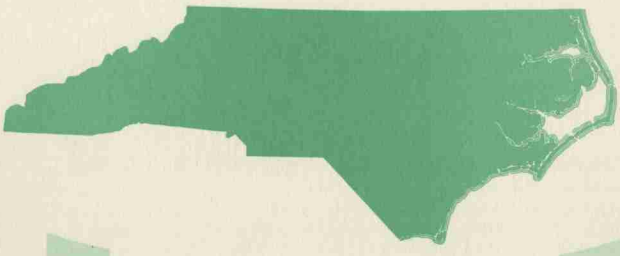
E. Flesner

PROMISING

North Carolina Farm Enterprises



SITUATION-OUTLOOK
COMPETITION
BEST PRODUCTION AREAS

Published By

THE NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

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PROMISING N. C. FARM ENTERPRISES

This is a guide book designed to aid in planning expansion of agricultural production and to assist agricultural related business groups in planning future operations. The enterprises included herein will play an important role in North Carolina's expanding agriculture. They have been evaluated as to situation-outlook, production needs, competition and essentials to successful production. It must be kept in mind that this information is in brief form and should be considered in relation to individual locations and situations. Consult your local agricultural agent or contact the particular department concerned at N. C. State College, Raleigh for detailed information.

February, 1959

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Basic Conditions Affecting North Carolina's Agriculture

Production Increasing: North Carolina's agricultural production has increased phenomenally during the past 30 years. Average annual output of farm products during 1951-55 was 52 per cent greater than the average annual output of all farm products produced in the state between 1925-29. Farm production per farm resident in North Carolina has increased 75 per cent over the last three decades.

Products Changing: Tobacco has been a major source of farm income. But, production of tobacco, cotton and peanuts is now regulated by government quotas and control programs. Faced with limitations on their ability to increase incomes by expanding these basic crops, Tar Heel farmers are rapidly turning to the production of other commodities. Large increases have occurred in the production of poultry, meat animals, vegetables for processing and grains. Production of cotton and fresh vegetables has decreased.

Year-round Production Demanded: Seasonal change in the flows of farm products through the marketing system has been reduced and price variation has been lessened due to improved storage and processing facilities. Eggs, broilers and many other products are now supplied on a year-round basis.

Capital Requirements are Increasing: Specialized equipment is being developed for use in producing many commodities. This equipment increases labor productivity and the minimum size unit necessary for efficient, economical production.

Abundant Labor Supply: North Carolina farms supply an abundant source of labor for firms processing agricultural commodities. Forty-one per cent of the farm operators in North Carolina work off the farm and one-fourth work off the farm for 100 days or more each year. Farm families receive approximately 45 per cent of their net income from non-farm employment of family members.

Large Markets Near North Carolina: Forty-one per cent of the nation's population is located within a 500-mile radius of the geographic center of North Carolina. Good transportation facilities mean that North Carolina's farm products have a locational advantage in being shipped via truck, train, plane, and boat to the major consumption centers on the eastern shore of the United States.

Product Markets Are Changing: Although plants engaged in processing and distributing of farm products in the United States have been decreasing in number and increasing in volume of output in recent years, these facilities have increased both in size and number in North Carolina. Efficient plants have been developed to supply Northeastern markets with large quantities of broilers on a competitive basis with other areas. North Carolina is the third-ranking broiler producing state in the nation, and exports a high proportion of broilers to other states. Egg markets are being reorganized and production assembled in large enough quantities to attract major buyers. North Carolina producers now supply most of the major egg outlets in the state and some beginning has been made in shipping to other states. Large, efficient plants also have been developed to process and distribute tobacco, cotton, cucumbers, peppers, and other agricultural products.

Market Needs Are Changing: During the last decade, large super markets have displaced many small grocery stores. These markets are geared to a national system of distribution. They are like a web that covers the nation. The best way we can serve local markets is by putting our products into this national web which distributes to the nation and to the world. The total market demand is larger than North Carolina farmers can possibly supply. Farmers, however, cannot continue to produce what they want to produce irrespective to market needs and expect the market to take their product. Large, modern market outlets demand a large steady supply of products of uniform quality for profitable operation. Few, if any, individual farmers are likely to produce products in sufficient volume to meet the needs of modern market outlets. Production plans and decisions of many individual farm operators must be coordinated with the needs of modern market outlets, and production adjustments must be carried out on a community or area basis in order to give farm products the characteristics demanded by modern market outlets.

Contract Farming Is Increasing: Contract farming is increasing rapidly in North Carolina. Most of our broilers and some layers, market hogs and vegetables are now produced under contract. Contract farming is the result of the growth of retail super markets and their needs for large volumes of products of uniform quality from dependable sources of supply. In order to assure uniformity of quality the use of uniform production practices is necessary by farmers. Contract farming also has been the result of a necessity for coordinating production and marketing decisions of large numbers of farmers enabling processing plants and retail stores to schedule the movement of farm products through their plants.

Guides for Adjustment: The following points can serve as guides for adjustment in North Carolina agriculture.

1. Produce those products which appear to hold promise of greater profits. For practically any given farm in North Carolina, there will be several enterprises which could be profitably produced. The individual farmer must select from this group of enterprises those which will be most profitable in his farming situation. Determining the most profitable combination of enterprises involves the selection of those which will yield the maximum net returns to the land, labor, and capital resources which are available or obtainable on a given farm. Products which appear to be especially promising in the future in North Carolina include broilers, eggs, hogs, feeder cattle, vegetables, and grain.

2. Fit production to demands of modern markets. Production changes must be accomplished on an area basis to secure a large volume, consistent quality, and a steady, dependable flow of commodities.

3. Increase the size of farms and processing firms. Increasing size of business will enable farms and processing firms to take advantage of specialized equipment and increase efficiency.

4. Gain efficiency by specializing. Many farmers and processors find that by specializing in the performance of a few operations they can do a better job and increase efficiency. Specialization and the use of specialized equipment aids in standardizing the product quality in accordance with market demands and in saving labor per unit.

5. Keep up-to-date on the technology of production and marketing. Research continues to develop new technology. Using this technology will increase efficiency and improve our competitive position.

6. Operate on a business basis. The need for high level managerial ability is increasing. Farmers and processors must keep up-to-date on business skills.

7. Develop marketing and processing firms on a sound, economic basis. One of the major marketing problems is getting a large enough volume of products of consistent quality and steady flow to be able to operate market outlets successfully. Real care and caution is needed in establishing additional markets. Special attention should be given to the services that additional markets can provide.

8. Make wise use of public policies and programs. Public policies and programs have a profound effect upon the income and progress made by farmers and other citizens.

Guides in Market Development: Many people are sincerely interested in taking action to improve the marketing of our farm products. Persons interested in developing a marketing program should consider the following:

1. Farmers can no longer do the whole marketing job themselves. Many people remember the days when the producer got all the consumer's dollar by selling to him directly. Except in a few specialized cases, this system will not work today. In the final analysis, farmers are not interested in percentages, they are interested in more income. In most cases, they will get more income by producing efficiently and allowing an efficient marketing system to move their products to the consumer.

2. Markets must be built on more than local demand. Local demand in an agricultural state such as North Carolina is not large enough to absorb our total production. A separate system built to service local demand will likely be too expensive to compete successfully with a nationwide merchandising and marketing system.

3. Plan for both fresh and processing market outlets. North Carolina farmers have traditionally produced for a fresh market. More and more of our produce is being processed one or more times. Some people predict that in the not too distant future the housewife will be buying completely prepared meals and have only the task of warming them and serving them. Our farmers need to think more about producing for processing.

4. A marketing system cannot exist on surpluses alone. Many people want a processing facility or market to handle what is not needed on the fresh market, or to take care of a sporadic surplus from the home garden. An efficient marketing system cannot be built if the flow of products is restricted to an overflow or surplus level. An efficient market must have a dependable supply of products of uniform quality.

5. A marketing facility does not necessarily make a successful market. Many people feel that all we have to do is to build a grand facility and a good market will automatically result. There are hundreds of monuments that attest to the fact that this is not so.

6. More market facilities may not be the answer. If it was ever true that every crossroads needed a market, certainly with modern transportation and communication it is not true today. Products must be assembled in large enough volume to permit markets to operate efficiently.

7. More than promotion is needed to improve marketing. Promotion has a place but certainly promotion will succeed only when you have volume, quality, and consistent supply.

8. A farmer cooperative is not necessarily an easy answer. Farmer cooperatives will succeed only if the factors needed for success are present. They have no magical, built-in formula. They must be approached from a business-like standpoint, as are other successful business organizations.

Sweet Potatoes

Situation-Outlook

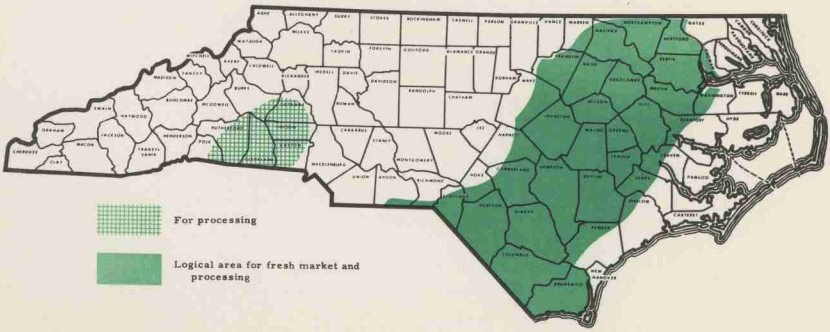
Sweet potato acreage in North Carolina has dropped gradually since 1932, but increased slightly in '57... the average yield is 127 bushels per acre; $300-$700 can be grossed per acre. Marketing trend is toward canning and freezing... 50% of Louisiana's 1957 crop went into cans and more freezing is in prospect. Per capita consumption of sweet potatoes is down from the 1945-49 average, but is expected to increase some by 1960.

