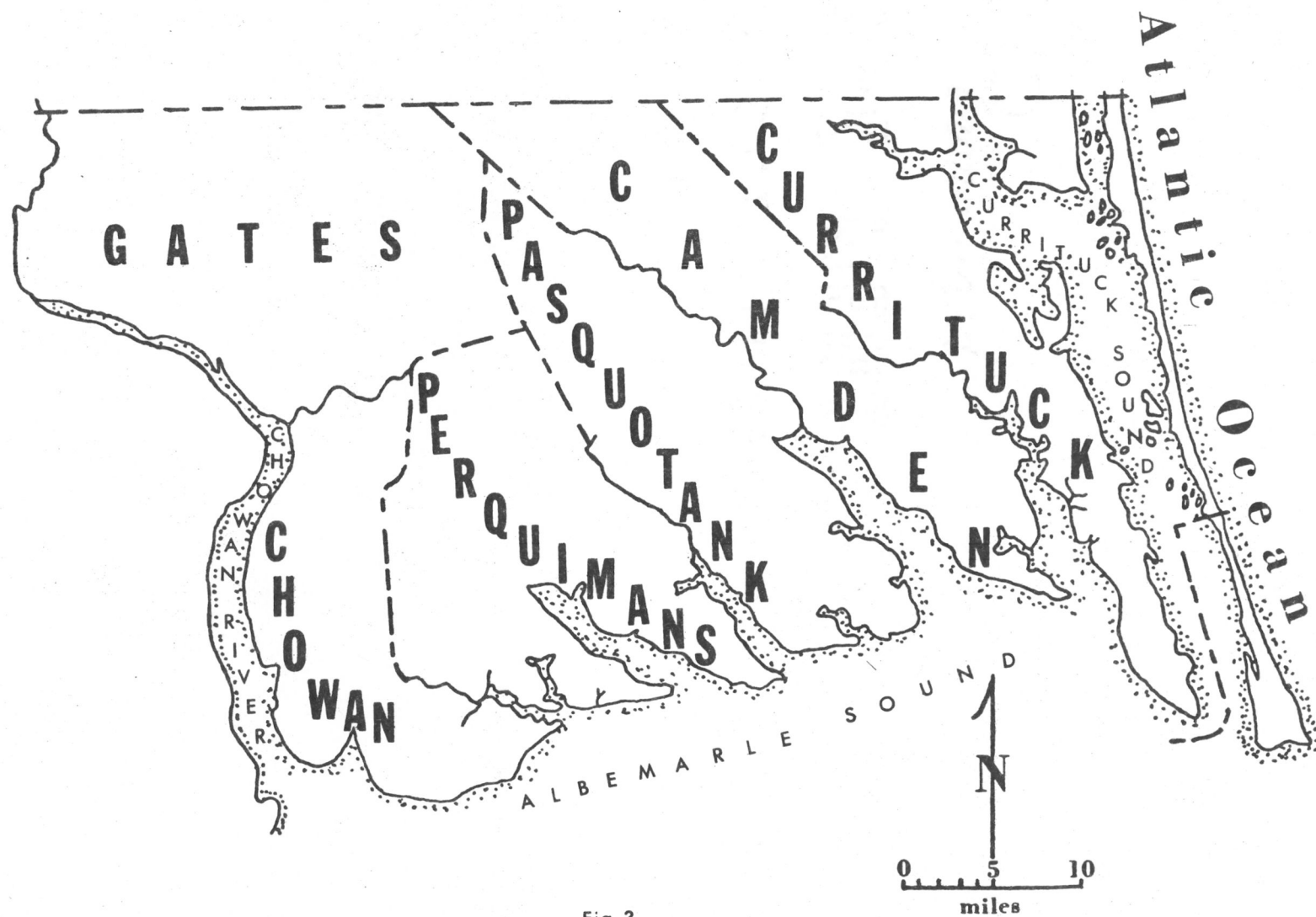


Fig. 3

TABLE 3
ECONOMIC ACTIVITIES
(Dollars)

County	Value added by Manufacturing	Retail	Wholesale	Agriculture
Camden	77,000	1,560,000	2,559,000	3,635,000
Chowan	943,000	12,335,000	8,408,000	5,283,000
Currituck . .	290,000	2,368,000	8,015,000	4,374,000
Gates	670,000	6,315,000	2,047,000	4,597,000
Pasquotank .	14,602,000	34,685,000	10,285,000	10,285,000
Perquimans	705,000	8,228,000	6,221,000	4,851,000

Source: United States Department of Commerce, Bureau of the Census, County and City Data Book, (Washington, D. C.: Government Printing Office, 1965), pp. 266-270.

Although the data in the table is five years old, the same approximate relative degree of importance of each activity exists today. This conclusion was reached by discussions with individuals in the Albemarle and by studying related data, which reaffirmed the statement.¹

¹Related data consists of working papers at the North Carolina Extension Service, North Carolina State University, Raleigh, North Carolina.

The distinctive rural character of the Albemarle can best be understood by answering the following five basic questions.

1. What particular characteristics of the land use, if any, can be explained historically and how did these characteristics evolve?
2. Where within the Albemarle does the agricultural production occur and what are the limitations of agricultural production?
3. What are the dominant crops, crop combinations, and types of livestock found in the Albemarle and what are the various techniques and methods used in agricultural production in this area?
4. What relationships exist between the settlements of the Albemarle and the rural areas and also between the various settlements, themselves?
5. What can be stated about the particular character of the Albemarle with respect to both a summary and a prognosis of the area?

CHAPTER 1
THE EVOLUTION OF LAND USE PRACTICES
IN THE ALBEMARLE

Early Farming

The present type of farming in the Albemarle is somewhat similar to that practiced by its earliest settlers.¹ The principal type of farming in the area is general. This diversified type of farming was evident when the first settlers established farms in the Albemarle in the 1650's.² The settlers were migrants from Virginia, who were attracted to the area by such statements as from the following quote: "they have two crops of Indian Corne yearly, whereas Virginia hath but one."³ Corn, which is one of the contemporary Albemarle's major crops was one of the early major crops. Sir Walter Raleigh described the corn, which was first grown as follows:

And the native corn of the country (Carolina) maiz, is so grateful to the Planter, that it returneth him his entrusted seed with the increase of two or three hundred interest, so facilely planted, that one man in forty-eight hours may prepare as much ground, and set such a quantity of corn, that he should have never so large an appetite to consume it and have nothing else to live upon.⁴

¹H. F. Lefler and A. R. Newsome, The History of a State-- North Carolina, (Chapel Hill: University of North Carolina Press, 1963), p. 84.

²William S. Powell, ed., Ye Countie of Albemarle in Carolina, (Raleigh: State Department of Archives and History, 1958), p. 82.

³Lefler and Newsome, North Carolina, p. 14.

⁴W. Neil Franklin, "Agriculture in Colonial North Carolina," The North Carolina Historical Review, Vol. III, October, 1926, p. 539.

This quote is rather flowery, but does suggest some of the early appeals of corn, which served as a basic food staple. Corn was the primary crop grown in the Albemarle in terms of acreage and kept this position until the 1950's. It was especially important to the area from 1860 to 1920, when it was virtually the only crop of any significance grown. Though the production of corn has long been important in the Albemarle it has never reached a level of production comparable to the major Midwestern corn producing regions in the United States. Corn has always been a source of livestock feed, but it is now more important as a product for the market.¹

A misconception during the time of first settlement in the Albemarle was that if an area was at the same latitude as another area, then identical crops could be grown in both areas. This misconception is exemplified in a brochure directing new settlers to try different crops. An excerpt from the brochure is as follows:

About the same time (1663) it was conceived that the planting of Carolina would be of great advantage to the King and his people, in regard the land in Carrolina will produce wines of all sorts, silks, reasons (raisins) of all sorts, currants, figs, olives, oyle, capers and tobacco.²

The crops mentioned in the quote are all found in the Mediterranean

¹North Carolina Department of Agriculture, North Carolina Agriculture 1900-1976, (Raleigh: 1964), pp. 15-17.

²Franklin, "Agriculture in Colonial North Carolina," p. 540.

area with the exception of tobacco, a native of the area. Much was known about the Mediterranean area at the time of first colonization of the Albemarle. This Mediterranean area lies in approximately the same latitude as the Albemarle. The Albemarle lies between thirty-six degrees North and thirty-six degrees thirty minutes North latitude. The Mediterranean area lies approximately between thirty-five degrees North and forty degrees North latitude. At the time of first colonization very little was known about the climates of various continents, except for those areas closest to England.¹ A logical, but incorrect assumption about similar latitudes was made. This assumption led to the aforementioned misconception. Several of the crops discussed in the previously mentioned brochure were tried, but it was soon discovered that the area would not produce any of the crops with great success with the exception of tobacco.

The first North Carolina tobacco crops were produced in the Albemarle. In 1677, 800 hogsheads were produced in the Albemarle. Most of the tobacco was taken to Virginia for transshipment elsewhere. Because it quickly exhausted the land and forced the farmers to be continually clearing new land, tobacco production in the Albemarle declined steadily until the early nineteenth century. At that time most farmers who raised the crop moved all their equipment and slaves to

¹Edward B. Espenshade, Jr., ed., Goode's World Atlas, (Chicago: Rand McNally and Co., 1965), pp. 79, 114-115.

the Piedmont and sold their land to corn and wheat producers. By the early 1800's production of tobacco was almost non-existent in the area.¹

Two varieties of white potatoes were found in the Albemarle during the early 1700's. One was introduced by traders from Barbados and the other was a native. It is not certain which, if either, variety survived.² This crop was grown as a staple to supplement the diet, when corn production faltered in the fall. White potatoes were widely grown in North Carolina by 1860 and were increasing in prominence as a food. By 1921 North Carolina was producing 1.5 per cent of the nation's total production of white potatoes.³ A considerable portion of this crop was produced in the Albemarle, a case of simple continued production of a crop in the area of first inception.

The first settlers of the Albemarle, who were from Virginia, brought cattle and swine with them.⁴ These animals were primarily allowed to forage for themselves, as exemplified by the following statement:

¹Cornelius O. Cathey, "Agriculture in North Carolina 1784-1860," James Sprunt Studies in History and Political Science, Vol. 38, (Chapel Hill: University of North Carolina Press, 1956), pp. 118-120.

²Franklin, "Agriculture in Colonial North Carolina," pp.560-561.

³H. R. Smedes, Agricultural Graphics: North Carolina and the United States 1866-1922, (Chapel Hill: University of North Carolina Press, 1923), p. 23.

⁴Franklin, "Agriculture in Colonial North Carolina," p. 563.

Cattle and horses must look out for themselves in winter--if they live, they live. No hay is given them, for no one makes meadows; fodder does not go far; and who could feed them on grain? So ordinarily in winter there is neither milk nor manure, and when spring comes the animals are reduced by hunger and cold that they hardly recover before fall.¹

Hogs were not exported from the region via ship, but were driven to Virginia markets for sale in the late 1600's. The markets were located in settlements where the present day cities of Suffolk and Norfolk, Virginia are located. The hogs were fattened on corn, a practice still evident in the Albemarle today. Only a small percentage of the hogs kept were suitable for marketing as they were subject to disease, thievery, and exposure to the elements. Poultry was raised, but with little attention from the farmers and for home consumption only.² Most of the farmers were considered subsistent and therefore most of their farming techniques reflected this form of socio-economics. It was not possible to devote proper time and expense to the animals, as the people had enough trouble with their own survival.³ Despite earlier difficulties cattle and swine were the second most important export of the Albemarle in the early 1700's. A position they would share with corn for the next 150 years, until the introduction of peanuts into the Albemarle.⁴

¹ Franklin, "Agriculture in Colonial North Carolina," p. 563.

² Ibid., p. 566.

³ Ibid., p. 565.

⁴ Ibid., p. 563.

Peanuts, which are the fifth most important crop in the Albemarle today, were first grown by slaves as a food for themselves. The first known place where the crop was grown for sale occurred in southeastern Virginia, which is still one of the nation's leaders in production. During the Civil War the Northern troops found peanuts to be a delightful food and production on a commercial basis was instituted soon after the end of the war.¹ At the time peanut production was increasing rapidly, the settlers of the Albemarle were trading in the area of Virginia where peanuts were being grown. These people from the Albemarle found the peanut to be a cash crop, which they could grow on the better drained land of the area. As a consequence of this discovery, peanut production began in the Albemarle in the 1880's and has remained relatively important ever since. Not since the demise of tobacco has a crop been grown solely for cash. Although some cash was added to the economy of the area, peanut production did not free the farmer from a need for a large amount of hand labor.²

Twentieth Century Farming

The tools used for farming in the Albemarle at the end of the nineteenth century were not greatly different from those tools used by

¹Hamid Hasson Naqavi, "Peanuts in the United States," (unpublished Master of Arts thesis, University of North Carolina, 1954), pp. 31-32.

²Naqavi, "Peanuts in the United States," p. 34.

the first settlers of the area. Certain changes and improvements did occur, such as the steel plow, the reaper, and the corn planter. These new pieces of equipment greatly aided the farmer, but still required quite a lot of hand labor, and also necessitated the use of draft animals to pull them. The maintenance of these animals was also very time consuming.¹ It was not until the beginning of the twentieth century that mechanization and the scientific control of the farm land came into real prominence. The practice of scientifically analyzing the soil to determine the necessary nutrients was not widely followed until the beginning of this century. Such new machines as steam and gasoline tractors, combines, manure spreaders, harvesters, multiple row plows, and cultivators became increasingly important. These items were very crude by the standards of today, but enabled the farmer to greatly reduce the time previously required for a particular task. It has been estimated that the average efficiency of production increased 500 per cent between 1830 and 1895.²

In the decade from 1910 to 1920 the gasoline engine was the single most important innovation in farming. The engine was used to power many pieces of equipment, as noted in the following:

It has been set to work turning the milk separator, the churn, the silage cutter, the washing machine, the sausage grinder and stuffer, the feed and fanning mills, and the grindstone. It pumps

¹E. L. Bogart, Jr., Economic History of American Agriculture, (New York: Longmans, Green and Company, 1923), pp. 77-80.

²Ibid., p. 119

water for the stock, for the house water tank, and for irrigation; it saws wood, shells corn, digs post holes, and drills the well. It mows the lawn, and runs the milking machine, vacuum cleaner, and the lathe in the workshop. By its power the barn and orchard are sprayed with disinfectant, and the sheep are sheared. Granaries and silos may be built to any desired height and filled by means of elevators run by gasoline engines. Is there any limit to which engine may not go in relieving the farmer, his wife, and their helpers from wearying muscular effort and drudgery?¹

This quote gives some idea of the versatility of the gasoline engine but moreover it reveals the drastic changes made possible with the engine. Time necessary to perform the various foregoing tasks was lessened greatly and allowed the farmer to use his newly found free time for other activities.

Mechanization of farms increased remarkably throughout the country and the Albemarle was no exception. These technological advances allowed for tremendous improvements in the equipment being produced until the level of development of today was reached. The advances are always appearing with no reduction in new ideas apparent for the immediate future.²

The fact that the use of machinery was spreading throughout the nation in the early part of the twentieth century meant that if the

¹Bogart, Economic History of American Agriculture, p. 135.

²Walter H. Pierce, Trends in the Development of Agriculture in North Carolina, (Raleigh: Department of Agricultural Economy, North Carolina State University, 1965), p. 5.

Albemarle was to be agriculturally competitive, then it must also turn to mechanized farming.¹ This change required money, which was scarce in the Albemarle in the early 1900's. A need arose for farm products that could be sold for cash. The sale of swine, peanuts, corn, and some cereal grains was partially helpful. Potatoes, primarily important to Pasquotank and Camden Counties, were promoted in those areas as a source of income. Truck crops for local farmer-operated roadside stands and for sale in the nearby Hampton Roads area of Virginia were grown in those areas of the Albemarle that could best facilitate the local sales and the shipments to the urban areas.² This fact is best exemplified by the amount of production in Currituck County, which is immediately south of the Norfolk, Virginia area. Pasquotank and Chowan Counties are both on U.S. 17 which enters the Hampton Roads area. These two counties are also major Albemarle producers of truck crops.³

Another crop, soybeans, came into prominence in the Albemarle in the 1930's. This crop, a legume, was found to be an excellent complement for corn in a crop rotation system as it added nitrogen to the soil. Nitrogen is a nutrient needed by corn. Soybeans were

¹Harris Pearson Smith, Farm Machinery and Equipment, 4th Edition, (New York: McGraw-Hill, 1955), pp. 1-3.

²Albemarle Area Planning Commission, A Region, p. 29.

³North Carolina Department of Agriculture, North Carolina Agriculture 1900-1976, p. 17.

the first new cash crop to be grown in the Albemarle on a large scale basis since the demise of tobacco.¹ Soybeans were originally used only as a source of a high protein oil and pulp. The pulp was used as a cattle feed. Many additional uses have been found for the soybean giving an increasing importance to it as a crop. Soybeans are now the leading money crop in the area and along with corn account for more than one-fourth of the agricultural income.² The Albemarle has developed from an area of virtually subsistent agriculture during its first settlement to an area of general commercial farming today. The need for ready cash has been greatly alleviated because of the aforementioned cash crops and livestock. The crop and livestock production of the area has created a unique pattern of farm sites. This pattern has been evident in the Albemarle from the time of first settlement to the present.

¹North Carolina Department of Agriculture, North Carolina Agriculture 1900-1976, p. 18.

²Federal-State Crop Reporting Service, North Carolina Agricultural Statistics, (Raleigh: Annual #119, 1968), p. 21.

CHAPTER II

THE LOCATION OF AGRICULTURAL AREAS WITHIN THE ALBEMARLE

Farm-Highway Pattern

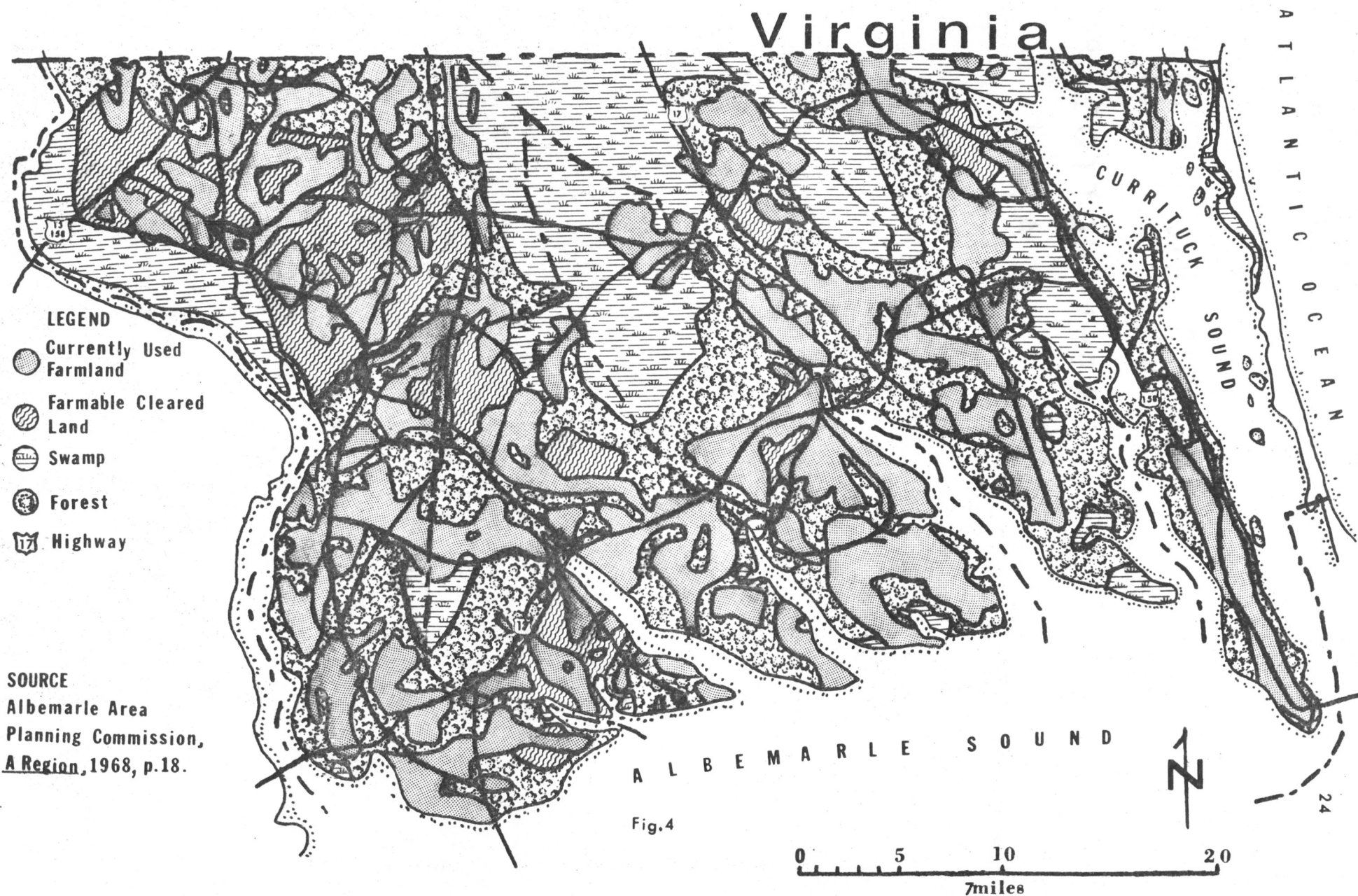
Agriculture is concentrated on the southern, western, and eastern edges of the Albemarle (Figure 4). Other outlying farms are found in small clusters where there is available well-drained land.¹ Besides the land which is indicated as cleared-farmland, the area which is delineated as cleared-farmable land could be used for agricultural purposes with only a minimum effort. The area denoted as swamp-land and forest would require a considerable effort in clearing and/or drainage for use as farmland. The two areas delineated as cleared-farmland and cleared-farmable land represent the extent of agriculture for both the present and immediate future, respectively.²

Many people who drive through the Albemarle gain a false impression of being in a densely populated farming area. This impression stems from the idea that beyond one farm there must surely be another. In the better drained areas this impression is correct,

¹U. S. Army Corps of Engineers and U. S. Coast and Geodetic Survey, "Topographic Quadrangles, " Back Bay 1940, Barco CE 1940, Beckford CE 1940, Edenton CE 1940, Elizabeth City CE 1940, Hertford CE 1940, Holland 1919-1957, Lake Drummond 1940, Moyock 1939, Powells Point CE 1940, South Mills CE 1940, Suffolk 1918-1954, Wade Point CE 1940, Winton 1906, (Government Printing Office: 1906-1957).

²Albemarle Area Planning Commission, A Region in Transition, (Elizabeth City, North Carolina: 1967), p. 18.

LAND USE IN THE ALBEMARLE Virginia



but in most of the Albemarle there is usually a swamp beyond any particular farm. The location of swampland results in farm distribution generally being in a narrow pattern. With the exceptions of U.S. 13, U.S. 17, and U.S. 158, a comparatively undeveloped road network exists in the area.¹ Most of the agricultural areas of the Albemarle are along this highway network. The accompanying map shows the relationship of highways, farmland, and wetlands to each other (Figure 5).² The development of the highway system did not evolve from a need for trade routes, a function originally performed by the numerous waterways, but instead was for the purpose of social contact. Farms were usually placed on the best land and the highways connecting them were resultantly on the best land. This highway system functions as a skeleton of the agricultural area. The farm pattern is thus the cause of the highway system and not the effect, as most of the farms were established before highways.³

Location of Agricultural Areas by Counties

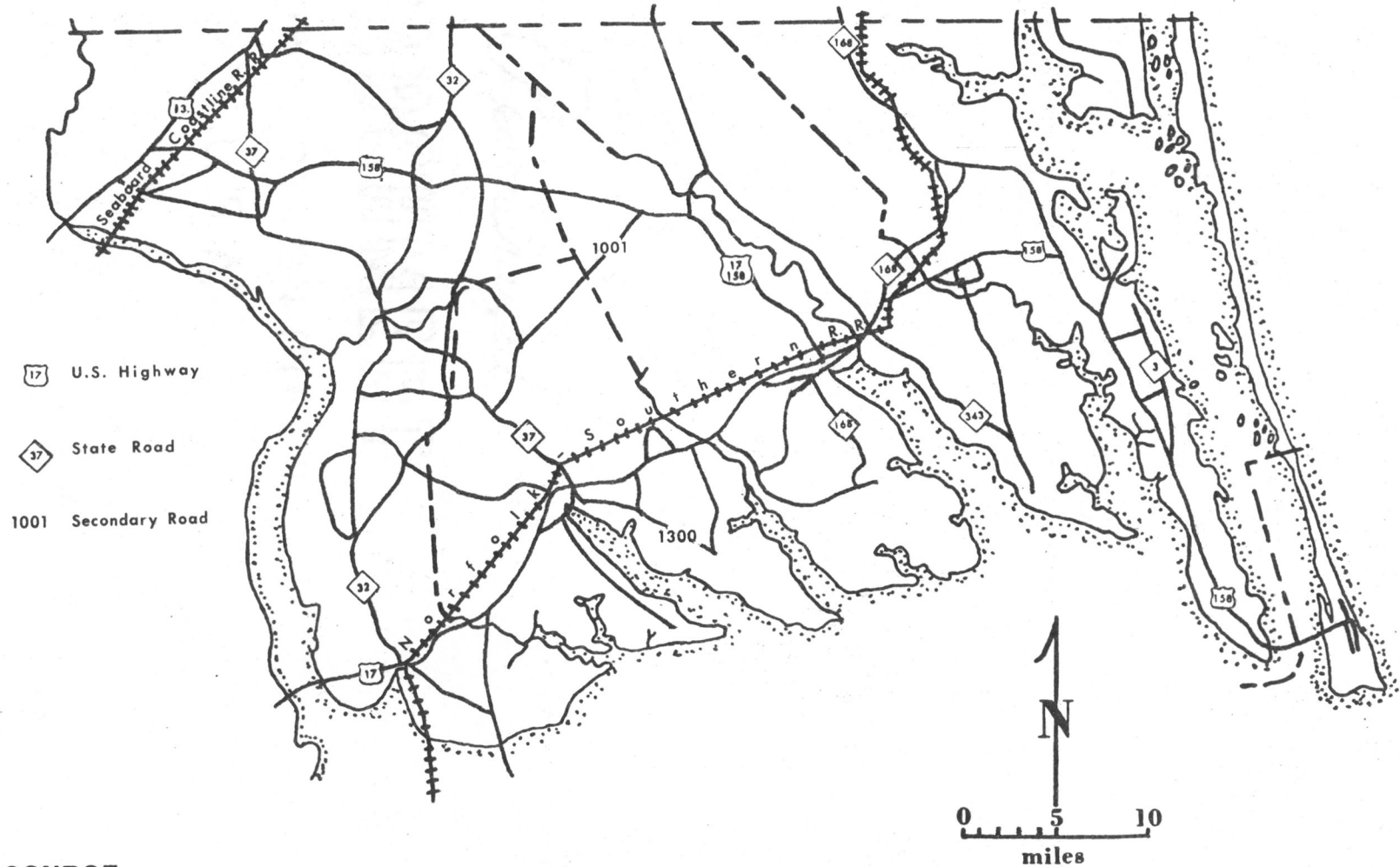
The following county by county enumeration of generalized agricultural areas reveals the location of most of the farms.

¹ Albemarle Area Planning Commission, A Region, p. 63.

² North Carolina Highway Commission, "County Highway Maps," Camden County, Chowan County, Currituck County, Gates County, Pasquotank County, and Perquimans County, 1965.

³ Catherine Albertson, In Ancient Albemarle, (Raleigh: Daughters of the Revolution, 1914), p. 8.

ROADS in the ALBEMARLE



SOURCE
N.C. Highway Dept.
County Maps

Fig. 5

Gates County is located in the northwest corner of the study area. Most of the agricultural activities are concentrated in a narrow belt running northwest to southeast. The Gates County farming center is composed of the area between N.C. 37 and U.S. 158. An outlying sector of Gates County farming also occurs along U.S. 13 (Figure 5).¹

Chowan County in the southwestern corner of the Albemarle along with Gates County, its northern neighbor, is a producer of peanuts. This crop needs a well-drained, sandy soil.² The only major occurrences of the required soil in the entirety of the Albemarle are along the aforementioned roads of Gates County, N.C. 32 in Chowan County, and along N.C. 37 in Perquimans County where it enters Chowan County. No other roads in the county have the amount of farmland as N.C. 37 (Figure 5).³

Perquimans County, immediately east of Chowan County, is in a continuation of the agricultural belt of Chowan extending along N.C. 37. Another arm of agriculture can be found on Durant's Neck along Secondary Road 1300. Very little agriculture occurs in the northeast

¹Albemarle Area Planning Commission, A Region, p. 18.

²B. F. Bullock, Practical Farming for the South, (Chapel Hill: University of North Carolina Press, 1946), p. 229.

³Albemarle Area Planning Commission, A Region, p. 18.

section of the county closest to Pasquotank County (Figure 5).¹

Immediately east of Perquimans County lies Pasquotank County. The majority of all agriculture in Pasquotank County occurs in the southern portion of the county along a network of secondary roads. The northern portion of the county is occupied by a section of the Dismal Swamp, which extends into Gates, Chowan, Perquimans, and Camden Counties. A small isolated area of agriculture occurs within the swamp at the intersection of U.S. 158 and Secondary Road 1001 (Figure 5).²

Camden County to the east of Pasquotank County is a comparatively large county by the standards of the Albemarle, but very little of it is developed agriculturally. A cluster of farms exists in and along a triangular pattern bounded by N.C. 343, and Secondary Road 1107. A continuation of the isolated cluster of Pasquotank County on U.S. 158 is the only other developed agricultural land of any consequence in Camden County (Figure 5).³

Currituck County lies along the ocean. Agriculture in this county occurs in a narrow north-south band along U.S. 158 and N.C. 168.

¹ Albemarle Area Planning Commission, A Region, p. 18.

² Ibid.

³ Ibid.

Very little of this area has been developed, due primarily to the hindrances of the wetlands and the sandy areas (Figure 5).¹

Cultural and Natural Factors in the Areal Arrangement of Agriculture

Agriculture in the Albemarle is limited to specific areas. Certain limitations exist which now or did previously influence the specific land presently being used for agriculture. Human selection is probably the most overlooked factor. The earliest permanent settlers virtually started to farm wherever they entered the Albemarle.² However, these people were also limited physically in certain instances. Two major physical limitations exist. The large sand deposits of the Outer Banks prevented people from developing any substantial agricultural activities on them. Agriculture is still virtually non-existent on the Outer Banks and for that reason, the area is omitted from this paper. A second limitation is the occurrence of wetlands. Wetlands are those areas not considered economically feasible to use for farming. At the time of first colonization there were more wetlands than there are today. Modern technology has facilitated the conversion of some of the wetlands to a state of economic profit, although approximately sixty per cent of the Albemarle is still classified as wetlands.³

¹Albemarle Area Planning Commission, A Region, p. 18.

²Cornelius O. Cathey, Agriculture: North Carolina Before the Civil War, (Raleigh: State Department of Archives and History, 1966) p. 2.

³Albemarle Area Planning Commission, A Region, p. 30.