Any acreage increase in North Carolina will be largely at the expense of other states. Retail prices now make sweet potatoes a luxury item... must sell cheaper if they are to be included regularly in menus. We must expect growing pains... to capture new markets we need lower prices.

Production Needs

High-yielding, good quality potatoes are essential... shoot for 300 bushels per acre... 115 bushels are required to break even. At least five acres are needed to justify equipment and storage facilities. Growers must be highly skilled... potatoes likely will not be a profitable sideline. Any expansion into new areas may call for local investment in marketing facilities. Growers and marketing people need to work together... more mechanical harvesting equipment is needed to cut production costs.

Sweet Potato Production Areas



Our Competitors

Louisiana is our biggest competitor, accounting for more than 1/4 of the nation's production... we grow slightly more than half as many. Our yields are higher than Louisiana's and most other competing areas. We have ideal soils and climatic conditions and are closer to eastern markets than most producing areas, and as near to midwest markets. If we're smart, we can take a bigger hunk of the national market.

Plan To Do This

Any area planning to start or expand sweet potato production should be sure they have the following:

Ideal soils--(good tobacco soil)
Long growing season.
Production potential--minimum 35,000 bushels within 25-mile radius.
Growers with know-how, willingness to produce quality and yields.
Equipment to supply supplemental irrigation when needed.
A soil treatment program.
Adequate disease control in plant bed, field, storage and in transit.
Efficient curing, storing facilities to reduce shrinkage.
Adequate capital for storage, markets and possibly a processing plant with competent management.

Irish Potatoes
Early Commercial Area

Situation-Outlook

Per capita consumption of potatoes has recently increased from a low of 100 lbs. to 106 lbs. per year...most years moderate to ample supplies are available when this area is ready to market...increased acreage possible but will have to come at the expense of competing areas.

Production Needs

Early commercial Irish potatoes is a highly perishable, highly risky crop best suited for growers who can take a chance and who can plant at least 25 acres...returns vary from being unprofitable to $2,000 gross per acre; the average is about $500.

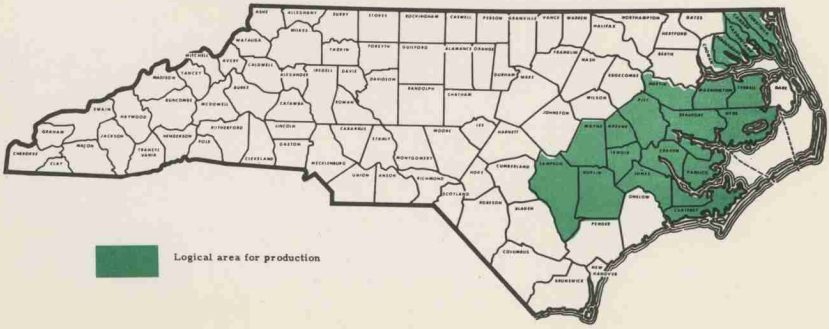
This crop is sold fresh and for processing--mostly potato chips; 44% of the '57 crop went for processing. Yields are only average (230 bu.)...product sold for fresh market generally poorly sized and handled, resulting in poor appearance in the market place. This situation must improve to meet competition.

We must shoot for a 500-bushel per acre yield. To do this, irrigation may be necessary. Growers must be trained to be highly skilled in production, harvesting, grading, sizing, handling and packaging in order to present a better looking product.

Our Competitors

We have a geographical advantage...we are within 500 miles of half of the U. S.'s population...yet California is our chief competitor.

Irish Potato (Early Commercial) Production Area



Most years we also compete with Virginia, South Carolina and Alabama. Acreage increase will depend on quality of product offered.

Plan To Do This

Closer row spacing.

Irrigate when necessary.

Use large seed pieces treated for disease control.

Choose loam or sandy loam soils.

Harvest and handle carefully--wash if for fresh market.

Follow sound insect, disease control programs--emphasize soil treatment for insects.

For fresh market, precool and/or refrigerate in transit.

Irish Potato Seed Production

Situation-Outlook

At present eastern North Carolina growers buy seed largely from Prince Edward Island and Maine; some from New York and midwestern states. The freight rate from western North Carolina to Elizabeth City is about the same as from Maine and Prince Edward Island to New York City. Thus, with comparable yields and a quality product, western Tar Heel growers should be able to supply at least eastern North Carolina and have an advantage in states to the south of us.

Production Needs

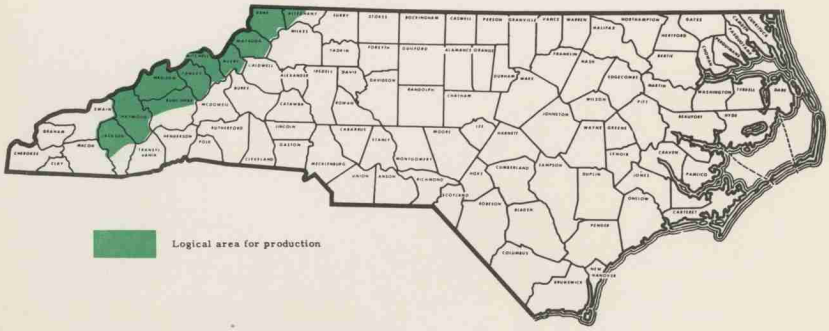
Growers must organize in groups or otherwise cooperate in production, storage and marketing of units of at least 5,000 bushels each. This will require financing temperature-controlled storage houses. Such a project must start small and grow as seed of a new variety becomes available.

Those who have loamy soil above 2,800 feet elevation, such as in Avery, Alleghany, Watauga and Ashe Counties, are in the best position to produce certified seed stock for mountain and eastern North Carolina growers, and possibly for use in South Carolina, Alabama and Florida.

Our Competitors

The small acreages and low yields of potatoes raised for seed production in the mountains of North Carolina makes if difficult for growers to compete with other areas.

Irish Potato Seed Production Area



New varieties are more suitable for eastern growers than the older ones such as Sebago and Cobbler. Present mountain seedstock growers should produce more to supply local demand and adjacent markets in Tennessee and Virginia.

Plan To Do This

Organize acreage, production and storage units of 5,000 bushel minimum.

Choose only best soils above 2,800 ft. elevation.

Plant varieties approved for certification.

Have centrally located temperature - controlled storage houses.

Follow recommended insect, disease control programs.

Market collectively or develop large scale, individual enterprises.

Tomatoes

Situation-Outlook

North Carolina grew about 2,900 acres of commercial tomatoes for fresh market and about 500 acres for processing in 1957... U. S. produced 220,950 acres for fresh market, 300,220 for processing... disease losses were about 22% in the state in '57. The 1949-55 average price for our tomatoes was $5.89 per hundred lbs.

Production Needs

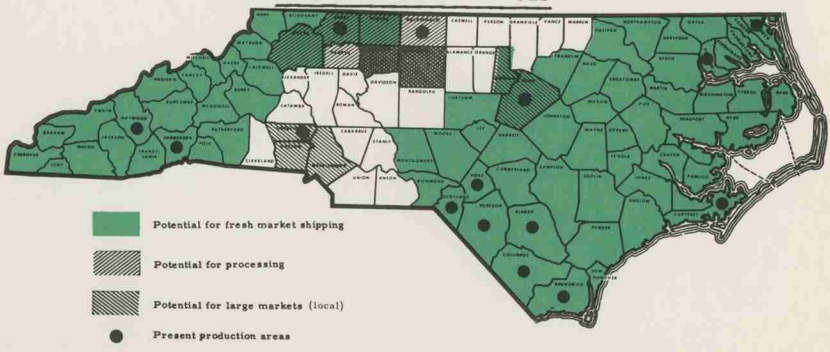
Because of uneven ripeness and diseases, opportunities for producing tomatoes for processing is limited to the northwestern areas. Eastern sections can make two crops, getting the early market in the spring and the late market in the fall, thus hitting the large northern markets. Western counties can produce vine ripe tomatoes for the larger southern markets... see map below for opportunities for the various areas.

High yielding, quality fruit is a must. Yields should average 6-8 tons per acre instead of the two tons we produced in 1957. Fresh market tomatoes will have to be staked or trellised, where earliness is a factor, the early varieties will have to be used... this will require skill and specialization. One of the biggest capital outlays will be for spraying and dusting equipment and materials.

Our Competitors

We have plenty of competition, and most are doing a better job than we are. At present we can't compete on a large scale with other

Tomato Production Areas



areas on processing tomatoes and may never be able to do so. Our fresh market yields can be just as high or higher than our competitors if we follow a good, sound production program.

Plan To Do This

Grow own plants under good production, disease program.

Use proper variety.

Follow good insect, disease control program.

In east, stake tomatoes; mulch and stake in west. Both areas should prune.

Organize so tomatoes may be graded and marketed at low cost in volume lots.

Build up soil and fertilize properly. Keep pH around 6.5.

Use supplemental irrigation when needed.

Snap Beans

Situation-Outlook

In 1957 North Carolina grew 11,700 acres of snap beans for fresh market, 3,600 for processing... we rank 3rd in the nation in acreage for fresh market and 11th in processing acreage. We can produce, harvest and package fresh snaps for $1.07 a bushel... average seasonal prices have been $1.85-$2.10 a bushel... our processing bean production and harvesting costs are about $50 a ton... average price for the 1946-55 period was $119.30.

National acreage planted for processing has already exceeded that for fresh market and is expected to continue in that direction... our job is to get more acres into processing beans and increase quality on fresh market acreage.