Farming in the Albemarle is characterized by emphasis on the production of crops that are tolerant of relatively wet soils.¹ Despite the stamina to withstand some soil moisture, the crops are more productive in areas which are not too wet. In order to increase production, most of the fields of the Albemarle are artificially drained. These artificial drains often flow into natural drains and then into streams. The majority of the farms are found in close proximity to streams and a good portion of these farms take advantage of the water-bodies in the necessary drainage process.²

Drainage in the Albemarle

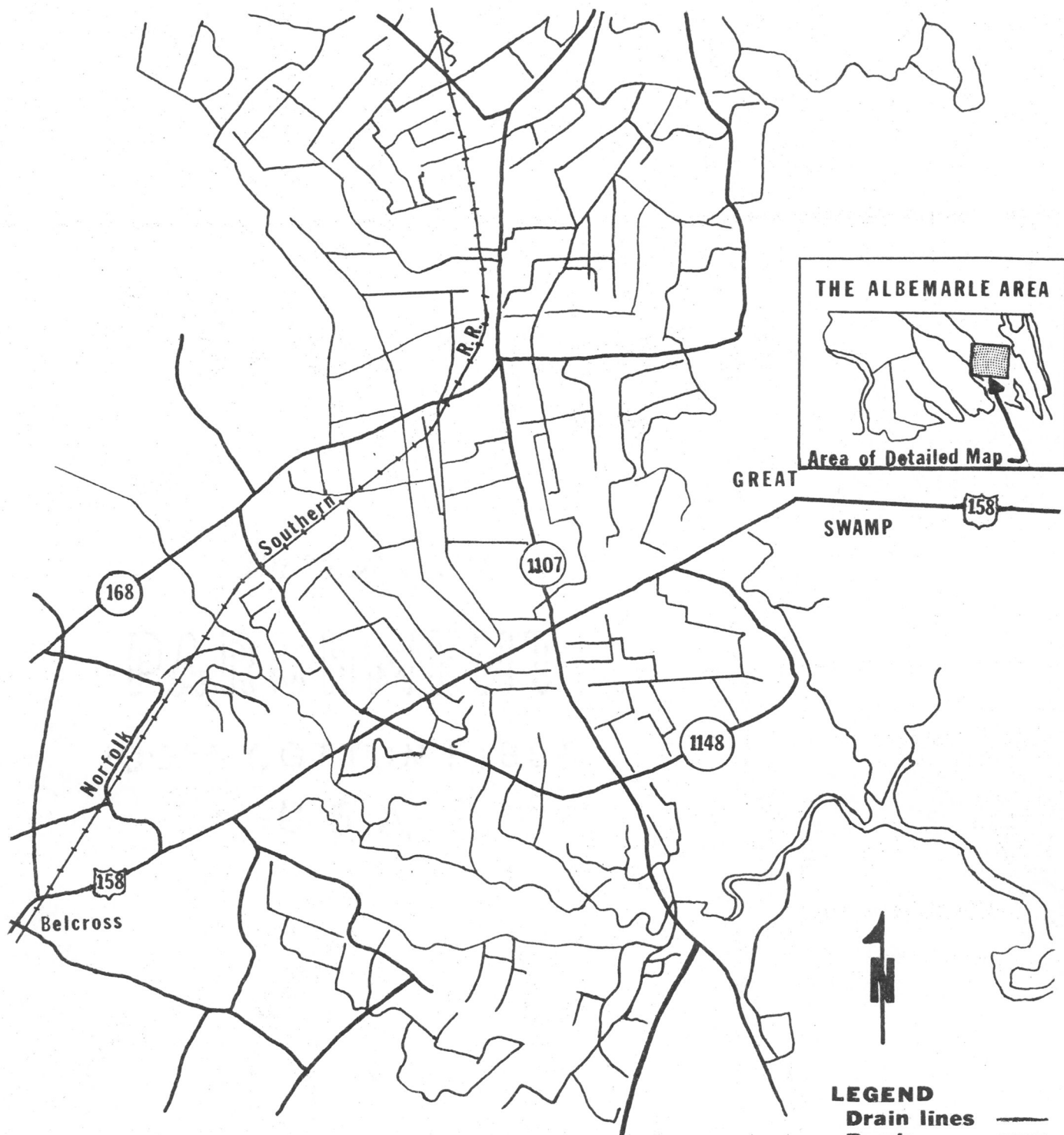
As previously mentioned, many areas of the Albemarle must be drained in order to be productive. The crops grown in the Albemarle are somewhat tolerant of the high moisture content of the soil. Peanuts, as a rule, cannot tolerate very wet soil and due to this characteristic, they are limited to the western edge of the Albemarle in Perquimans, Gates, and Chowan Counties.³ The drainage system of the Albemarle is rather complex and has several constituent parts of varying dimensions (Figure 6). On the land that is farmed it is common to find a

¹ Albemarle Area Planning Commission, A Region, p. 25.

² Ibid., p. 23.

³ Ibid., p. 29.

TYPICAL DRAINAGE PATTERN



SOURCE

U.S.C.G.S. Quadrangle
Elizabeth City CE 1940, 1957.

LEGEND

Drain lines ———
Roads ———
Rail lines ———

Fig.6

0 1 2
miles

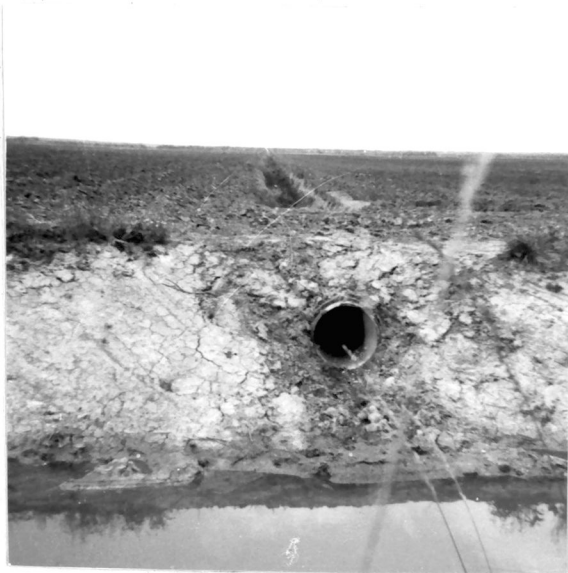
system of tile, underground drains and/or very shallow open ditches. The tile drains follow the natural subsurface drainage and are the most effective, but are also the most expensive. The open ditches are the least expensive to construct, but are only partially effective. This system constitutes the first stage of the overall drainage system of the Albemarle. The next step in the drainage system of the area is a pattern of larger open ditches that carry the water from the fields to a point of disposal in a natural or man-made water-body. These ditches vary from three to fifteen feet in both width and depth.¹ If at all possible, existing natural water-bodies are used throughout the area. The accompanying map of the drainage system of central Camden County is considered to be typical of the areas of the Albemarle referred to in the first of this chapter as cleared-farmable and cleared-farm land. Those water-bodies that are comparatively straight are assumed to be man-made. All others are thought to be naturally occurring. The density of these ditches is readily detectable from the map. Only those ditches of the second stage of drainage are shown due to the inability to locate every first stage ditch or tile drain (Figures 6 and 7).²

¹A. F. Gustafson, Using and Managing Soils, (New York: McGraw-Hill Book Company, 1948), pp. 86-98.

²U. S. Army Corps of Engineers and U. S. Coast and Geodetic Survey, "Topographic Quadrangles, " Elizabeth City CE 1940, (Government Printing Office: 1906-1957).



First stage ditch in
Pasquotank County



First stage ditch entering
a second stage ditch



Second stage drainage ditch in
Chowan County

Fig. 7--Typical drainage ditches in the Albemarle

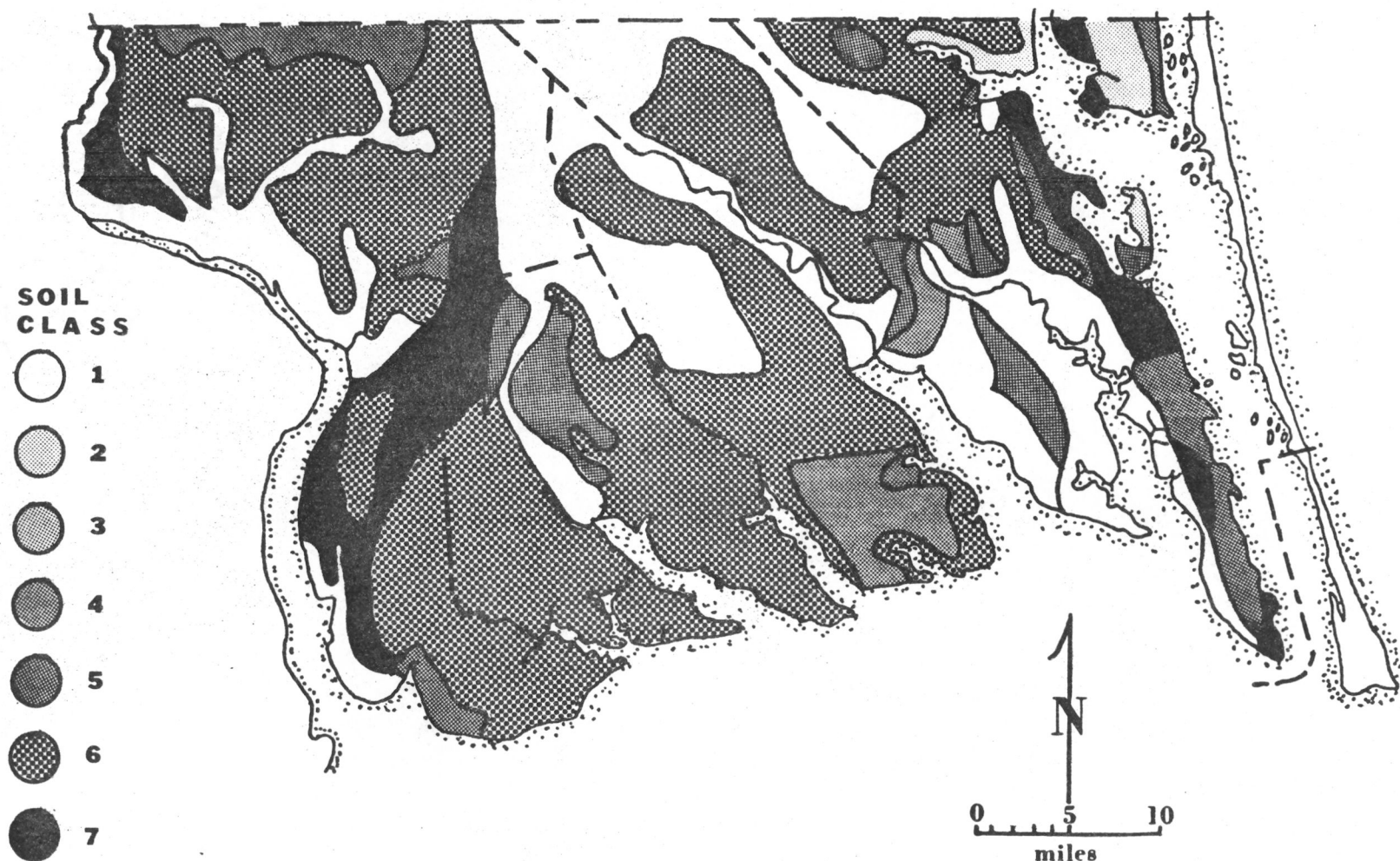
The soil association map of the Albemarle should enable the reader to understand which land must be drained to be productive (Figure 8). All those areas that are classified between somewhat poorly drained and very well drained require the least work to convert to farm land. Classes five and seven are in this category. Class three also is in this category, but since it occurs only in the omitted section of the area it is not considered. Classes one, two, four, and six require the greatest amount of work to reclaim for agricultural use. Classes one and two are almost entirely non-reclaimable due to the prohibitive cost. Class six, which constitutes the majority of the land used for agriculture, is the border class between the two categories of either easy or not easy to drain land. The amount of drainage necessary for an adequate quantity of farmland is rather evident from Figure 8.¹

Farming in the Albemarle is done primarily on the better-drained land. Most of the farmland has been drained by some type of the previously discussed methods. The crops that are raised are tolerant of wetlands. The Albemarle is an area which provides an excellent example of man making major changes on the landscape in order to improve its agricultural capacity.²

¹ Albemarle Area Planning Commission, A Region, p. 20.

² Ibid., p. 23.

SOIL USE CLASSES of the ALBEMARLE



SOURCE
See footnote 1 P. 34.

Fig. 8

CHAPTER III

MAJOR TYPES OF AGRICULTURE

Contemporary Status

Most of the farms in the Albemarle are concerned with the production of corn, soybeans, livestock, fruit and vegetables, peanuts, white potatoes, and cereal grains. These crops are not all found on each farm, but do represent the major crops of the area. A typical farm would produce these crops, but not necessarily every year (Table 4). These farms are generally evenly distributed throughout the Albemarle. Corn and soybeans are the dominant crops of the area with their combined value of \$15,402,235 being better than one-fourth of the total value of agriculture in the Albemarle, which was \$54,240,865 in 1969. The total acreage devoted to corn and soybeans was 203,400 acres in 1969, almost one-half of the land in farms--570,025 acres.¹ These two crops have complementary growing requirements and are usually found in combination with each other.²

Livestock and livestock products are the second most important agricultural pursuit of the area with a value of \$15,202,540 in 1969.

¹Calculated from: North Carolina Agricultural Extension, Estimated, and North Carolina Department of Agriculture, North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

²Howard G. Small, North Carolina Agricultural Extension Service, Producing Soybeans in North Carolina, (Raleigh: 1967), p. 4.

TABLE 4

AGRICULTURAL PRODUCTION - 1969

ACREAGE	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
Soybeans	18,000	14,000	18,000	10,500	25,200	26,000
Peanuts	45	6,070	181	7,244	832	3,281
Corn	10,900	11,000	14,500	18,000	18,300	19,000
White Potatoes ...	1,800	30	850	---	4,350	56
Fruit & Vegetables	238	3,512	2,940	395	4,707	1,730
Pasture.....	37,240	35,641	38,550	40,254	48,789	53,152
Cereal Grain	5,650	570	10,120	560	5,579	5,053
Land in Farms ...	74,428	85,276	92,522	122,367	86,709	108,823
Total Acreage....	152,960	115,200	174,720	219,520	146,560	167,040
VALUE (\$)						
Soybeans	1,339,500	1,104,000	1,512,000	587,500	2,238,240	1,786,000
Peanuts	12,544	2,112,891	43,380	2,207,791	25,668	1,050,600
Corn	1,100,000	836,550	1,596,000	896,000	1,369,645	1,036,800
White Potatoes	571,050	9,000	409,062	---	1,566,000	26,000
Fruit & Vegetables	88,610	1,100,625	1,536,780	50,600	2,868,324	404,250
Livestock	633,035	3,106,365	2,680,225	3,538,610	2,064,755	3,179,550
Cereal Grain	393,840	44,600	753,500	9,115	465,110	260,018
Total Value	4,843,693	10,136,193	9,278,909	8,895,270	11,670,298	9,416,502

Calculated from: North Carolina Agricultural Extension Service, Estimated, and North Carolina Department of Agriculture, North Carolina 1969, for the Counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

Pasturage is the leading type of agricultural land use by acreage in the Albemarle with a total of 255,075 acres. Swine production is the leading type of livestock production by value and is most important in those areas of peanut production.¹ Originally the hogs were fed on whole, unshelled peanuts; however, this practice has been curtailed, due to the high market value of the Virginia type peanut, which is used primarily for human consumption. Corn has been substituted for peanuts as hog feed in the Albemarle.²

A combination of forest products and crops such as sweet potatoes and sweet corn is third in value with a total of \$6,508,904 in 1969. This third position emphasizes the diversity of agricultural production in the area.³

Fruit and vegetable production is the fourth ranking agricultural product of the Albemarle in terms of value--\$6,049,189, but is sixth in terms of acreage--14,555 in 1969. Peanuts are the dominant crop in Chowan and Gates Counties in terms of value and rate fifth in all Albemarle agricultural products with a value of \$5,452,874 from a total of 17,654 acres.⁴ Corn and soybeans are of the same comparative

¹Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans.

²Karl H. W. Klages, Ecological Crop Geography, (New York: MacMillan Company, 1942), p. 427.

³Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans.

⁴Ibid.

value as peanuts in Chowan and Gates Counties, unlike the counties of the neighboring peanut belt, where peanuts far overshadow the other crops.¹

White potatoes constitute the least significance of the major crops of the Albemarle in terms of acreage with only 7,086 acres in 1969. Their value of \$2,581,112 is rather remarkable, since they are grown primarily in Pasquotank County and to some extent in Camden and Currituck Counties.

The production of cereal grains; primarily wheat, oats, with some rye and barley; is increasing in importance to all counties of the Albemarle.²

Corn

An understanding of the natural requirements of crops grown in the Albemarle should enable one to better understand why these particular ones are raised. Corn demands fairly high summer temperatures, which average better than seventy-five degrees Fahrenheit. Its average growing season of 140 days is compatible to the summer temperatures and growing season of the Albemarle.³ The recommended

¹Walter H. Pierce, Trends in the Development of Agriculture in North Carolina, (Raleigh: North Carolina State University Press, 1965), p. 53.

²Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans.

³Klages, Ecological Crop Geography, p. 393.

planting time is between March 25 and June 1 for this area.¹ Moisture must be relatively high in the latter part of the summer, when a great need for water for proper kernel growth occurs.² Nitrates are especially in demand when the plants need moisture the most. Fair drainage, good soil aeration, and an ample supply of phosphates are necessary for high yields. Corn is planted in the Albemarle every eight inches in rows three and one-half feet apart, and fertilizer is applied in bands three inches wide beside the seeds. A topdressing of 100 to 140 pounds of nitrogen per acre is added to the soil when the plants are two feed high. The best rotation for corn is with peanuts or soybeans.³

Hybrids, specially bred types of corn, are the dominant kind of corn planted today. They are bred for various desirable traits, which can better withstand the varying conditions found wherever corn is grown. Those hybrids used in the Albemarle are McNair 440V, Pioneer 109B, P-A-G 751, Pioneer 304B, McCurdy M303, Coker 53, N.C. 270, and McCurdy M306. All mature between 100 and 120 days.⁴

¹Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, (Raleigh: 1969), p. 65.