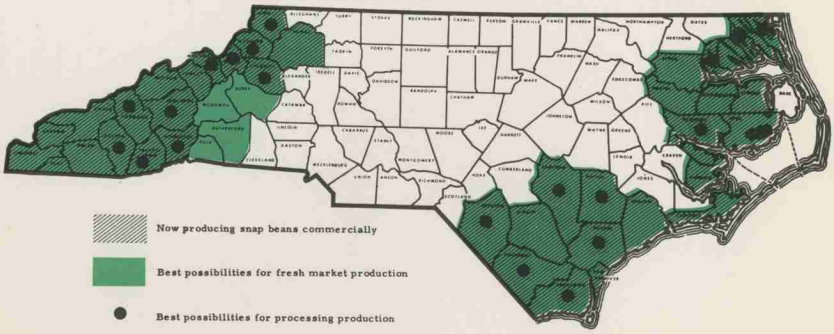
Production Needs

Higher yields, quality and lower costs are needed. In processing, the trend is toward larger plantings per farmer (New York averages over 10 acres per farmer) and mechanical harvesting. Our fresh market yields for the main crop were 80-103 bushels per acre for the 1946-55 period... should be over 200 bushels per acre. Processing yields for the same period was 1.6 tons... should be 2.5 to 3 tons per acre.

Our Competitors

New York and the west coast are our biggest competitors... our transportation costs are less than for the west coast but their yields

Snap Beans -- Fresh Market and Processing Areas



are higher. We have the edge on New York in production costs, but they are closer to markets. To compete, we will need high yields and lower costs.

Plan To Do This

Any area planning to start or expand snap bean production should first be sure they have the following:

Ideal soil--rich, productive (doesn't dry out or crust quickly).

Know-how, sincere desire to produce high yields, good quality.

Plant sufficient acreage to be able to sell to either fresh market or processing buyers in truckload or carload lots. Concentrate this acreage within 25-mile radius.

This includes proper fertilization, adequate insect control, irrigation, harvest.

Watermelons

Situation-Outlook

Present per capita consumption of watermelons is expected to continue in the future. Any immediate increase in acreage must come at the expense of some other area now producing this crop... it can be expected that normal expansion of production will increase with the increase in population.

Production Needs

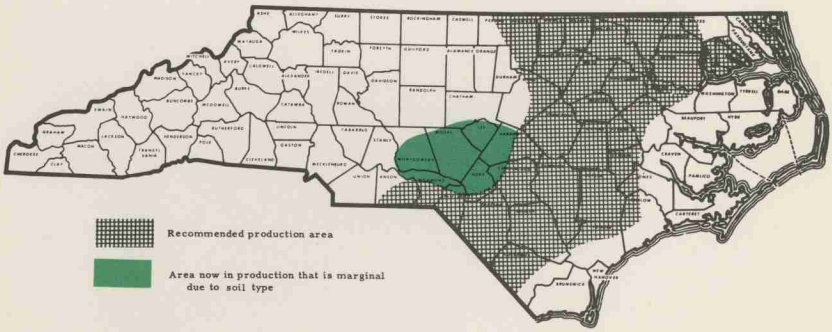
Watermelons should gross North Carolina growers $175 per acre, based on a one cent per lb. price to growers (5-year average) and 585 melons per acre. The state average is 185 28-lb. melons per acre... total cost of production, $75 per acre. Production areas should be concentrated, 500-1,000 acres, preferably 1,000, within a 25-mile radius.

High yields of marketable melons is a must. Our state has lower average yields than its competitors. Pruning is the secret to success... at least 5 acres, and preferably 10, are needed for an efficient production unit.

Our Competitors

Texas and South Carolina are our biggest competitors. Together they produce 168,000 acres; we produce only 16,000 acres. Our only but big advantage is being closer to markets. We can take a larger share of national markets by increasing yields and concentrating on large production in a few areas where marketing facilities are provided.

Watermelon Producing Areas



Plan To Do This

Follow insect, disease control programs.

Learn how to produce high yields of quality melons.

Pruning is a must.

Onions

Situation-Outlook

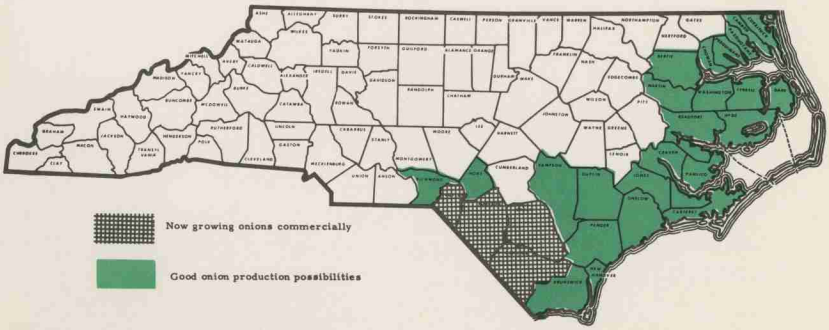
Onions are an easily grown, early harvested crop that should fit into most eastern and southeastern counties. Acreage in North Carolina increased from 50 in 1956 to about 3,000 in 1958. We can grow 10,000 or more acres in this state...1949-55 average prices in the U. S. were $3.06 to $6.22; in 1956 they were $6.22, and in 1957 they were $4.65 per hundred. This was a one to four cents a lb. return to land and management or $150 to $600 per acre...unless better production and curing than is now being done is planned, stay out of this crop.

Production Needs

Yields in 1957 averaged 6,000 lbs. per acre; should be 15,000 lbs. or better. This crop requires specialized operation...farmers report average cost of production of $2 per 100 lbs. Areas having peanut or hay dryers could utilize them for drying onions, thus cutting losses and raising quality. One of the biggest capital outlays will be for dusting and spraying equipment and materials.

Southern stem rot caused heavy losses to the '58 crop and purple blotch appears to be a serious threat. It was apparently introduced in Texas-grown plants in 1958 along with the pink root. Nematode diseases pose a potential problem...yellow dwarf and perhaps other viruses will be a threat.

Production Areas for Fresh Market Onions



Our Competitors

Georgia and North Carolina are the only states east of the Mississippi harvesting onions May 16-June 30. We compete with Texas, California and Arizona. We're closer to larger markets and could squeeze them out if we do a good job of production and handling.

Plan To Do This

Select soils that don't dry rapidly.

Raise your own plants or contract with Texas plant growers for certified plants.

Arrange for drying facilities to insure against bad weather (tobacco barns, hay dryers, etc.).

Mechanize topping, digging, trimming operations.

Lime, fertilize, prepare soils properly.

Follow good insect, disease control practices.

Research is needed in N. C. for development of satisfactory disease control.

Should organize into a few good grading and marketing groups rather than a large number of small groups. Handle at least 2,000-3,000 acres each.

Strawberries

Situation-Outlook

There's money in strawberries--$500 or more net per acre--if you do a good job. Acreage in the state could be expanded...probably tripled in areas where the crop comes in after states in the south and ahead of states to the north.

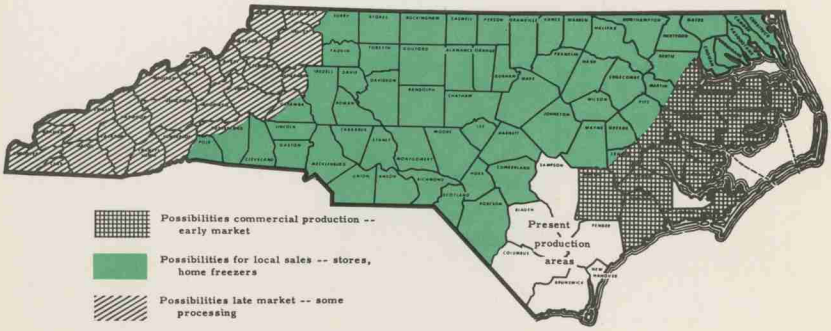
Production Needs

A number of things can be done to vastly improve income...yields and quality should be increased and more field grading should be done. Stop facing baskets with good berries and putting rotten ones in the bottom. Production should be increased from 80 to 200 24-quart crates per acre. Processing prospects aren't good...best area is the mountains if yields can be increased to 400 crates per acre. Prospects good in mountains for late fresh market in North Carolina and points south. Opportunities are excellent for a few growers near small towns in the central part of the state for local supply. It's hard to find good berries in local stores; practically none available for home freezers. "Pick-'em yourself" method could relieve harvest problems.

Our Competitors

California is our major competitor, but we can beat her fresh market due to prohibitive shipping costs. Our biggest problem is quality--California usually gets better prices on northern markets because they market a better quality berry.

Strawberry Production Areas



Plan To Do This

Any area planning to start or expand strawberry production should first be sure it has the following:

Choice soils--treated for nematodes where necessary.

Certified plants.

A planned disease, insect control program.

Growers with the know-how, or willingness to produce, pack, ship only high quality berries.

Dewberries

Situation-Outlook

Dewberries are a natural as a supplemental crop for some North Carolina areas. Fancy pack and pint packages are accepted in northern markets. Pie and preserve makers buy locally when possible, but usually go to the northwestern U. S. for their berries.

Production Needs

Plants do best on loam soil with adequate moisture, but not surface water. Labor requirements on dewberries are not as high as that for strawberries. Plantings should last from 7-12 years. Poor yields and quality are our biggest problems at present. Production costs per pint should drop as better practices are applied... this is a specialty crop and is highly perishable. Growers, packers and shippers all must cooperate to give the consumer quality.

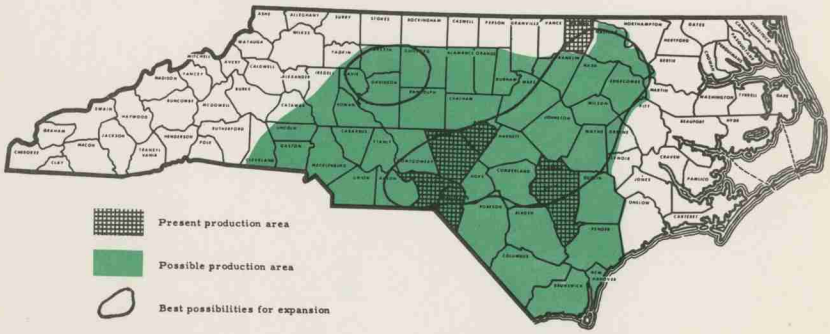
Our Competitors

The west coast is our main competitor. Their yields are much higher and even though they ship across the U. S. they are able to put berries on the market at a competitive price. The secret is efficient production of high quality.

Plan To Do This

Any area planning to start or expand dewberry production should first be sure they have items listed on the following page.

Dewberry Production Areas



Ideal soil.

Proper soil treatment.

Irrigation facilities.

A planned pruning program.

A well planned disease and insect program applied with adequate equipment.

Growers with the know-how or willingness to learn how to produce, pack and ship high quality berries.

Red Raspberries

Situation-Outlook

Red raspberries are a delicate fruit and require special care in handling. They are used fresh or frozen and in ice cream mixes.

Production Needs

Plantings should last 10-15 years; if grown properly no staking is required. Capital outlay must include spray equipment and funds for disease and insect control materials. Peak labor needs come at harvest time. Yields in North Carolina are good, but not as high as in the northwestern U. S. Planting should be made to supply the markets available. A perishable product such as red raspberries needs to be produced, harvested and cared for in a very specialized manner.

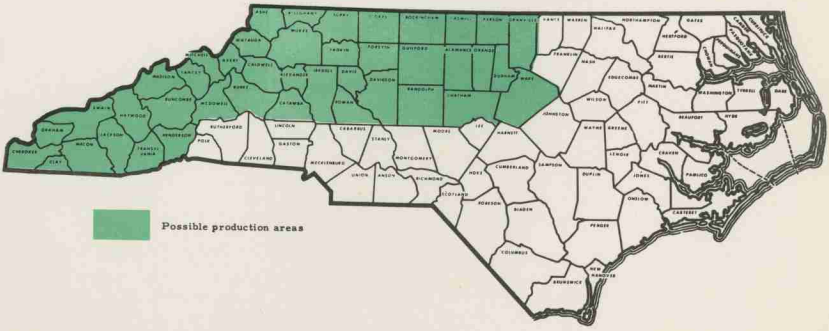
Our Competitors

Markets could be local and to the south. California ships east in pint and half pint containers. North Carolina growers also would need to sell in the same type containers, sending only quality products to market.

Plan To Do This

Any area planning to start or expand red raspberry production should first be sure it has the items listed on the following page.

Red Raspberry Production Area



Adapted soils.

Prune to avoid staking or trellis .

Irrigation facilities.

A thorough knowledge of disease and insect problems--and follow through with a thorough spray program.

Growers with the know-how or willingness to learn how to produce, pack and ship only high quality.

Black Raspberries

Situation-Outlook

Black raspberries are a natural for the mountains of North Carolina. With organized marketing, possibilities are good for both large and small plots. Tourist trade and other fresh markets are available.

Production Needs

No staking is required if plants are pruned properly. Planting expense isn't excessive...planting should last 8-10 years if properly pruned and sprayed. Capital outlay must include disease and insect spray equipment and control materials. Peak labor needed only two weeks at harvest time...quality pack in attractive and desirable pint packages.

Our Competitors

Practically none. Good time to expand.

Plan To Do This

Any area planning to start or expand black raspberry production should first be sure they have the following:

Good sites.

Desirable varieties.

Black Raspberry Production Area

Knowledge of good pruning practices.

A knowledge of disease and insect problems and willingness to follow a thorough spray program.

Growers with know-how or willingness to learn how to produce, pack and ship only high quality.

Bunch Grapes

Situation-Outlook

North Carolina is the southern limit for bunch grape production; present plantings compare favorably in yield and quality with major grape areas. This enterprise has a good future...markets are available in the state, as well as to the south where bunch grapes aren't grown. Roadside markets are another possibility. Sale of two or three colored varieties in small packages is popular...there is possibility for sale to processors for grape juice or grape juice blended with other fruits.

Production Needs

Biggest planting expense is for posts and a trellis. Plantings should last 20 or more years. Yields in well-managed vineyards are excellent due to sufficient pruning and spraying...neither too time-consuming nor overly expensive. More mechanization is needed; capital outlay must include spray equipment and disease and insect control materials.

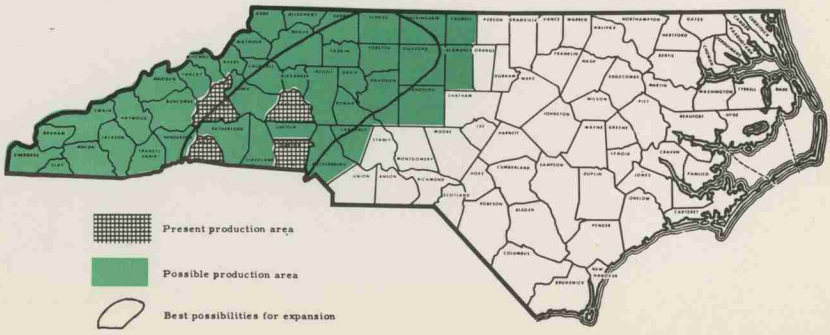
Our Competitors

California is our biggest competitor. As with other fruits, we have a shipping cost advantage. Other competing states are around the Great Lakes area. Most of the grapes produced north of this state would ripen later than ours, therefore we would have the definite advantage of earliness.

Plan To Do This

Any area thinking of starting or expanding bunch grape production should first be sure it has the items listed on the following page.

Production Areas for Bunch Grapes



Choice sites and desirable varieties.

A knowledge of pruning needs and the willingness to prune adequately.

A spray program for disease, insect control.

Growers with the know-how or willingness to produce, pack and market only top quality.

Muscadine Grapes

Situation-Outlook

Muscadine grapes are a high vitamin C fruit, having natural cultural habits for production in North Carolina. Tar Heels like the fruit but fail to realize the number of people in the U. S. who are unable to buy this fruit because out-of-state markets haven't been developed... marketing situation today is about the same as it was with blueberries 20 years ago. New varieties with a dry scar are a natural for pint packages.

Production Needs

Plantings will need to be grown on trellises. Posts make up the biggest planting cost. Vines should be productive for 20 years or more. Present yields are good...with better care should be excellent. No spray program is needed at present, but indications are it will be in the future. Work in Georgia indicates a possible future for a processed, blended juice.

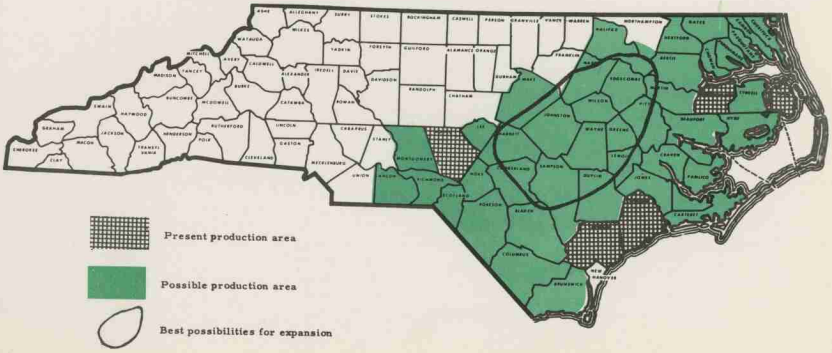
Our Competitors

Presently we have very little competition...some from South Carolina and Georgia. Both of these states are doing more with muscadine grapes than North Carolina.

Plan To Do This

Any area thinking about starting or expanding muscadine grape production should first be sure they have the items listed on the following page.

Muscadine Grape Production Areas



Soils adapted to this crop--avoid low, wet soils.

Only varieties suitable for shipping or for juice.

Growers with the know-how or willingness to learn how to produce, pack and ship high quality grapes.

Apples

Situation-Outlook

North Carolina is one of the earliest commercial apple producing areas. This means that we can harvest, pack and sell top quality, tree ripened apples to consumers in the north, and especially in the south, before the major producing areas.

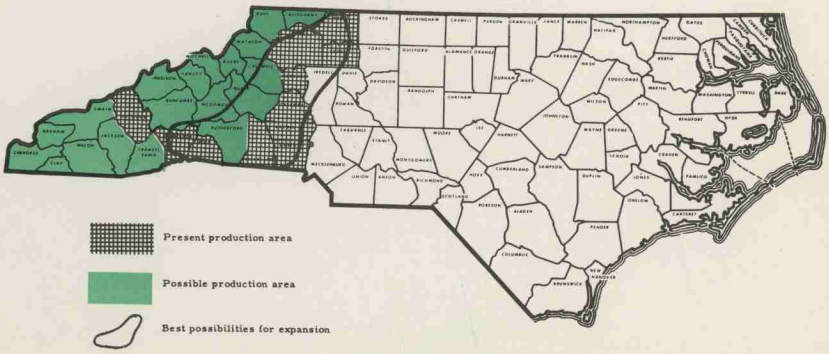
Production Needs

Expansion is possible on land suited for mechanization and irrigation. Quality and quantity are needed for large buyers... today's buyers ask for 1,000 or more bushels of one variety in one order. Expanded production and concentration is needed, along with ample capital outlay for disease and insect control equipment and materials. A grower in the lower Piedmont with 800 trees (about 20 acres) reported a labor income of approximately $1,000 per acre in 1956 and about $700 per acre net in 1957... others could do as well. We have a freezing plant in Lexington, a dehydrofreezing plant in Wilkesboro and a new canning plant in Buncombe County, all which need good quality apples.