²Glenn C. Klingman, Crop Production in the South, (New York: John Wiley and Sons, Incorporated, 1957), p. 230.

³Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, p. 65.

⁴B. F. Bullock, Practical Farming for the South, (Chapel Hill: University of North Carolina, 1946), p. 66.

Certain insects, such as budworms, cutworms, earworms, wireworms, and root aphids are always pests and grasshoppers, chinch bugs, army worms, and corn borers are serious enemies at sporadic intervals. Rotation of crops and proper cultivation along with the correct use of insecticides can curb these pests.¹

Chemical treatment and the use of disease resistant hybrid seeds had resulted in a rarity of corn diseases until the growing season of 1970. At that time the Southern Corn Leaf Blight (*Helminthosporium maydis*), a fungus which destroys the entire plant, became a severe epidemic in the eastern United States. The Albemarle lost approximately thirty per cent of its 1970 corn crop. This loss, however, was not as great as in other parts of the country where losses equaled fifty to sixty per cent of the crop. The blight can be curbed by the use of hybrid seeds created from detasseled corn. Detasseling is expensive, as it must be done by hand. Besides the expense incurred by using detasseled hybrids, a sufficient quantity of hybrid seeds will not be available until 1972. The economic impact on the Albemarle can only be estimated, but the loss of this past season is thought to be representative of the 1971 season. The lack of corn will push the value up to a level where it cannot be used economically as a feed for pigs. Hogs are of

¹Klages, Ecological Crop Geography, p. 167.

great importance in the area and the substitution of some other feed is possible, but the price of port will probably increase.¹

Corn in the Albemarle is mechanically harvested. The combine used for corn can with only minor changes also be used for soybeans (Figure 9).²



Fig. 9. --Corn crop in Perquimans County

Soybeans

Soybeans were first planted in the United States in North Carolina, in the nineteenth century, and have spread throughout much of the nation.³

¹Luther L. Farrar, "Southern Corn Leaf Blight, " Southeast Farm Weekly, (Auburn, Alabama: August 27, 1970), pp. 4-8.

²Billy Griffin, personal interview with the Assistant County Extension Agent for Perquimans County, Hertford, North Carolina, April, 1970.

³North Carolina Department of Agriculture, North Carolina Agriculture 1900-1976, (Raleigh: 1964), p. 17.

Soybeans demand a fairly uniform amount of moisture, but can withstand short periods of drought. Soil conditions favorable to corn are also suited to soybeans, but soybeans grow well on soils with less fertility than that required by corn. Soybeans are a legume and yield the nitrogen needed by corn.¹

Soybeans are planted twice during the warm growing season in the Albemarle. The first crop is planted about the first of May and matures in about 170 days. The varieties used in the Albemarle for the first planting are Lee or York. The only difference in varieties is length of time required for maturation.

A second, but much smaller crop is planted at the end of June. The Bragg variety is used for the second planting. The second planting occurs on land where wheat, which was planted in the fall, has been harvested. Both soybean crops mature about the same time and are harvested simultaneously.²

Soybeans are rotated with corn, small grains, fescue, hay pasture or sorghum in two or three year cycles. This crop often harbors nematodes, other insects, or fungus. For these reasons, soybeans are not desirable in rotation before tobacco, peanuts, or fruits and vegetables.³

¹ Small, Producing Soybeans, p. 4.

² Billy Griffin, personal interview, April, 1970.

³ Small, Producing Soybeans, p. 4.

Soybeans need both lime and fertilizer, but the individual field must be tested to determine the correct amount and types. Soybeans should be planted in rows thirty-six to forty-two inches apart. In the Albemarle eight to ten beans per foot are planted at a depth of one to one and one-half inches.¹ During maturation weeds are controlled to assure proper growth. The use of cultivators for weed control is preferred over herbicides. Harvesting begins when the moisture content reaches thirteen per cent. Diseases, except the Southern Corn Leaf Blight, and insects similar to those harming corn affect soybeans and should be treated similarly to corn (Figure 10).²



Fig. 10--Soybean crop, southern
Pasquotank County

¹Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, p. 77.

²Small, Producing Soybeans, pp. 13-20.

Livestock

The production of livestock and livestock products has been rapidly increasing in the Albemarle. Of the \$15,202,540 total income from livestock and livestock products sales, hogs sold for slaughter, beef cattle sold for slaughter, milk, and turkeys had a total sales value of \$12,841,447 (Table 5). Hogs sold for slaughter had a total sales value in 1969 of \$10,071,400. Swine production is, therefore, of extreme importance to the Albemarle and actually is the leading agricultural product.¹

The leading counties in swine production are Perquimans, Gates, Currituck, and Chowan. Perquimans, Gates and Chowan Counties have long histories of raising swine on Virginia type peanuts. The relationship to peanuts no longer exists, but the practice of swine production has continued and spread throughout the Albemarle with corn being substituted for peanuts.² A total number of 227,800 hogs were raised in the Albemarle in 1969 and the amount has been increasing steadily since 1961, when only 68,650 hogs were raised. In recent years a decline in demand has been noted.³ Producers must give more attention to analysis of the market before adopting or expanding the hog enterprise.

¹Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank and Perquimans.

²Klages, Ecological Crop Geography, p. 427.

³Pierce, Trends, p. 111.

TABLE 5
LIVESTOCK AND LIVESTOCK PRODUCTS

Value (\$) Number	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
Hogs	<u>400,000</u>	<u>1,976,000</u>	<u>2,000,000</u>	<u>2,000,000</u>	<u>1,205,400</u>	<u>2,365,000</u>
for slaughter	8,400	40,000	40,500	45,000	25,600	45,000
Feeder	<u>17,000</u>	<u>40,000</u>	<u>161,000</u>	<u>60,000</u>	<u>73,075</u>	<u>140,000</u>
Pigs	850	2,000	7,000	2,500	3,950	7,000
Beef Cattle	<u>123,750</u>	<u>100,000</u>	<u>82,500</u>	<u>226,928</u>	<u>371,250</u>	<u>31,250</u>
for slaughter	475	410	300	1,300	1,250	125
Feeder	<u>60,000</u>	<u>52,000</u>	<u>120,000</u>	<u>65,000</u>	<u>202,500</u>	<u>93,750</u>
and Yearlings	500	400	800	500	1,400	625
Dairy Cattle				<u>22,500</u>	<u>27,450</u>	<u>35,750</u>
for slaughter	---	---	---	250	500	275
Dairy Cattle						<u>2,500</u>
for replacement ..	---	---	---	---	---	10
Sheep	<u>3,600</u>	<u>1,200</u>	<u>8,000</u>	<u>300</u>	<u>12,600</u>	<u>9,000</u>
.....	200	60	500	15	750	600
Turkeys		<u>879,120</u>				
.....	---	163,300	---	---	---	---
Broilers				<u>50,000</u>		
.....	---	---	---	25,000	---	---
Hens	<u>2,200</u>	<u>3,375</u>	<u>7,500</u>	<u>50,000</u>	<u>7,500</u>	<u>3,500</u>
.....	3,000	4,500	15,000	100,000	9,000	5,000
Milk-value only...	---	17,920	---	---	570,129	367,200
Eggs-value only ..	25,800	30,000	286,000	822,000	90,000	1,400
Cured Ham-value only	---	4,500	---	40,500	9,975	54,000
Other Meat-value only	---	2,250	8,400	75,000	6,750	75,000
Other						
Products-value only	285	---	6,825	---	1,126	19,200

Compiled from: North Carolina Agricultural Extension, Estimated, and North Carolina Department of Agriculture, North Carolina 1969, for the Counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

Hogs, as with any living creature, develop diseases and must be treated accordingly. Hog cholera is the most debilitating disease.¹ This disease has been prevalent in the northeastern section of this state and especially in the Albemarle in the past five years. It can wipe out entire hog operations on a farm. A vaccination exists, but is not used due to the attempt by the U. S. Department of Agriculture to totally eliminate any trace of the disease. Areas surrounding a diseased farm are quarantined. All farms, except the diseased farm in the quarantined area, may sell hogs for slaughter without any controls. Hogs sold for breeding from a cordoned area must be individually certified cholera free before leaving the farm. A quarantine is in effect for sixty days after the disease is first encountered. Practice now calls for all hogs on a diseased farm to be destroyed. Hog cholera is not as harmful in the Albemarle as it might be imagined. This fact is due primarily to the sale of hogs for slaughter and not raising them for breeding purposes in the Albemarle. The aforementioned lack of control on slaughter hogs is the prime influence here. It is estimated that only less than five per cent of the hog production in the area has been reduced by the disease.² Hogs are generally sold in the fall of the year.

¹Bullock, Practical Farming, pp. 365-367.

²Bruce Woodard, personal interview with County Extension Agent for Cumberland County, Fayetteville, North Carolina, October, 1970.

The time of sale results from tradition, when hogs were once slaughtered in the fall when the cool weather prevented spoilage of the meat being prepared for winter storage (Figure 11).¹



Fig. 11 -- Mechanical feeders and swine,
central Perquimans County

Fruits and Vegetables

Fruits and vegetables vary in essential needs and cannot always be considered as having one set of general growing requirements. However, certain groups of fruits and vegetables grow well together due to similar growing characteristics. Such is the case of the combination found in the Albemarle. The climate and soil, when drained, is acceptable to the crops. The principal fruits and vegetables of the Albemarle

¹W. Neil Franklin, "Agriculture in Colonial North Carolina,"
The North Carolina Historical Review, Vol. III, October, 1926, p. 564.

are snapbeans, sweet potatoes, peaches, cabbage, cantaloupes, cucumbers, sweet corn, tomatoes, peppers, watermelons, and lima beans.¹

The normal planting dates and usual length of growing season for the more important fruits and vegetables agree with the planting of other crops of the Albemarle.² Sweet potatoes, snapbeans, cabbage, and sweet corn are the dominant crops among the principal fruits and vegetables (Table 6).³ Pasquotank, Currituck, and Chowan Counties are the leaders in production of fruits and vegetables. Due to the tremendous investment in these crops, the farmer must prevent diseases and animal pests from destroying these crops.

The need to quickly get these crops to market far overshadows the miniscule tolerances of these crops to any abnormal weather changes, animal pests, or diseases. Fruits and vegetables have been increasing in production since World War II, but still do not constitute a considerable part of the agriculture of all of the area. Reasons for the lack of increases in production of fruits and vegetables are the problems involved with the use of migratory workers for harvesting. The ease with which other Albemarle crops are raised as compared to fruits and vegetables has also been a deterrent to expansion of production.

¹ Albemarle Area Planning Commission, A Region, p. 29.

² George R. Hughes and Thomas W. Flowers, Garden Manual, (Raleigh: North Carolina Agricultural Extension Service, 1970), p. 7.

³ Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

TABLE 6
FRUITS AND VEGETABLES

Value (\$) Acreage	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
Sweet	<u>14,500</u>	<u>208,600</u>	<u>114,750</u>	<u>46,200</u>	<u>74,000</u>	<u>320,000</u>
Potatoes	30	250	100	75	60	275
Apples		<u>300</u>			<u>27,750</u>	<u>2,625</u>
.....	---	2	---	---	25	10
Other Fruit	<u>15,360</u>	<u>1,500</u>		<u>20,000</u>	<u>3,920</u>	<u>2,500</u>
and Nuts	80	5	---	20	35	25
Cabbage	<u>70,000</u>	<u>15,000</u>	<u>27,300</u>		<u>2,575,200</u>	<u>16,800</u>
.....	125	100	60	---	3,300	70
Sweet		<u>297,000</u>	<u>120,000</u>	<u>15,000</u>	<u>134,062</u>	<u>69,000</u>
Corn	---	2,000	300	300	275	300
Cucumbers		<u>31,200</u>	<u>63,250</u>			<u>12,000</u>
Fresh	---	60	100	---	---	50
Cucumbers		<u>4,000</u>				<u>90,000</u>
Processing	---	10	---	---	---	150
Lima		<u>87,500</u>	<u>18,000</u>			---
Beans	---	250	20	---	---	---
Peppers		<u>1,875</u>	<u>10,500</u>			<u>6,325</u>
.....	---	3	20	---	---	10
Tomatoes		<u>36,000</u>	<u>280,000</u>			---
.....	---	20	400	---	---	---
Snap		<u>87,500</u>	<u>731,250</u>		<u>5,000</u>	---
Beans	---	250	1,500	---	25	---
Other	<u>2,000</u>		<u>34,000</u>		<u>13,201</u>	<u>225,000</u>
Vegetables	3	---	220	---	35	240
Watermelons		<u>384,000</u>	<u>36,000</u>		<u>660</u>	<u>80,000</u>
.....	---	1,600	100	---	2	375

Compiled from: North Carolina Agricultural Extension Service, 1969 Preliminary Reports, for the Counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

There are very few farms which may be classified as specialized fruit and vegetable farms. In most cases these crops are grown as supplementary sources of income to other enterprises of farming in the Albemarle (Figure 12).¹

Peanuts

Peanuts, which are important primarily to Gates and Chowan Counties, are not tolerant to wet soils as are most of the other crops of the Albemarle.² Peanuts need a well-drained, light colored, loose, friable sandy loam soil. Potash, calcium, nitrogen, and phosphates must often be added.³

Seed peanuts are not hybrids like corn, due to the breeding nature of peanuts. Certain varieties do exist, the only unique characteristic being a different maturation period. The advantage of the different maturation periods is that they allow the farmer to plant different varieties and stagger his harvest dates. The slow process of harvesting necessitates the staggering of harvesting, if a farmer does the work himself.⁴

¹Pierce, Trends, p. 98.

²Bullock, Practical Farming, p. 229.

³Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, p. 74.

⁴Billy Griffin, personal interview, April, 1970.



Cabbage--southern Currituck
County



Peach orchard--central
Camden County



Melon patch--southern Chowan County

Fig. 12--Typical truck crops of the Albemarle

In areas where the farmer desires to harvest all acreage quickly, custom combining is arising. Custom combining is that which is done by paid professionals. Such is not the case in the Albemarle where most farmers own all their equipment.¹

The main variety of peanut grown is the Florigiant, which matures in 155 to 160 days. Other varieties also found in the Albemarle are the NC 5 and NC 2, which mature in 160 to 170 days and 170 to 180 days respectively.² It is recommended that planting occur as close to May 1 as possible for all varieties. These peanut varieties grow best in rotation with corn.³

There are certain practices that must be followed during the course of a year. During January or February it is recommended that soil samples be taken from the fields. After the results of the samples are determined the proper amount of potash or lime is worked into the ground. The practice of taking soil samples is for all crops, not just peanuts alone. The soil is tested for nematodes, a plant destroying parasitic worm, and proper measures are taken.

The seeds are treated to prevent rot just before the May 1 planting date. Seventy-five to ninety pounds of seeds per acre are

¹ Billy Griffin, personal interview, April, 1970.

² Rufus Keel, personal interview with the Vice-President of Keel Peanut Company, Greenville, North Carolina, April, 1970.

³ Astor Perry, Peanut Reference Manual, (Raleigh: North Carolina Agricultural Extension Service, 1968), pp. 2-59.

applied every four to six inches in rows thirty to thirty-six inches apart. Weeds and grasses are carefully controlled during maturation. In early June the area is sprayed for thrips, leafhoppers and root-worms--all insects. Due to a need for calcium in the peanut crop, the local farmer applies at least 600 pounds of land plaster per acre after blooming. Between June 25 and July 10 the plants are treated for leaf-spot. Between July 15 and August 15 the plants are treated for concealed damage by applying one-half pound of actual boron per acre. Digging begins in early September to determine the approximate full maturation date (Figure 13).¹



Fig. 13--Peanuts one-fourth mature,
central Pasquotank County

¹Astor Perry, 1970 Profit Producing Peanut Practices,
(Raleigh: North Carolina Agricultural Extension Service, 1970), p. 1.