Our Competitors

At the start of the North Carolina season competition is very limited. Stored apples compete with apples produced in the eastern U. S., but main competition comes from the west coast. At present, production costs are lower per bushel for apples produced on the west coast... North Carolina still is in favorable position because of shipping costs. Our competition remains light as long as we are striving for the early market.

Apple Production Areas



Plan To Do This

Any area planning to start or expand more apple production should first be sure it has the following:

Choice location--frost-free, fertile soils.

Ample capital for equipment and facilities.

A thorough knowledge of disease, insect problems. Follow thorough spray program.

Facilities for irrigation.

Growers with the know-how, willingness to produce, pack, ship only top grade fruit.

Growers that are open-minded enough to consider being a part of centralized selling of N. C. apples.

Peaches

Situation-Outlook

North Carolina peach acreage is dropping due to tree transplanting problems in the Sandhills area... South Carolina and Georgia acreages are increasing. Largest peach acreage in North Carolina is in Montgomery, Moore and Richmond Counties... adjoining counties are equally well suited. Plantings may move to the Piedmont where trees grow larger and last longer, thus giving lower costs of production per unit... good possibilities for late peaches in the Piedmont, both for fresh and frozen sales.

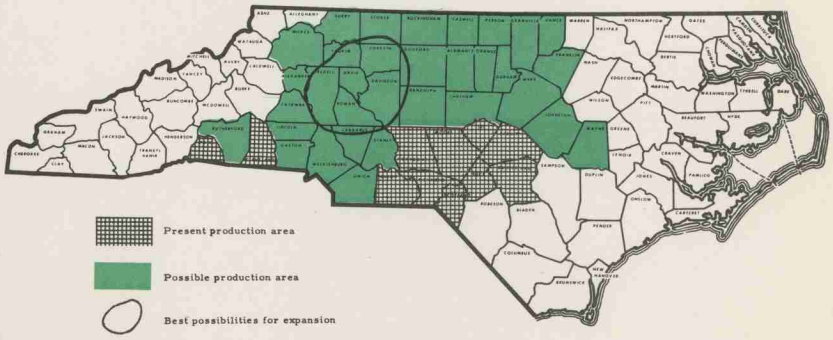
The new processing plant in Buncombe County needs clingstone peaches... this is a good opportunity for someone as this type isn't grown in this state at present. Demand is good for tree ripened peaches for fresh use and home freezers... small growers can do well with good roadside markets on well traveled roads.

Production Needs

It's highly undesirable to plant less than five acres... plantings of 5 to 100 acres are economical only when using a specialized market or where producer is part of an organized market... demand for top quality fruit makes peach production a business, not a sideline.

Insects and disease are a threat every year, hence their control is essential. Ignoring this phase will doom your crop, as the market will not take small, poorly colored, wormy, or diseased fruit.

Peach Production Areas



Our Competitors

North Carolina peaches, both fresh and processed, have nation-wide competition. High quality production and packaging are the best ways to meet this competition.

Plan To Do This

Any area planning to start or expand peach production should first be sure they have the following:

Ideal sites.

Program for fumigating old crop or peach land before setting trees.

Thorough knowledge of insect and disease problems and an action program to meet these problems.

Plant only adapted varieties.

Either be small--5-10 acres, or very large--400-1,000 acres.

Ornamentals

Situation-Outlook

Ornamental plant production is a growing industry in North Carolina, but we still import 60% of our cut flowers. With the expected increase in population and the trend toward more home, church, school and road landscaping and purchase of cut flowers, the demand is expected to increase even more.

Production Needs

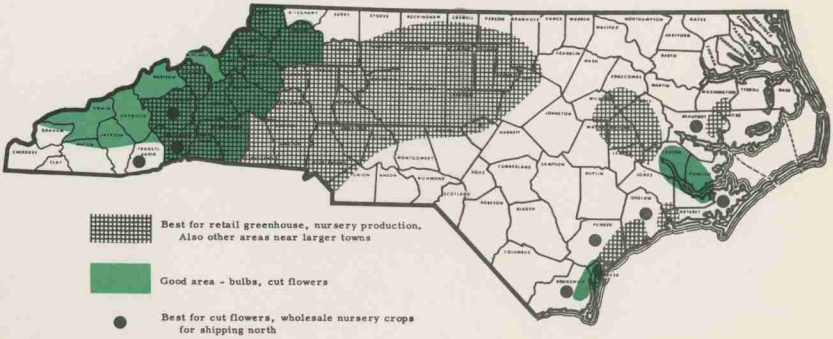
The western half of the state near large population centers is best suited for growing nursery and greenhouse crops for the retail trade... mountain counties are well suited for carnation cut flower crops, also wholesale nursery crops for shipping north. Eastern counties might consider wholesale nursery crops for sale within the state. Coastal counties are well suited for bulb and cut flower production.

Prices of ornamentals aren't likely to rise in proportion to other commodities... to stay in business or expand makes efficient production essential. The grower will need to consider mechanization, chemical weed control, irrigation and should specialize in a few items... he must be prepared to sell more on the wholesale market, through sale yards, stores, etc.

Our Competitors

North Carolina is in an excellent position because of its location to the center of population of the U. S. We have a wide climate range

Production Areas for Ornamentals



and soils conducive to a wide range of plants. Many growers are leaving the north and coming to North Carolina to save on land costs, labor costs, taxes, and fuel bills. States to the south have a longer growing season, less fuel cost...we need to consider this in choosing plants to grow.

Plan To Do This

Areas planning to expand ornamentals should do the following:

Analyze markets--local, wholesale, out-of-state.

Make sure soil and climate suitable for crops to be grown.

Have adequate water for irrigation.

Broilers

Situation-Outlook

Roughly one-third of North Carolina's farms have 10 acres or less of land that can be cultivated. Often poultry is by far the best bet for these small farms...more than 100,000 broilers can be produced on an acre of land in a year's time. North Carolina is growing more grain. This, too, should encourage broiler production since 60% of their feed is corn.

U. S. production now amounts to 28 pounds of broiler meat per person a year...one 3-pound broiler per person every 6 weeks. We produced 105 million broilers in 1957...likely will produce at least 125 million in '58. There will be more expansion in production and consumption of broilers. North Carolina families can have a lion's share of the income expansion if they want to compete for it with other states.

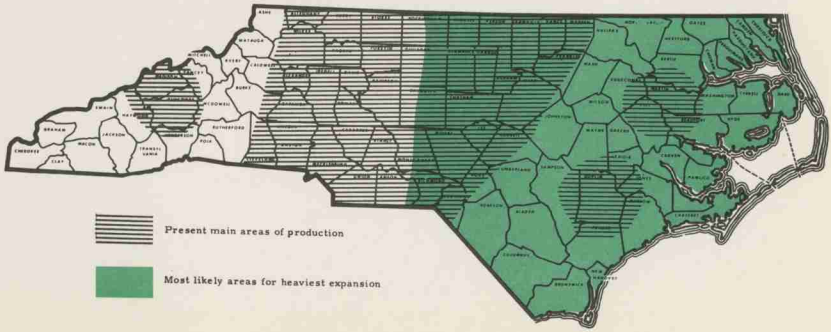
Production Needs

As a supplementary enterprise, 4 1/2 broods of 5,000 broilers each are suggested...for a full time enterprise growers will need to handle 25,000 to 50,000 birds at a time. Satisfactory housing and equipment will run about 45¢ a broiler. Producers must turn out a pound of meat on 2 1/2 or less pounds of feed in 9 weeks or less to come out ahead.

Our Competitors

The South, chiefly Alabama, Mississippi and Georgia, is our main competitor. However, since we are much closer to the biggest markets

Broiler Producing Areas



we can compete with them very favorably if we match their production and assembly cost.

Adequate labor and reasonably priced land also make it easy to expand production in North Carolina.

Plan To Do This

Any area planning to start expansion of broiler production should first be sure they have the following:

Satisfactory market outlets.

People with a will to improve their lot in life.

Financiers, suppliers, feed men, hatchery-men, and processors who are willing to work together.

Concentrate production to supply efficient processing plants beyond 50,000 per square mile.

An abundance of feed grain.

Turkeys

Situation-Outlook

Production has increased rather rapidly in recent years--we produced more than 1 1/2 million turkeys in 1957... 2 1/2% of the nation's total. The average person is eating more turkey each year--in 1950 he ate only 4 pounds...in 1957, 6 pounds. North Carolina could expand production up to 10 million turkeys annually--mostly by grabbing a larger share of the increase in consumption...some by taking markets from more distant areas. Factors limiting expansion will be people who are trained and have the will to do the job, feed and adequate financing.

Slightly lower prices are likely...but with bigger units the efficient grower should maintain satisfactory margins above production costs.

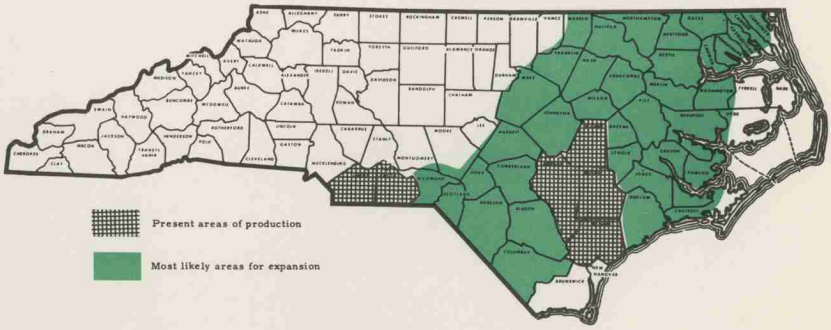
Production Needs

About 1,000 turkeys make a good sized "beginning unit"...5,000 and up are needed for a full time operation. Investment in buildings and equipment will amount to about $1 per bird. Growers must produce a pound of live weight on about 4 pounds of feed. Management must be highly developed...an "average" job absolutely will not do with turkeys.