White Potatoes

Approximately thirty per cent of North Carolina's white potato crop is produced in the Albemarle.¹ White potatoes, important primarily to Pasquotank County, grow best where a mean annual temperature of forty to fifty degrees Fahrenheit occurs.² Pasquotank County is considerably warmer than these temperatures. It has been stated that the potatoes of Pasquotank County draw a good price only when those cooler areas of the northern United States have a poor year's production.³

The soils that are most desirable are well-drained loam, fine sandy loam, or silt loam with a deep subsoil and a high phosphate content.⁴ The optimal soil conditions are artificially achieved in the Albemarle.

White potatoes are planted every ten to twelve inches in rows three to three and one-half feet apart in the Albemarle. The seed potato, that is the potato used for seeding purposes, should average one and one-half ounces in weight. The varieties grown in the Albemarle are Irish Cobbler, Plymouth, Superior, Pungo, and Sebago.

¹North Carolina Department of Agriculture, North Carolina 1969 Farm Census Summary--Preliminary Report by Counties, (Raleigh: 1969, pp. 3-4.

²Klages, Ecological Crop Geography, p. 43.

³Albemarle Area Planning Commission, A Region, p. 29.

⁴Klingman, Crop Production, p. 382.

The seed potatoes are planted from February 15 through March 1. Before planting, the seed potatoes are treated with bichloride of mercury to prevent the scab, a serious disease found in alkaline soils. Insects such as the potato bug are serious pests and the plant should be dusted for these pests during maturation. Harvesting occurs during the cool part of the day about 105 to 135 days after planting--depending upon the variety planted (Figure 14).¹



Fig. 14--Recently planted potato field with a drainage ditch, Pasqu-tank County

¹Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, pp.174-175.

Cereal Grains

Cereal grain production is increasing as the farmers of the area are continuing to diversify. Cereal grains are important primarily to Currituck, Pasquotank, Camden, and Perquimans Counties. The principal types of cereal grain grown in the Albemarle are winter wheat, oats, some rye, and barley.¹

The grains are planted in the fall, preferably between October 19 and November 1, in the Albemarle. The soils which are most desirable are medium to fertile soils containing loam. The recommended fertilizer ratio with cereal grains is twenty pounds of nitrogen, forty pounds of phosphate, and forty pounds of potash per acre. A top-dressing of thirty to sixty pounds of nitrogen per acre is applied about February 1. The soil is tested for acidity and limed accordingly.

Certified seed is the primary type used in the Albemarle. The seed is planted at a ratio of one to two bushels per acre. Many varieties of cereal grain are on the market. Personal decision as to which is the most productive for individual farms is the only influence on purchase choice.

Diseases, such as smuts, rusts, bunts, and blights can be controlled by proper treatment of the seeds before planting. The green

¹Calculated from: Estimated and North Carolina 1969, for the counties of Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans.

bug, army worm, and Hessian fly are the major insect enemies of cereal grains. The use of various chemicals and the practice of sowing after the fall demise of insects are the major forms of pest control.¹ Cereal grains are harvested in the spring, approximately 210 days after planting (Figure 15).²



Fig. 15--Harvesting wheat in April in Perquimans County

Farm Mechanization and Equipment

Although farming in the Albemarle is classified as general, the diversification of equipment is not very great. The versatility of the

¹Agricultural Extension Service, Handbook for Agricultural and Home Economics Workers, p. 86.

²Agricultural Extension Service, Selected Field Crops in North Carolina, (Raleigh: 1965), p. 28.

equipment has enabled the farmer to reduce the number and variety of machinery necessary for profitable production. A typical farmer in the Albemarle has comparatively large capacity equipment. As the average farm in the area is owner-operated and very little hired labor is used, the farmer has to use equipment which can cover large areas quickly. The equipment used on these farms represents some of the largest capacity farm equipment made. The following is a sample of the basic minimum amount of equipment on an average farm in the Albemarle: six to eight row tractor--\$10,500; six to eight row plow--\$2,000; cultivator--\$1,500; self-propelled corn and soybean combine--\$20,000; peanut harvester--\$9,000; bottom plow--\$1,500. The preceding equipment, with the exception of the corn and soybean combine, is designed to be used in conjunction with the six to eight row tractor (Figure 16). The large tractor and equipment exemplified the great investment of the farmer in his machinery. Other items such as peanut dryers, crop sprayers, or custom equipment for specialty crops may be owned or leased.¹

One piece of equipment, which is found on almost every farm in the Albemarle is the metal storage bin for grain. These bins are

¹Dallas Tripp, personal interview with the Sales Manager of Eastern Tractor and Implement Company, Greenville, North Carolina, May, 1970.



Corn-soybean combine at an
Edenton tractor dealer



Heavy tractor at an
Edenton tractor dealer



Disc in foreground,
peanut combine in background at an
Edenton tractor dealer

Fig. 16--Farm equipment typical to the Albemarle

aluminum or galvanized steel, cylindrical structures, twelve to thirty feet in diameter and of approximately the same corresponding height. Several of these bins are usually located in close proximity to each other and connected by a duct system whereby grain is fed into them by a conveyor elevator to a position higher than the bin tops. Gravity then allows each bin to fill through the duct system. These bins are very versatile and may be used for storage of corn, soybeans, peanuts, and/or cereal grains. They constitute a significant feature on the landscape of the Albemarle. No other agricultural structure is so often seen (Figure 17).



Fig. 17--Typical grain storage bins in Pasquotank County

Very little hand labor is required for any of the crops grown in the Albemarle. Fruits and vegetables do require some handlabor, but when compared to the need of the major crops the amount of hand labor is virtually insignificant. The lack of large numbers of farm helpers being required results in the area being sparsely settled with very few tenant or migrant worker dwellings.¹ Unlike other sections of North Carolina, almost all of the blacks own their farms in the Albemarle.

Techniques of farming in the Albemarle are very advanced. The people are not so reactionary as to continue only the methodology of their forefathers. The farmers usually own most of their equipment and take pride in buying new and better equipment, if they believe it will improve their production and be profitable.² The basic procedure for growing the principal crops of the Albemarle has been discussed, but the following statements complete the methodology of agricultural production in the area by listing the types and uses of the equipment for each agricultural product. Corn and soybeans are very similar in their requirements for equipment. In the spring of the year the ground is plowed into rows. Corn and soybeans are planted via a mechanical planter, which is pulled behind a tractor. The planter places the seeds into the ground at a predetermined interval. The width of the rows and quantity of seeds distributed is fully adjustable. Depth of cultivation

¹ U. S. Department of Commerce, Census, Table 5, pp. 311-318.

² Billy Griffin, personal interview, April, 1970.

varies with weights on the cultivator, as certain crops should not be cultivated as deeply as others due to potential root damage. In the fall of the year, both corn and soybeans can be harvested by the same combine. A slight adjustment must be made to the front portion of the machine to facilitate the harvest of either corn or soybeans.¹

Swine require very little mechanical equipment. Electric fences, mechanical feeders, and feed preparation items are the only noticeable equipment used for hogs. Feed preparations include boiling garbage and/or using commercially mixed feed. Although meat processing is highly mechanized, not enough is performed in the Albe-marle to warrant discussion (Figure 11).²

In the preparation of the ground for peanuts, it is recommended that the land be broken with a six to eight row plow. Peanuts are mechanically planted with a piece of equipment which digs a place for the seed, deposits the seeds, and then covers the seeds and tamps the soil over the seed via a concave wheel. During maturation, weeds are kept from between the plants by the use of a cultivator which is actually a series of hoes on wheels. Peanuts are now harvested with a combine which loosens the soil and removes the entire plant from the ground. The part of the plant containing the peanut pods is retained in a

¹Dallas Tripp, personal interview, May, 1970.

²A. C. Scarborough, Southern Hog Growing, (Danville, Illinois: The Interstate Printers and Publishers, Incorporated, 1958) pp. 68-78.

storage trailer, which is pulled by the combine. The remaining portion of the plant is deposited on the ground. The peanuts are then taken to storage shelters where they are forced-air dried before marketing.¹

Fruits and vegetables, except for trees, are mechanically planted with the same type planter as that used for corn, soybeans, and potatoes. Weeds must be cultivated from all fruits and vegetables. Some fruits and vegetables must be hand harvested and those which may be mechanically harvested are usually not, due to the prohibitive cost of the equipment for such small acreage. The only major concentration of hired labor are associated with fruits and vegetables, and the amount is very nominal. Those counties producing crops requiring hand labor are also logically the prime users of it.²

Potatoes do not require any special equipment other than the harvester. The spring plowing must be very deep, as the seed potatoes must be covered with enough dirt to prevent freezing during late frosts. Potatoes can be planted with the same planter as that used for corn and soybeans with only slight modifications. The usual cultivation to control weeds must be maintained during the growing season. Potatoes are dug from the ground via a bottom plow and then either gathered by hand or by the use of a mechanical harvester and loaded into

¹Smith, Farm Machinery, pp. 414-420.

²Agricultural Extension Service, Selected Field Crops, p. 28.

storage wagons. The latter is the preferred manner in the Albemarle.¹

Cereal grains do not require any special planting equipment. The plow used for corn and soybeans works on the land used for cereal grains equally well. Weed cultivation after planting is necessary but due to most of the maturation occurring during the cold season, the land is not bothered greatly by weeds. Harvesting is done by mechanical combines. Due to the high cost of these machines, some custom combining occurs in the Albemarle. These custom combines are primarily Virginia-based operations.²

The agricultural activities of the area require various items, such as equipment, fertilizer, sprays, et cetera. These items must be procured in nearby towns and villages. The towns offer services that satisfy the needs of the Albemarle inhabitants in a proportionate amount to the size of these settlements.

¹Smith, Farm Machinery, pp. 414-420.

²Agricultural Extension Service, Selected Field Crops, p. 28.

CHAPTER IV
THE RELATIONSHIP OF THE
VILLAGES AND TOWNS OF THE ALBEMARLE

Overview of Settlements

The settlements of the Albemarle fall into two basic groups. The first group is composed of villages with populations of 500 or less. Its modal population is approximately 300.¹ The second group is composed of three towns; Hertford, with a population of 2,068; Edenton, with 4,458 inhabitants; and Elizabeth City, with a population of 14,062. No settlements exist in the Albemarle having between 500 and 2,000 people.²

The towns of the Albemarle are related to the surrounding rural areas via the services they perform for the rural area. Verification of the preceding statement necessitates a consideration of the various industries and businesses in the settlements of the Albemarle. The following studies reveal the relationship of the towns and villages to the rural landscape. In studying the settlements of the Albemarle, the relevance of a specific business to an area must be considered. In order to indicate the relevance of a specific business, a methodology was devised which would yield qualitative data at a rapid rate. The use of the number and type of concerns of

¹Albemarle Area Planning Commission, A Region, p. 46.

²Ibid., p. 44

the settlements met the requirements of this study. By revealing the number and type of concerns it was decided conclusive relationships would be apparent. To facilitate the study of the smaller villages, they were subdivided from the under 500 category into the following three classes: 0 to 99, 100 to 249, and 250 to 500.

Villages of the Albemarle

Zero to Ninety-nine Population Class

In the 0 to 99 class, the following five settlements are found: Ryland in Chowan County; Corolla in Currituck County; Corapeake and Drumhill in Gates County; and Chapanoke in Perquimans County.¹ These settlements by the very nature of their size can be quickly and accurately detailed. Corolla with a population of 50 in Currituck County, is found on the Outer Banks section of that County. As that portion of the Albemarle is omitted from this study, the village of Corolla will not be further discussed. The predominant business establishments in the 0 to 99 class settlements are a general merchandise store and one other establishment. The second establishment is usually a post office, service station, or a farm equipment repair shop. It is possible for more than two establishments to be located in this first class, but such is not usually the case in the Albemarle. These small communities are usually located at the site of crossroads and are too small to be considered as planned meet-

¹ Albemarle Area Planning Commission, A Region, p. 45.

ing places for the rural citizens. This feature is generally reserved for the following class.

One Hundred to Two Hundred forty-nine Population Class

The second class is composed of settlements of 100 to 249 people. The settlements of the Albemarle in this class are as follows: Belcross, Camden, Shiloh in Camden County; Tyner in Chowan County; Aydlett, Shawboro, and Snowden in Currituck County; Eure and Gates in Gates County; and Belvidere in Perquimans County.¹ In addition to the aforementioned establishments of the 0 to 99 class, the 100 to 249 class community normally has at least one church, one or two more general merchandise stores, another service station, and possibly a business which specializes in a particular product or service, such as a granary, a farm implement dealer, or crop buyer. The church acts as a unifying feature of this size community. It can be used as a meeting place for the local rural populace for meetings other than those of religious orientation.²

Two Hundred Fifty to Five Hundred Population Class

The third class is composed of villages with a population range of 250 to 500. The communities have all the features of the first two classes and more. The settlements of the Albemarle in this class are

¹ Albemarle Area Planning Commission, A Region, p. 45.

² John M. Gillette, Constructive Rural Sociology, (Sturgis and Walton Company, New York: 1914), p. 223.

as follows: Old Trap and South Mills in Camden County; Barco, Coinjock, Grandy, Harbinger, Knotts Island, Mamie, Moyock, and Poplar Branch in Currituck County; Gatesville and Sunbury in Gates County; Weeksville in Pasquotank County; and Winfall in Perquimans County.¹ The third class settlements are often the site of educational facilities and government offices. Granaries, farm implement dealers, local markets, and buyers of farm products are usually located in these communities (Figure 18). Volunteer fire departments are often found in this class also. An increase in the number of merchandise stores, service stations and churches may also be noted. A more or less natural increase in businesses and service functions is found with every increase in population in the lowest three classes of settlements in the Albemarle.



Fig. 18--Fruit and vegetable market
in Currituck County

¹Albemarle Area Planning Commission, A Region, p. 45.

Towns of the Albemarle

Hertford

Hertford, the county seat of Perquimans County, is the first of the over 2,000 population class to be studied. It has a population of 2,068. Hertford, as small as it is, has a relatively large central business district. This feature is reflected in its importance to the surrounding rural areas, as a service center. The following establishments are considered to be directly supported by the rural area: three businesses which operate granaries and sell feed, seed, and fertilizer -- Farmer's Feed and Seed, Hertford Livestock and Supply Company, and Hertford Farmer's Exchange; a veneer company -- Hertford Veneer, Incorporated, which reflects the significance of the locally grown hardwood trees; and two farm implement dealers -- Blanchard Farm Equipment and Hertford Motor Company (Figure 19). Also found in the town is the County Extension Office for Perquimans County. Estimates in the growth of Hertford show that its population is decreasing.¹ A fact, which can best be explained by the lack of any new industry moving into the settlement in recent years. Most of the young people are leaving for better paying jobs in nearby Elizabeth City or the Hampton Roads area. No new housing construction is

¹ Albemarle Area Planning Commission, A Region, p. 51.

evident in Hertford.¹



Fig. 19--Tractor dealer in
Hertford, North Carolina

Edenton

Edenton, the county seat of Chowan County, is the second largest town in the Albemarle with a population of 4,458. Eleven establishments, which were considered to be directly related to economic activities in the rural area, and the County Extension Office were found in Edenton. These establishments are as follows: two tractor and farm implement dealers--Byrum Implement and Truck Company, Incorporated; Edenton Tractor and Implement Company, Incorporated; two grain storage dealers--Home Feed and Fertilizer Company, and

¹ Billy Griffin, personal interview, April, 1970.

Leary Brothers Storage Company, who were also dealers in feed and fertilizer; one veneer company--Richard P. Baer and Company; one peanut blanching establishment--Seabrook Blanching, Incorporated; which is reflective of the proximity of Edenton to the Virginia-North Carolina peanut belt, as is the one wholesale peanut buyer--Jimbo's Jumbo Peanut Company; and a cotton mill--Edenton Cotton Mill, Incorporated.

The mill is a remnant of the time when cotton was produced in large quantities in the northeastern portion of North Carolina. Only 5,400 acres of cotton, for a total of \$174,000, were grown in the Albemarle in 1967.¹ The production of more valuable and easily grown crops has prevented cotton production from increasing. The population of Edenton is expected to increase over the next decade.² The blanching plant is relatively new to Edenton and the veneer plant has been increasing production and has added men to its payroll.³ Two new firms, Carter's Ink Company and a Chris-Craft boat works, have been recently attracted to Edenton. This attraction is primarily due to labor leaving the farms. Some new housing developments are being constructed in Edenton (Figures 20 and 21).

¹Federal-State Crop Reporting Service, North Carolina Agricultural Statistics, (Raleigh: Annual, #119, 1968), p. 31.

²Albemarle Area Planning Commission, A Region, p. 51.

³Division of Community Planning, Population and Economy--Edenton, North Carolina, (Raleigh: North Carolina Department of Conservation and Development, 1968), p. 12.



Tractor dealer--Edenton,
North Carolina



Veneer plant--Edenton
North Carolina



Peanut blancher--Edenton,
North Carolina

Fig. 20--Town and village growth



Peanut buyer--Edenton,
North Carolina



Housing development--
Edenton, North Carolina

Fig. 21--Town and village growth, continued

Elizabeth City

Elizabeth City, the largest city (14,062) and the county seat of Pasquotank County, is apparently an anomaly in the Albemarle. The comparatively large size of the community seemingly should reflect numerous establishments, which are oriented to the rural areas. This is not the case of Elizabeth City, as exemplified by the following: two farm implement dealers--Shawboro Tractor and Implement Company, Incorporated, and R. C. Abbott Company; six feed, seed and fertilizer dealers--Bailey Kenyon Supply, Incorporated, Mobil Chemical Company, Roberts Brothers, Incorporated, Smith-Douglass Fertilizer Company, Weaver Fertilizer Company, and D. T. Whitehurst Warehouse; three granaries--Continental Grain Company, Henry Winslow Grain Elevators, and Ward and Son, Incorporated; one grain elevator equipment company--L. R. Foreman and Sons; and one cotton mill--Elizabeth City Cotton Mills, Incorporated, which is similar in nature and origin to the one in Edenton. The County Extension Office is also located in Elizabeth City (Figure 22).

It is accepted that more establishments are here than in Edenton, but not the amount assumed to be comparable to its population. It has been found that Elizabeth City's population is reflective of other economic activities beside agriculture. Two colleges and a Coast



Fig. 22--Grain elevator in
Elizabeth City, North Carolina

Guard Air Facility add to the economy and population of the town.¹ The lack of total dependence on the hinterland falsifies the reasoning that Elizabeth City, which is centrally located in the Albemarle, is the focal point of the area. The population of Elizabeth City is increasing slowly and it has not been ascertained whether the increase was created because of the area's agriculture or from other economic facets of the town, but the agriculturally-oriented industries do not seem to be expanding greatly.² It is considered that Elizabeth City serves the same purposes as Hertford and Edenton, but primarily for the eastern half of the Albemarle.³

¹Albemarle Area Planning Commission, A Region, p. 84.

²North Carolina Department of Conservation and Development, Development Plan for Elizabeth City, (Raleigh: 1967), p. 20.

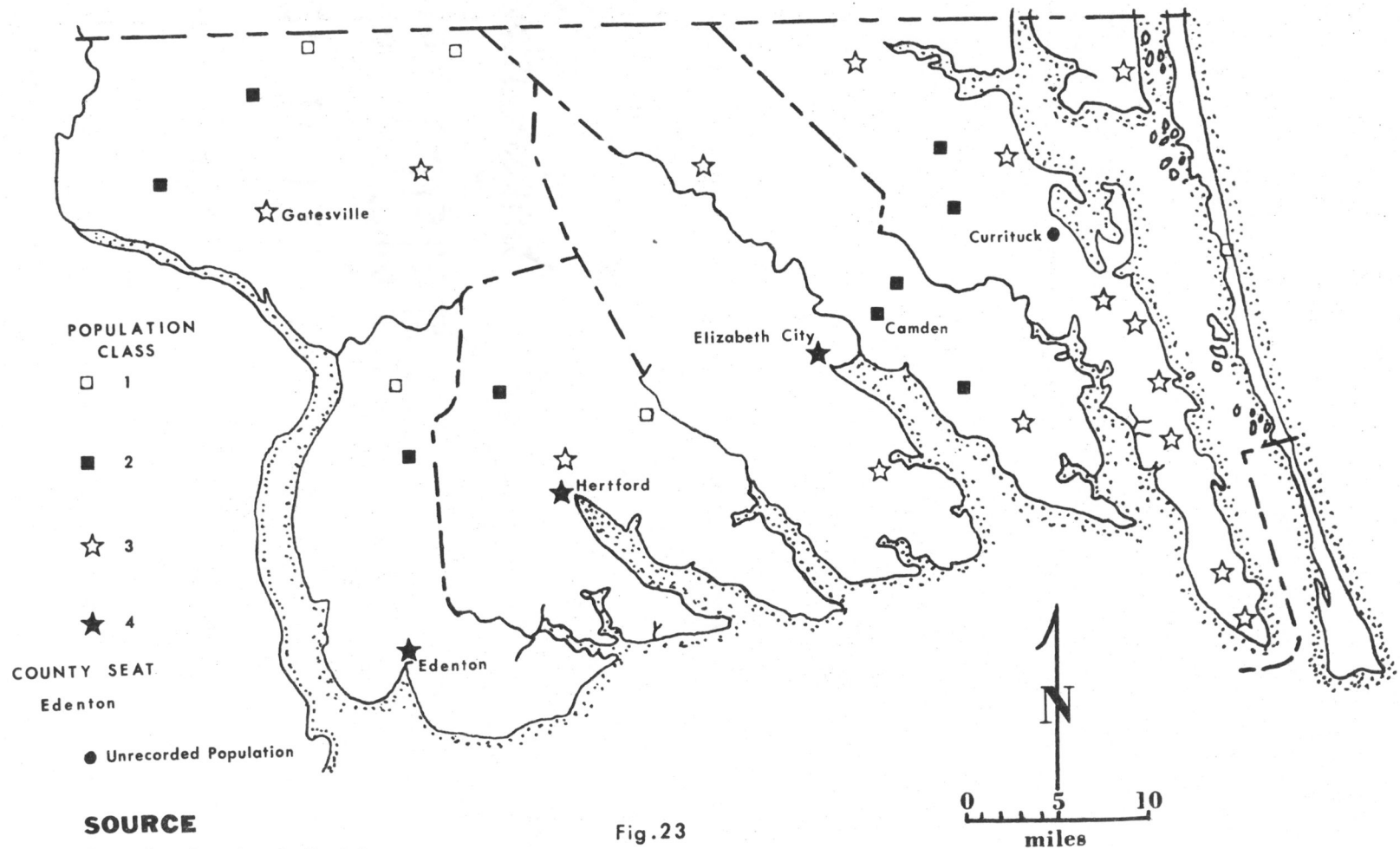
³Albemarle Area Planning Commission, A Region, p. 83.

In conversation with an arbitrarily-selected portion of the populace of the Albemarle, the following conclusion has been deduced: although basic items are purchased in the small local villages, most people bypass Elizabeth City and proceed to the Hampton Roads area of Virginia for the more difficult to obtain items.¹ Advertising of this area may be seen in the Elizabeth City newspaper, on billboards, and heard on local radio stations. Volume of sales and number of Albemarle shoppers in this Virginia agglomeration was not ascertained, as it was not within the scope of this paper, but the impact is evidently significant to warrant the aforementioned advertising. The services offered by the large Hampton Roads area are numerous and offer ultimate satiation of needs of anyone from the Albemarle (Figure 23).²

¹Interviews with an arbitrarily selected portion of the populace of the Albemarle, January, 1970.

²Albemarle Area Planning Commission, A Region, p. 5.

TOWNS of the ALBEMARLE



SOURCE
See footnote 1 P.66.

CHAPTER V

RETROSPECT AND PROSPECT

Retrospect

The area referred to as the Albemarle in this study encompasses approximately 1,500 square miles.¹ It is at the northern end of the humid subtropical climatic belt.² Much of the land in the area is forested and marshy,³ and approximately fifty-five per cent of the area is in an unused state.⁴ The land that is used is farmed rather intensively with many techniques of modern farming to insure productive fields.⁵

In order to better comprehend the nature of the Albemarle, it was decided to study a farm, which could be considered typical of the area farms. This farm study is discussed in the following paragraphs.

¹Federal-State Crop Reporting Service, North Carolina Agricultural Statistics, p. 86.

²Edward B. Espenshade, Jr., ed., Goode's World Atlas, p. 8.

³Albemarle Area Planning Commission, A Region, p. 17.

⁴U. S. Department of Commerce, Bureau of the Census, Census of Agriculture: 1964, Statistics for the State and Counties, (Washington, D.C.: Vol. I, part 26, Government Printing Office, 1967), Table I, pp. 275-281.

⁵Billy Griffin, personal interview, April, 1970.

Land Use--Hypothetical Farm

The typical farm of the Albemarle has been increasing in acreage since World War II, as neighboring farmers have sold their land and sought work in urban areas.¹ The farm would have most of its cleared acreage devoted to the production of corn or soybeans. Other crops grown would be peanuts and/or truck crops. The income received from the sale of these various crops would be normally in direct proportion to the amount of acreage they occupy. The keeping of swine and other livestock adds considerably to the income of the farmer.² This farm has better than 150 acres of land of which the majority is cleared.³ A considerable investment is necessary to properly drain its fields. The cost is considered absolutely necessary and the returns from it are high, but it is a long term investment.⁴

Another great investment on the typical farm is in equipment (Figures 24 and 25). Due to the comparatively large acreage farmed and almost negligible use of hired laborers, the equipment must be capable of doing large amounts of work quickly. Without the use of custom combining or cooperative buying of equipment, the individual

¹ Albemarle Area Planning Commission, A Region, p. 24.

² Bureau of the Census, Census of Agriculture: 1964, Tables 8 and 13.

³ Ibid., Table 1, pp. 275-281.

⁴ Edward Higbee, American Agriculture, Geography, Resources, and Conservation, (New York: John Wiley and Sons, Incorporated, 1958), p. 119.



Entrance to a typical equipment storage area, Perquimans County



Cultivator on a tractor, Perquimans County



Peanut combine and grain filler in front of grain storage bins, Perquimans County



Discs and tractor with spray mechanism attached, Perquimans County

Fig. 24--Elements of a typical Albemarle farmstead



Equipment storage facilities,
Perquimans County



Corn-soybean combine,
Perquimans County

Fig. 25-- Elements of a typical Albemarle farmstead

investment adds up rather quickly. This farm has approximately \$50,000 to \$60,000 worth of equipment just for field use.¹ The value of the land and buildings averages \$35,000 for the Albemarle as compared to \$24,000 for the state of North Carolina.²

The only locally built structures on the farmstead are usually a pen for hogs and an open-walled equipment shelter. One structure, which is seemingly ubiquitous in the Albemarle is the grain storage bin. Since this is a commercially built and mechanically operated device, it is not actually a building in the sense of a barn or equipment shelter. Normally several of these bins are built in close proximity to each other and are connected via the duct system, which has been previously discussed.³

The typical farm family has four people in the household.⁴ The operator is approximately fifty-two years of age, which is slightly higher than the state average of fifty years of age.⁵

¹Dallas Tripp, personal interview, May, 1970.

²Reporting Service, North Carolina Agricultural Statistics, 1968, p. 86.

³Harris Pearson Smith, Farm Machinery and Equipment, 4th Edition, (New York: McGraw-Hill, 1955), pp. 464-469.

⁴Bureau of the Census, Census of Agriculture: 1964, Table 7, pp. 334-341.

⁵Ibid., Table 6, pp. 323-330.

He has had eight years or more of schooling.¹ This farmer owns his land and uses part of someone else's acreage also (Table 7).² This individual receives a portion of his income from a source outside of the farm.³ He is likely to sell his property for retirement purposes, as it is doubtful if his children will desire to retain possession of the property, due to more lucrative jobs in urban areas.⁴ This farm family has a heritage of agriculture and their ancestors were Virginians who migrated to the area prior to the Revolutionary War.⁵ Equipment for the farm and the human necessities of life are bought either in the local community, Edenton, Elizabeth City, or in the Hampton Roads area of Virginia, depending upon the urgency of need and the nature of the product. The listing of the settlements is in ascending order of ability to satiate the needs of the populace of the Albemarle.⁶

¹Bureau of the Census, Census of Agriculture: 1964, Table 7, pp. 334-341.

²Ibid., Table 4, pp. 301-307.

³Ibid., Table 7, pp. 334-341.

⁴Albemarle Area Planning Commission, A Region, p. 79.

⁵William S. Powell, Ye Countie of Albemarle in Carolina, (Raleigh: State Department of Archives and History, 1958), p. 82.

⁶North Carolina Department of Conservation and Development, Development Plan for Elizabeth City, (Raleigh: 1967), p. 17.

TABLE 7

FARM OWNERSHIP

All Farms	Camden	Chowan	Currituck	Gates	Pasquotank	Perquimans
No. Operators..	215	448	307	620	446	603
Full Owners....	84	187	140	297	183	274
Part Owners ...	98	161	121	213	177	228
Managers.....	1	3	6	1	-	1
Tenants	32	97	40	109	86	100
% Tenancy	14.9	21.7	13.0	17.6	19.3	16.6
Black						
Total.....	40	70	34	158	72	116
Full Owners ...	11	24	19	69	29	59
Part Owners ...	20	26	10	50	32	46
Tenants	9	20	5	39	11	11

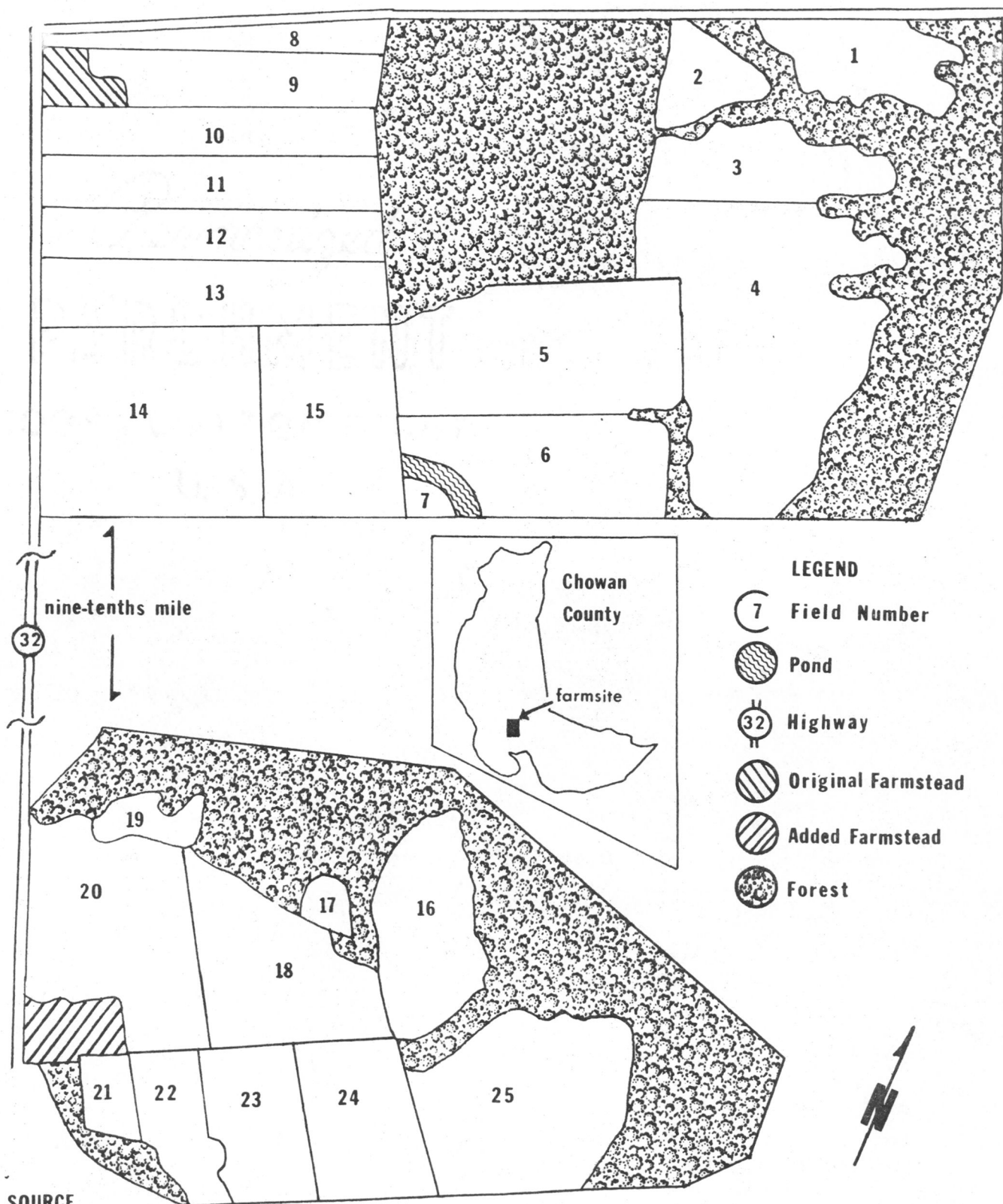
Calculated from: United States Department of Commerce, Bureau of the Census, Census of Agriculture: 1964, Statistics for the State and Counties, (Washington, D.C.: Vol. I, part 26, Government Printing Office, 1964), Table 3, pp. 291-297.