Our Competitors

Texas, the Midwest and Far West are main areas of competition. We can house birds cheaper than any of these except Texas...are closer than most to biggest markets. Overall, our growers get 2¢ more per

Turkey Production Areas



pound than the national average. Freight differentials make the big difference...we can put dressed turkeys in New York in 8 hours...other areas take up to 8 days or more. We are the closest area to the big eastern markets with enough economical land and labor to warrant a sizeable increase in production.

Plan To Do This

Any area thinking of starting or expanding turkey production should first be sure they have the following:

An aggressive feed man to push turkeys.

Processing plants within a reasonable distance.

Adequate financing.

An aggressive, open-minded people.

Plenty of feed grains.

Market Eggs

Situation-Outlook

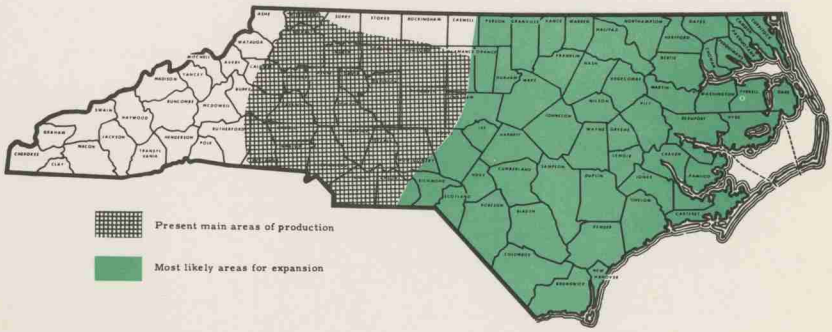
North Carolina is in excellent position for growth in market egg production. The increases, however, will depend on organization to export a quality egg in quantity. Some of the old producers are expanding and some new producers are entering the field. Profit per bird is down, but still is above $1 a bird annually. Production rates have been increasing...now is around 192 eggs per hen per year...should go up to from 210 to 240 eggs annually for each bird.

Some new market outlets are available; however, we should also try to capture some of the existing ones. Egg prices likely will average below 40¢ a dozen for the next few years...efficient poultrymen can hold production costs below 30¢ a dozen. Profits will depend on how far production costs are below market prices.

Production Needs

Keep 2,000 hens to supplement farm income...4,000 to 8,000 for one man full time. Set a goal of 20 dozen eggs per hen and produce each dozen on less than 5 pounds of feed. Use local grains (buy and store at harvest) and concentrate to help hold production costs down. Quality control at the farm is necessary for today's market. We need high quality eggs in volume to market more efficiently. Produce for a market--not to market.

Market Egg Production Areas



Our Competitors

The midwest and northeast have been our main competitors. Some of the southern states may give us keen competition in the next few years. However, with our favorable climate, low-cost housing and availability of labor, we can produce eggs as cheaply as any other area.

Plan To Do This

The following points should help new or expanding areas to start right and stay in market egg production:

Produce high quality eggs in truckload lots for a specific market.

Spray eggs as they are packed to maintain higher yield of top quality.

An egg packing and cooling room with ample space to pre-cool cases before the eggs are packed on each farm.

Use new cases, flats and fillers for all out-of-state sales.

Collect the eggs four or five times per day to keep the eggs clean and to keep the interior quality high.

Provide a North Carolina certified egg program to set up and maintain quality standards by the State-Federal inspection service.

Form an egg marketing association that can become a part of a strong poultry federation.

Beef Cattle

Situation-Outlook

The Mountain region is best adapted to a cow and calf program, fattening cattle on grass and feeder cattle production. Cow and calf herds, stocker cattle production and feeding cattle limited grain on grass are recommended for the Piedmont. Eastern North Carolina is well adapted to cow and calf herds, steer feeding and the production of stocker cattle. A few counties in the Sandhills can handle a very limited number of stocker cattle.

North Carolina needs to increase production of good quality beef cattle. Good quality beef--produced economically--will continue to be profitable. Good markets are available in the state for all classes of beef cattle.

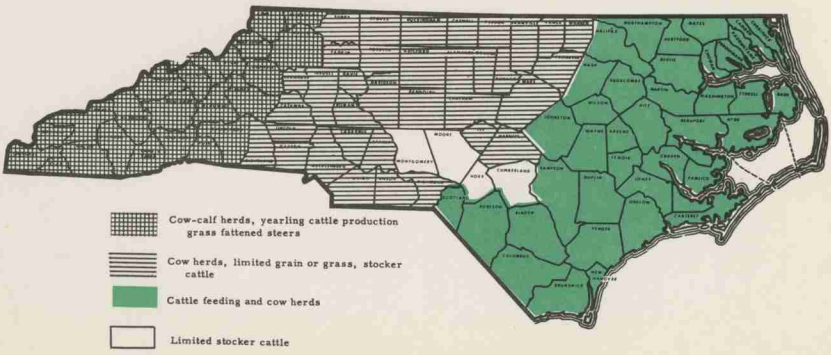
Production Needs

The number, size and quality of cattle for a feeding operation can best be determined by the kind and amount of feed available on the farm. An abundant supply of home grown feed, good management and marketing practices are extremely important for a profitable operation. To get the most out of a cow and calf program, get rid of poor producing cows, use a good type purebred bull and produce early calves.

Our Competitors

North Carolina's long growing season means that we can produce feeder calves and yearlings more economically than most competing states. The utilization of roughage and pasture in combination with grain

Areas for Production of Beef Cattle



feeding of slaughter cattle gives North Carolina feeders a definite advantage over the larger grain feeding states where cattle are finished in dry lot. North Carolina cattle operations that are built around good quality cattle, a sound feed program and good management are in an extremely favorable competitive situation when compared to any other section of the country.

Plan To Do This

Beef cattle producers should consider the following 4 points as a general guide that can lead to a successful operation.

Provide home grown feed.

Follow a sound management program at all times.

Produce high quality cattle.

Market cattle at the proper time and place--when they are reaching the most desired grade and weights.

Swine

Situation-Outlook

North Carolina is increasing swine production...we had 1,406,000 head on farms on January 1, 1958, compared to an average of 1,208,000 for the past 10 years. Hog enterprises are operated in one of the following ways or a combination of these: (1) Producing feeder pigs for market, (2) growing out pigs on concrete (pig parlors), and (3) conventional enterprise--raising out pigs to market weight.

Pork consumption has decreased in the past 10 years...but we might gain back some of this loss by producing meat-type hogs. Hog prices are high now and anyone planning a swine program should figure on lower pork prices.

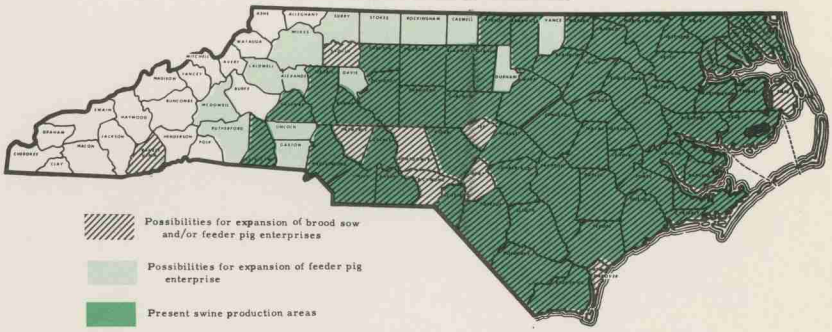
Production Needs

At least 5 brood sows are needed for a minimum size commercial unit. Or, a 50-pig unit would be about the smallest profitable size where pigs are purchased and fed on concrete floors. Must raise at least 15 pigs per sow per year on the basis of 2 litters to be profitable. Shoot for 1 pound of pork on 3-3 1/2 pounds of feed and a 200-pound hog in 180 days or less.

Our Competitors

Georgia is the only state in the eastern U. S. that produces more hogs than North Carolina. North Carolina is closer than Georgia to major consuming areas...we should be able to meet competition from

Swine Production Areas



Corn Belt producers by increasing efficiency and improving quality. The markets are here... and present indications are that we cannot supply North Carolina packing plants with all the hogs they need without expanding production.

Plan To Do This

Provide proper housing... cost will be $75-$100 per sow.

Be interested enough in hogs to use recommended practices.

Provide pasture for breeding animals, sows and pigs.

Have or get adequate financing.

Have plenty of feed grain.

Plan to produce quality meat-type animals.

Sheep Production

Situation-Outlook

There's room and a need for many more farm flocks, especially in the Mountain and Piedmont counties. A farm flock of 30 ewes can gross $750 a year. North Carolina sheep growers have good markets... and the outlook for the production of lambs and wool is good. Well managed farm flocks should continue to be one of our most profitable livestock enterprises.

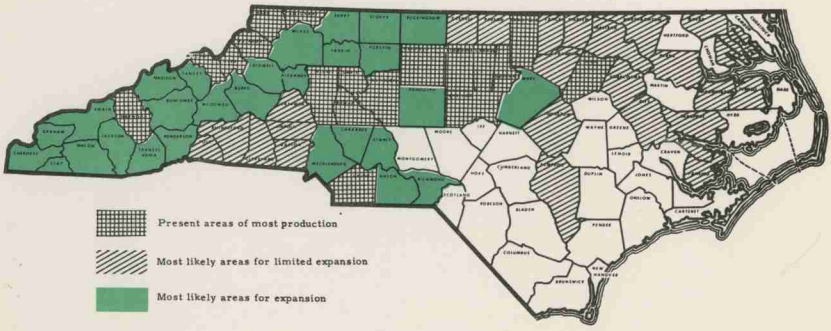
Production Needs

High quality grade ewes and a good purebred mutton type ram should be used for breeding stock. As few as 10 ewes and 1 ram can make money on small farms...25 to 30 ewes and 1 ram make a more economical unit though. Basic feed requirements for a 30-ewe flock are 15 acres of pasture, 1/2 acre of corn, 1/2 acre of oats and 2 acres of legume hay.

Our Competitors

Spring lamb producers in Virginia, Tennessee and Kentucky are our main competitors. North Carolina is better located to supply the spring lamb market in the New York and Boston areas than any of these. Also, we can produce an earlier spring lamb than the states now supplying most of the lambs for these big markets. Choice spring lambs can be produced more economically in North Carolina than in competing states, too.

Sheep Production Areas



Plan To Do This

A county or area planning to increase sheep production should encourage individual producers as follows:

Take part in a county-wide sheep promotion program.

Provide good seed stock and ample feed.

Fence land for sheep with woven wire.

Follow a strict parasite control program.

Market all lambs and wool cooperatively.

Provide excellent management at all times... sheep must have the proper attention at the proper time.

Grade A Milk

Situation-Outlook

Present production and consumption are about in balance. Future expansion of fluid milk sales will be in line with population growth. Most of this increase, however, will be supplied by present producers as they go toward larger, more efficient units. Capital investment of about $1,500 per cow makes it hard for new producers to enter the market.

Look for slightly lower blend prices as a result of increased competition from other states and a lower percentage of total production being used as fluid milk.

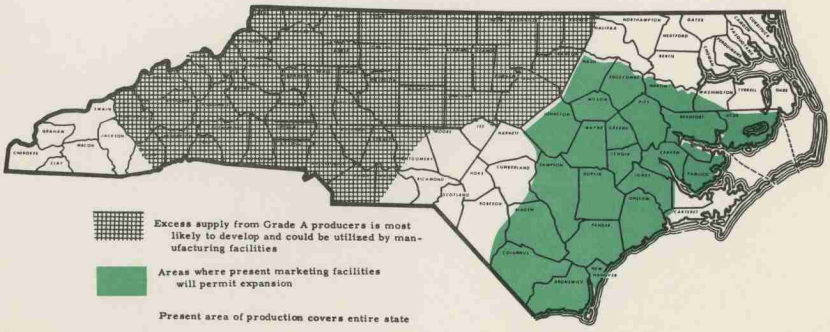
Production Needs

The emphasis is on volume and efficiency. Minimum herd size of 20-25 milking cows is recommended...40-50 cows are better where adequate capital and management are available. Regardless of herd size, dairymen must plan to produce 175,000 to 250,000 pounds of milk per man per year.

Our Competitors

Only small amounts of fluid milk are shipped into North Carolina from other states. This is due to health regulations and other legal barriers, and high transportation costs. Also, milk historically has been produced close to the market. However, use of a concentrated milk may eliminate most of these barriers to outside competition in the

Grade A Milk Producing Areas



near future. Such a situation would drop Class I prices to farmers $1.00 to $1.50 per cwt. and speed up the change to larger, more efficient units. It also could result in a further reduction in the number of Grade A dairymen in the state.

Plan To Do This

Only very limited expansion can occur in Grade A production. However, the following points should be considered where new herds are added:

Be sure there's a market and that the plant will take the extra milk.

Be sure adequate land, capital and management are available.

Be sure the herd is located near enough to other producers to permit a reasonable hauling charge.

Grade A producers with larger, more efficient herds may want to consider increasing production to the point where they supply a sizeable amount of milk for manufacturing purposes.

Manufacturing Milk

Situation-Outlook

We import $25 million worth of milk (farm value) in the form of manufactured dairy products such as evaporated milk, cheese, butter, etc. Thus, there's room for a lot of expansion in this industry in North Carolina. It must, however, be regarded as a supplementary enterprise... it fits in very nicely with an off-the-farm job. Where markets are available and the people have a livestock background this offers a good potential for expansion.

Prices should stay about the same--$3.05 per cwt. for 4% milk. A slight production increase should allow plants to become more efficient.

Production Needs

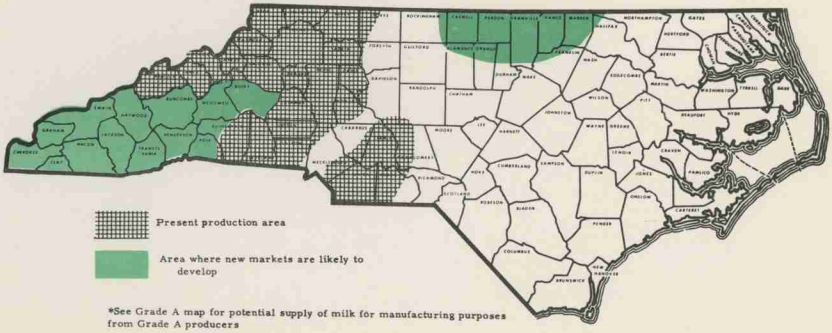
Have at least 5 cows. This will justify construction and purchase of certain labor-saving arrangements and equipment. Production in a county should be concentrated in localized areas to reduce hauling costs.

If no market is available now, figure on 30,000 pounds of milk per day during the slack season within a 25-mile radius as a minimum amount to justify the construction of processing facilities.

Our Competitors

We always have had to compete on a national market in manufactured dairy products. Right now a number of plants are interested in locating processing facilities that are closer to the final market than

Areas for Production of Milk for Manufacturing Purposes



*See Grade A map for potential supply of milk for manufacturing purposes from Grade A producers

their present Midwest plants. We can capture a much larger portion of the North Carolina market if we can produce competitively with other areas.

Plan To Do This

In the areas where markets are available almost unlimited expansion can occur. The following points should be considered:

Concentrate production in an area to reduce hauling costs.

Encourage construction of elevated milking parlors and purchase of cow-to-can milking machine.

Plan on at least 5 cows per herd...preferably 8 to 10.

Produce most of milk on home grown forages.

Before attempting to establish a new processing facility the following questions should be answered:

Can 30,000 pounds of milk per day be produced during the slack period within a 25-mile radius?

Are good quality cattle readily available at a price the people can afford?

Do these people have a livestock background and are they likely to continue in production for several years?

Is this the enterprise best suited to the area?

Grain Sorghum

Situation-Outlook

The growing North Carolina poultry and livestock industries are calling for an ever increasing supply of feed grains. Because of hybrids and improved varieties, use of combines, dry weather and corn acreage allotments, grain sorghum has become one of our cheapest livestock and poultry feeds... will be used more and more as adequate supplies can be assured to manufacturers. Growers in the southern Piedmont and northern Coastal Plain have been very successful with grain sorghum; the crop will do well throughout the Piedmont and Coastal Plain except on Striga infested land... sorghum has been used successfully in some sections as a second crop following small grains or Irish potatoes. It's also possible to rotate with soybeans on land infested with the soybean cyst nematode.

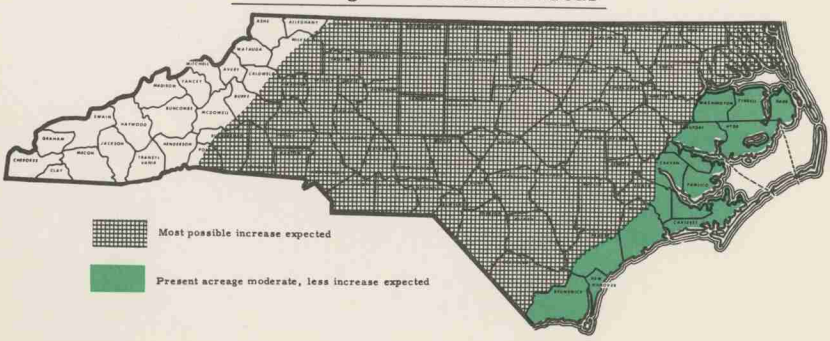
Production Needs

Our biggest need is to increase the number of acres of grain sorghum planted in the state to meet the big demand for feed grain. Hybrid varieties have increased our potential for increased yield per acre where proper production practices are carried out.

Our Competitors

Sorghum's main competitor is corn, of which it is equal or slightly below in feed value. Sorghum has some distinct advantages that appeal to the grain farmer. If planted late or during a dry season, it often will produce a fair grain yield where corn is a complete failure. The

Grain Sorghum Production Areas



dwarf hybrid varieties have a distinct advantage over corn from the standpoint of handling ease, since they can be harvested with a grain combine.

Plan To Do This

Develop proper drying, storing facilities.

Expand acreage to land released by acreaged allotments of other crops.

Give further consideration to sorghum as a second crop behind small grains and Irish potatoes.

Soybeans

Situation-Outlook

Soybeans for combining were planted to an estimated 416,000 acres in 1956 and 1957...a 7% increase is indicated for 1958. Soybeans are being substituted for other crops, as farmers have come to regard them as a cash crop...expanded acreage will depend strongly on governmental control of other crops. Acreage yield has jumped markedly in recent years, largely due to new varieties and improved production practices.

Market conditions for soybeans are bright...two oil extraction plants have been constructed in the state which supplement existing processors using hydraulic and expeller extraction methods. Strong export demand has held down any large carryover.