The L. C. Bunch Farm--A Typical Example

The farm represented by Map 1 is the property of L. C. Bunch of Chowan County. This farm is considered to be representative of the farms of the Albemarle, as it produces the typical crops of the area, is in the modal acreage category, and is following the course taken by most other farms of the Albemarle. The total acreage of this farm is 234 acres. The larger tract of land was the original farm. The smaller separate tract was added within the past ten years. This second tract, which is less than one mile from the original, is an example of the previously mentioned farm expansion of the Albemarle. From the total acreage on this farm, only 115 acres is devoted to crop production--various fields are used for more than one crop (Figure 26).

The Bunch farm had, in 1969, a total of twenty-two acres of peanuts, two acres of cotton, three and one-half acres of tobacco, eighty acres of wheat, fifty acres of soybeans, thirty-five acres of corn, and approximately eleven acres of fruits and vegetables. This eleven acres was devoted to raising watermelons, sweet potatoes, sweet corn, lima beans, and snap beans. This farm has approximately seventy-five acres in pasture land; however, most of this land was dormant and only fifty hogs were kept on this farm in 1969. The production of tobacco and cotton has augmented the small livestock production of the farm. On the rest of the farm, approximately forty acres is in forest, some

L.C. BUNCH FARM



SOURCE
A.C.S.C. Photo,
Edenton, N.C., June 1970.

Fig. 26

of which is swampy.

The fields, as numbered on the map, were devoted, all or in part, to the following agricultural pursuits during 1969: field one--wheat, fruits, and vegetables; field two--corn, fruits and vegetables; field three--corn and soybeans; field four--cotton, tobacco, and wheat; field five--wheat and soybeans; field six--peanuts; field seven--corn; field eight--peanuts; field nine--wheat, fruits and vegetables; field ten--wheat, fruits and vegetables; field eleven--wheat, fruits and vegetables; field twelve--soybeans, fruits and vegetables; field thirteen--corn; field fourteen--peanuts and tobacco; field fifteen--wheat and soybeans; field sixteen--wheat and soybeans; field seventeen--corn; field eighteen--peanuts; field nineteen--corn; field twenty--peanuts, wheat and soybeans; field twenty-one--wheat and soybeans; field twenty-two--corn; field twenty-three--corn and soybeans; field twenty-four--corn and soybeans; and field twenty-five--wheat and soybeans.¹ The specific field used for each particular crop varies from year to year due to crop rotation practices.

Prospects

The Albemarle, as a separate entity, is losing its isolated status due to increasing contacts with the peripheral areas. It is

¹ Jack Fisher, personal interview with the Head of the Agricultural Crop Stabilization Commission, Edenton, North Carolina, June, 1970.

gaining economic ties with the surrounding area of Virginia. It is apparent, however, that its long isolation from the rest of North Carolina is preventing any large increases in contacts with the rest of the state for a considerable time into the future.¹

As farm size continues to increase, the dollar investment will also increase per farm accordingly. Agriculture will remain as an extremely important part of the economy of the Albemarle, but with a decreasing percentage of the populace engaged in agricultural activities. The importance of soybeans is expected to rise along with a decrease in corn production. Truck crops and the orchard industry are expected to increase to a stage, where canning plants may be attracted to the Albemarle. Livestock production will probably increase proportionately with the increase in the size of farms. The remaining agricultural products of the Albemarle will probably remain stationary in their importance.²

New industry is moving into Edenton and Elizabeth City, which is unrelated to the rural areas except as an attraction for its surplus labor force. This fact is exemplified by the entrance of a

¹Division of Community Planning, Population and Economy--Edenton, North Carolina, (Raleigh: North Carolina Department of Conservation and Development, 1968), p. 4.

²Albemarle Area Planning Commission, A Region, pp. 24-29.

Carter's Ink Company plant and a Chris-Craft boat works to Edenton.¹

The total population of the area will become slightly larger between 1970 and 1980.² This fact is due in part to the expected increase in the use of the natural resources of the Albemarle for recreational purposes. The use of the Outer Banks in Currituck County, the Dismal Swamp area, and the entire water boundary area of the Albemarle is expected to become of greater importance.³

¹Division of Community Planning, Population and Economy -- Edenton, p. 65.

²The Governor's Conference with Edward Higbee, (Raleigh: The Governor's Office, 1964), p. 12.

³Albemarle Area Planning Commission, A Region, pp. 56-61.

APPENDIX A

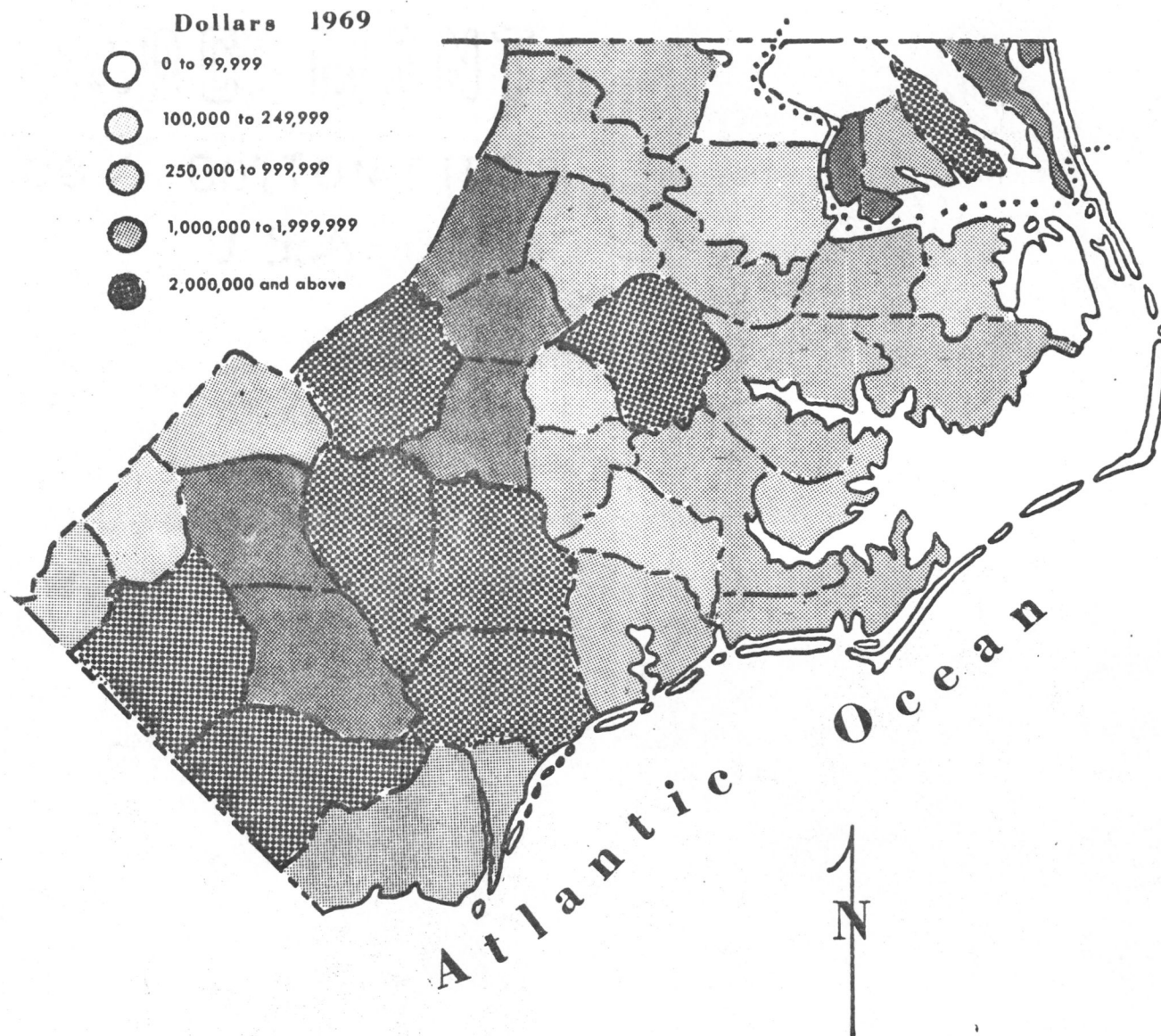
SINGLE FACTOR MAPS

The following maps reflect the relative patterns of the principal types of agriculture of the Albemarle as found in the coastal plain of North Carolina.

Livestock Production in the Coastal Plain

92

by counties



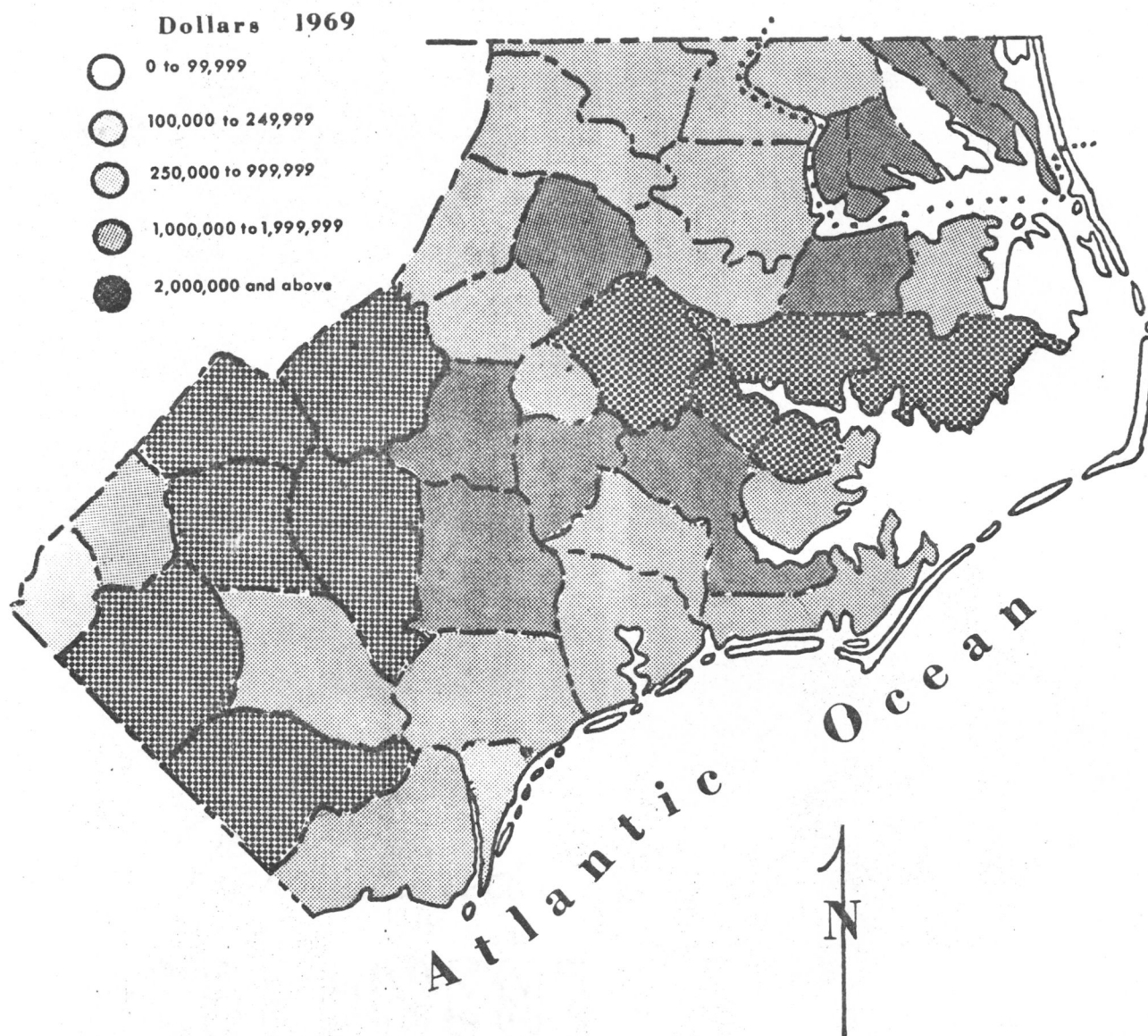
SOURCE

See footnote 1 P.4.

Fig. 27

Soybean Production in the Coastal Plain

by counties



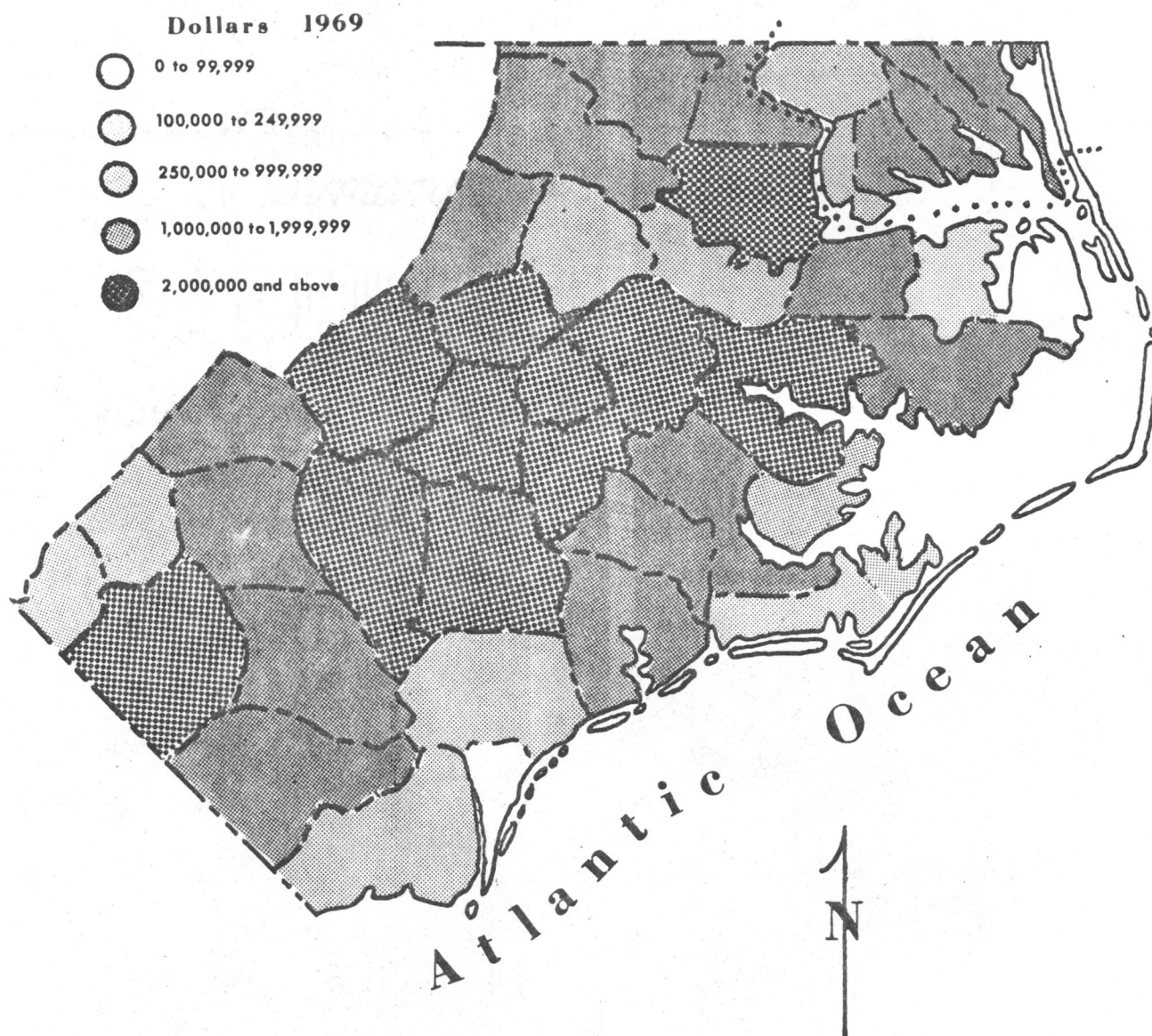
SOURCE

See footnote 1 P.4.

Fig. 28

Corn Production in the Coastal Plain

by counties



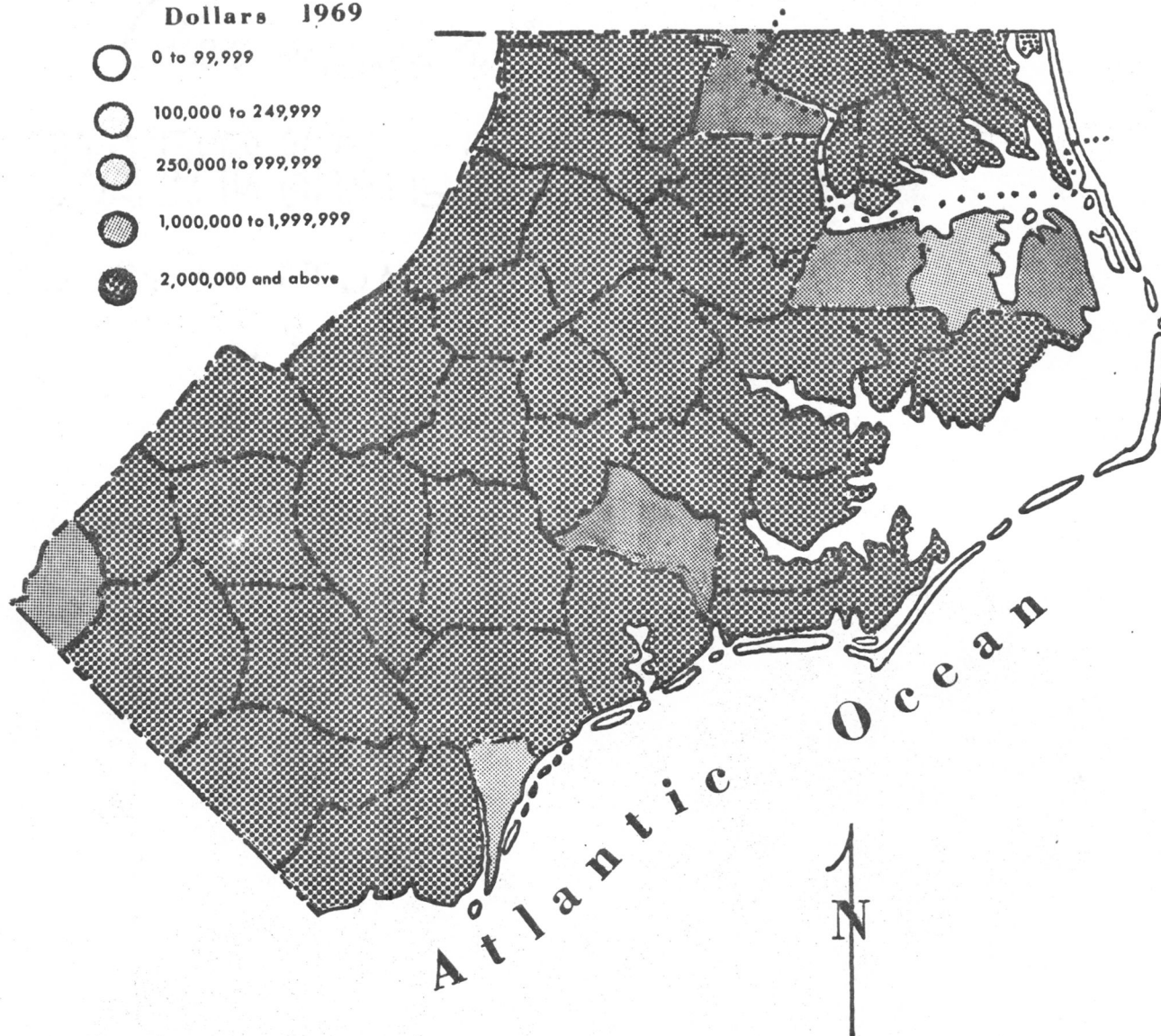
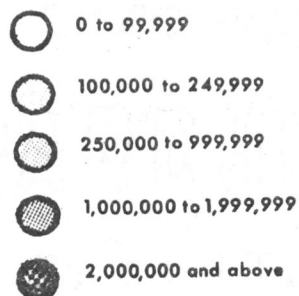
SOURCE
See footnote 1 P.4.

Fig. 29

Fruit and Vegetable Production in the Coastal Plain

by counties

Dollars 1969



SOURCE

See footnote 1 P.4.

..... Albemarle Area

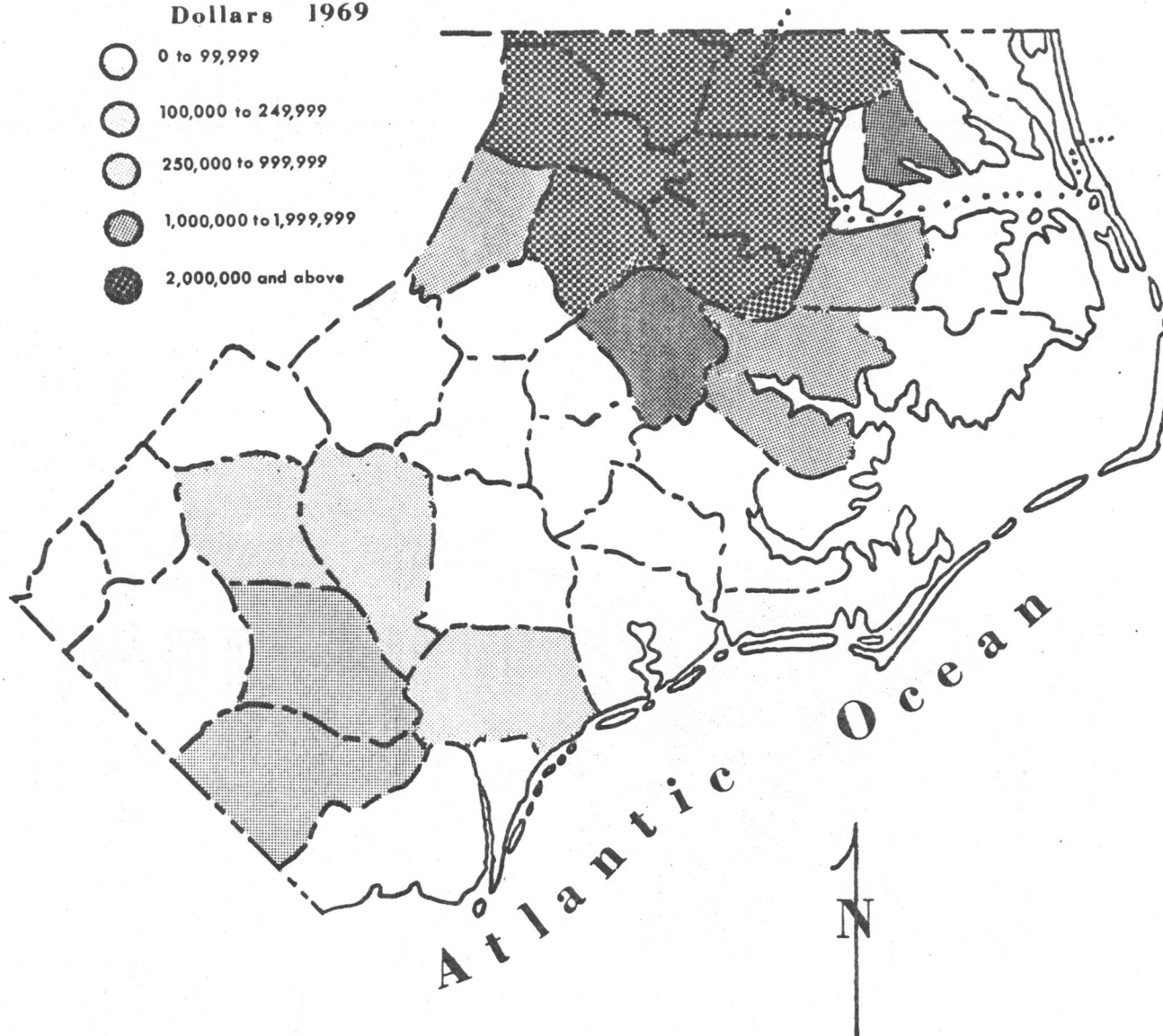
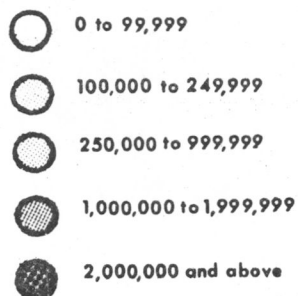


Fig.30

Peanut Production in the Coastal Plain

by counties

Dollars 1969



SOURCE

See footnote 1 P.4.

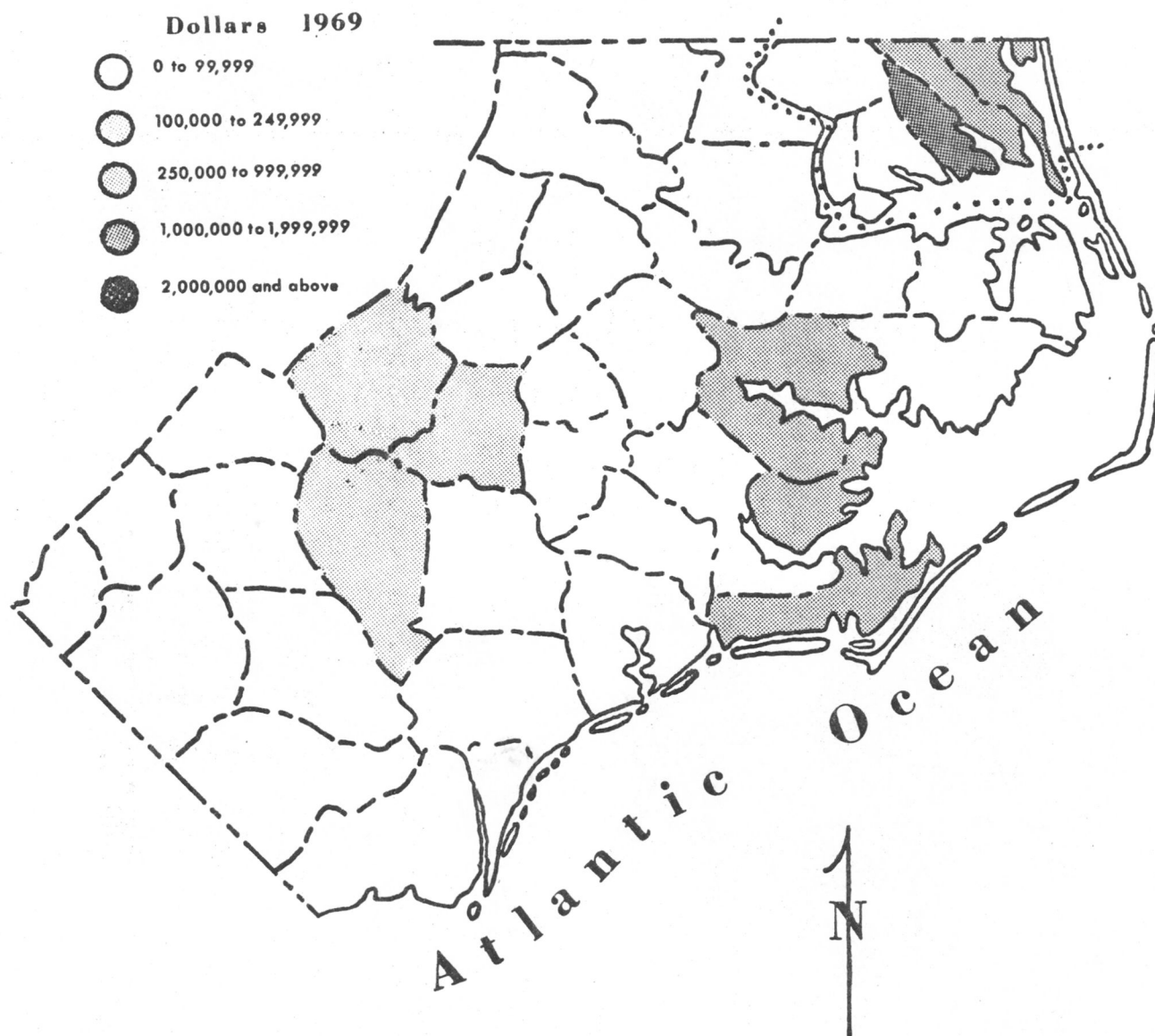
..... Albemarle Area



Fig. 31

White Potato Production in the Coastal Plain

by counties



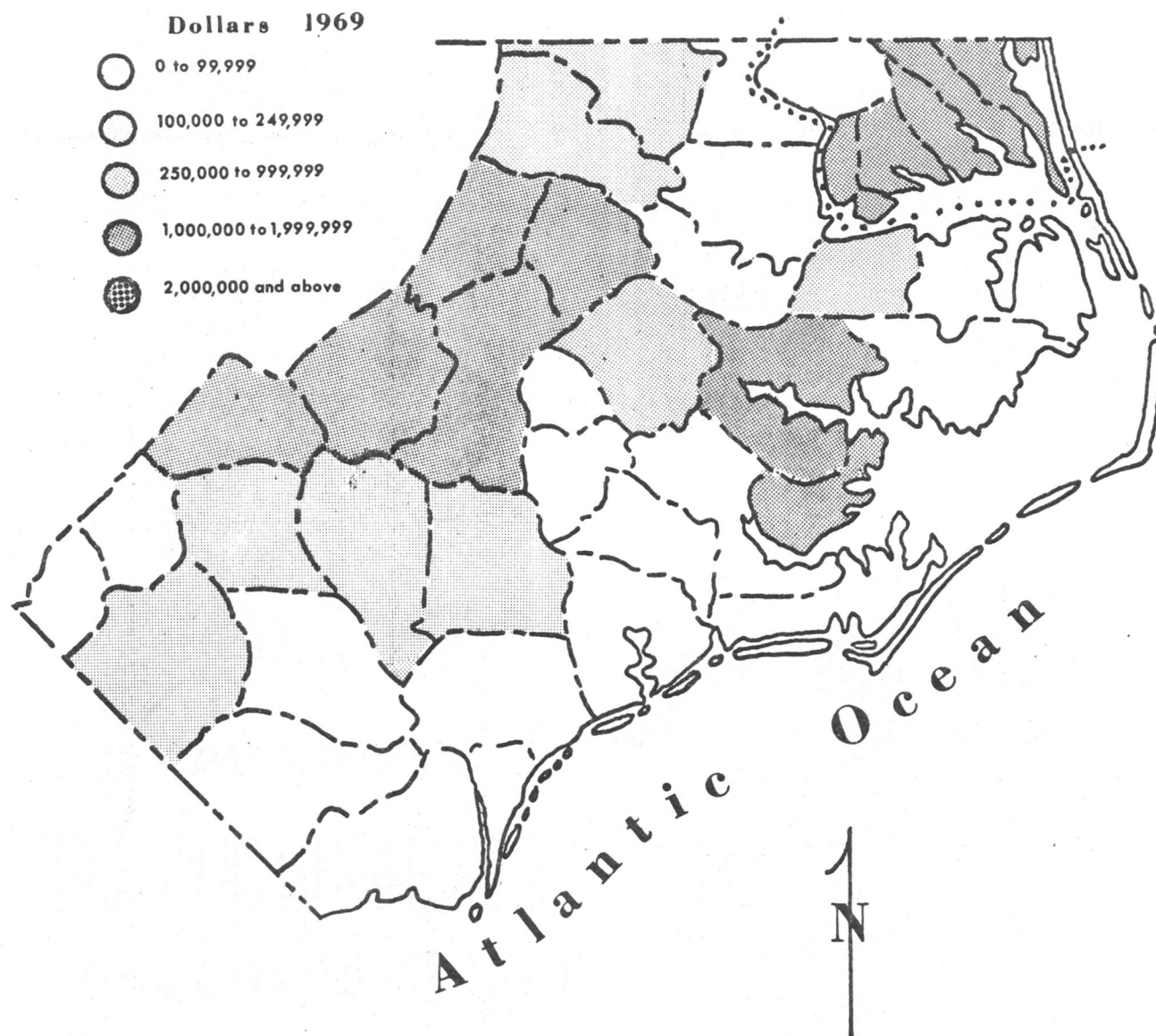
SOURCE

See footnote 1 P.4.

Fig. 32

Cereal Grain Production in the Coastal Plain

by counties



SOURCE

See footnote 1 P.4.

Fig.33

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