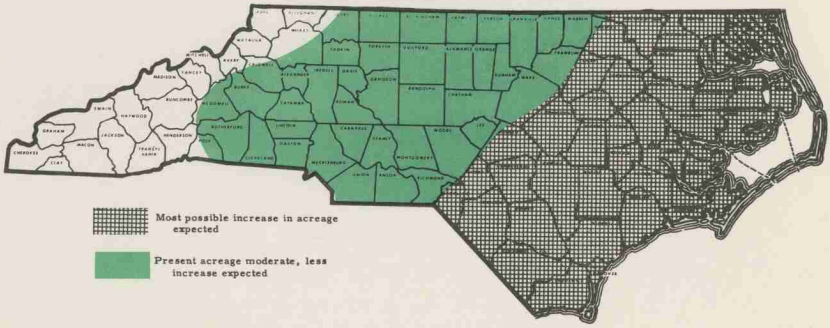
Production Needs

We need to produce good quality soybeans for export...beans with high oil content, yellow seed coats and low foreign material content. The yellow seeded varieties will meet these requirements, as will the new varieties now being released. At present North Carolina doesn't produce enough soybeans for crushing to keep our crushers operating at capacity the year-round.

Our Competitors

Production Competitors---Per acre yields in North Carolina compare favorably with other soybean areas in the U. S....our smaller units, however, are not as efficient as the larger units of the Delta or midwest areas.

Soybean Production Areas



Oil Competitors---The U. S. soybean situation is influenced by the supply of cottonseed oil and animal fats. In world oil competition, which affects our export demand, soybean oil is influenced by supplies of copra, olive oil, and soybean supplies from the Far East countries.

Plan To Do This

Use better varieties.

Follow recommended production practices.

Use storage, where practical, for more orderly marketing procedure.

Pearl Millet

Situation-Outlook

Millet is used extensively in the state in rotation with Ladino pasture...has proven very satisfactory as a summer crop for supplementary grazing and silage...well adapted throughout the state and has essentially replaced Sudan grass in the Coastal Plain area. We now grow about 50,000 acres in North Carolina. This acreage will probably increase to more than 100,000 acres within the next five years.

Production Needs

The above estimated increase in acreage is needed to meet needs of present livestock numbers on hand.

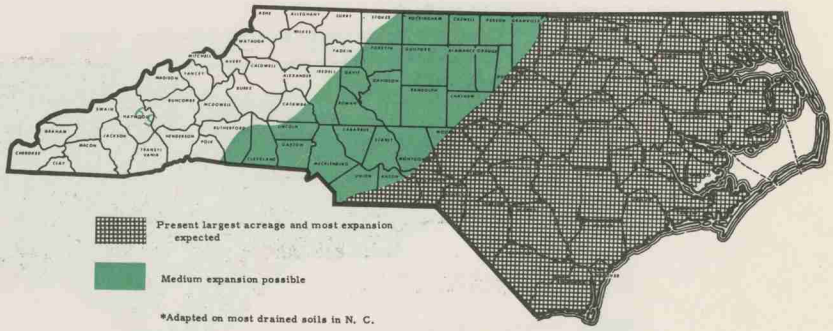
Our Competitors

Other forage crops: Coastal Bermudagrass, alfalfa, Sudan grass. Other areas: No real competition to supply above needs.

Things To Do

Educational program on use of Ga. Hil and Starr varieties of Pearl millet. Adequate fertilization and management.

Pearl Millet Production Areas



Coastal Bermuda

Situation-Outlook

We now have about 30,000 acres of Coastal Bermuda planted in North Carolina and this acreage will probably increase to more than 125,000 acres within the next five years. Coastal Bermuda is well adapted to the upland soils of the Coastal Plain and Piedmont...it is particularly adapted to the sandy soils of the Coastal Plain where perennial forages are less well adapted. A dehydration plant has recently gone into operation in the Southeastern part of the state, and if this project proves successful, a larger acreage than estimated would develop.

Production Needs

This acreage is needed to give adequate summer grazing for animals now on farms. If the livestock and dairy industries expand materially in the Coastal Plain and Southern Piedmont, the acreage needed will increase proportionally.

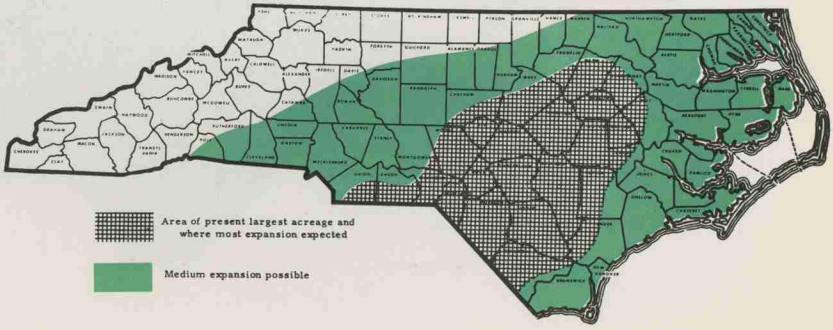
Our Competitors

Crops within the area - millet. From outside the state the more southern states have a longer growing season on Coastal, therefore can make better use of it.

Things To Do

Must overcome former prejudice and objections to Bermudagrass. Must use very cheapest sources of nitrogen. Must sell good grazing management program with it.

Coastal Bermudagrass Production Areas



Lespedeza

Situation-Outlook

Although they do not rate top billing, the lespedezas are important forage crops in North Carolina...about 1/2 million acres are cut each year for hay; 150,000 acres annually go into seed production.

Where grain crops are not presently followed by a summer crop, farmers can effectively use the annual lespedezas, Korean and Kobe, for additional hay and summer grazing. Sericea, a long-lived perennial, pays off for those farmers whose soils are not suitable for the more productive forage crops...sericia is also being utilized as the basic pasture crop for a number of beef herds in the state. Possibilities are good for dehydrating sericia for high carotene leaf meal...for those who now buy seed from outside sources, seed production may prove profitable.

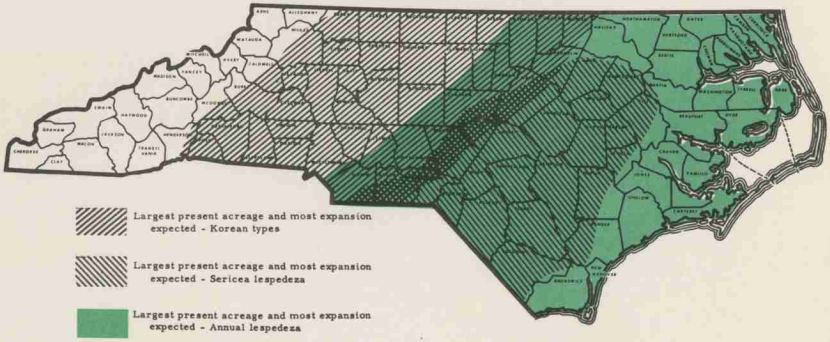
Production Needs

Proper fertilization, using quality seed and weed control should be primary objectives of lespedeza growers...where grain and lespedeza are planted together, fertilize for both. For effective sericea grazing, keep animals on it continuously so growth doesn't get tough and woody. Do not graze after August 1 or vigor will be reduced.

Our Competitors

Areas outside the state give little competition in hay production due to shipping costs. Lespedeza seed production is competitive; however, North Carolina at present is in a favorable position in this respect,

Lespedeza Production Areas



producing more seed than is used.

Plan To Do This

Plant improved varieties...Rowan, Climax, Kobe.

Control ragweed and dodder for quality hay.

Castorbeans

Situation-Outlook

Although there is no organized market system for castorbeans in North Carolina at present, markets are available if production develops... development of dwarf varieties and hybrids increases the possibility of mechanical handling, a boom to probable producers. North Carolina has favorable weather conditions for growing castorbeans... the fact that the U. S. imports 90% of her needs emphasizes the opportunity for expansion.

Yields for this crop may range from 1,000 to 1,500 lbs. per acre; at 1957 prices would gross the farmer $60-$90 per acre. Castorbean oil has unique properties for use in paints, varnishes, fungicides and cosmetics.

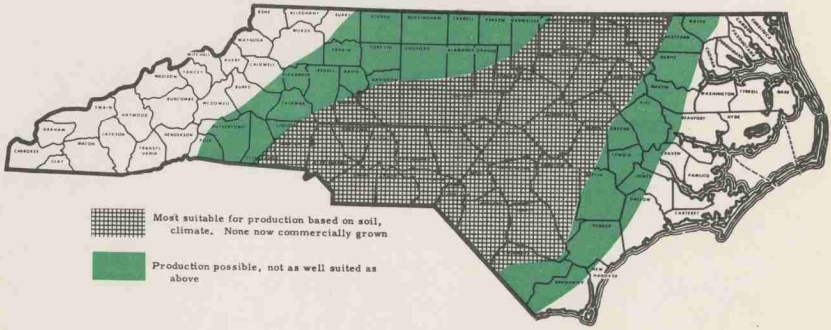
Production Needs

The greatest need is coordination of production and marketing; however, additional information on the best cultural practices will be necessary. As mentioned above, there are no North Carolina markets, and carload lots are necessary to justify shipping to processing plants... an estimated 10,000-15,000 acres within a 10 mile radius of a marketing point would be desirable.

Our Competitors

Bulk of present supply is imported at about $120 a ton... the southwestern U. S. has high yields where irrigated. Higher average yields are possible in North Carolina... Tidewater and lower Coastal Plain

Areas for Possible Castorbean Production



areas are not recommended because of excessive disease problems on the leaves and seed burns. Castorbeans should be competitive with soybeans once an area is equiped to mechanically harvest and dehull.

Plan To Do This

Production can be successful on most soil suitable for corn.

Mechanical harvesters, dehulling equipment should be first considerations.

Planting, fertilization and cultivation may also follow those used for corn.

Sesame

Situation-Outlook

Sesame is a new crop to North Carolina farmers having been used for food for centuries. It was grown first commercially in the U. S. in 1950, following development of varieties suitable for mechanical harvesting. Sesame seed contains about 50% oil which is of considerable value both as a high grade edible oil and for industrial uses. The whole seeds are used in bakery products.

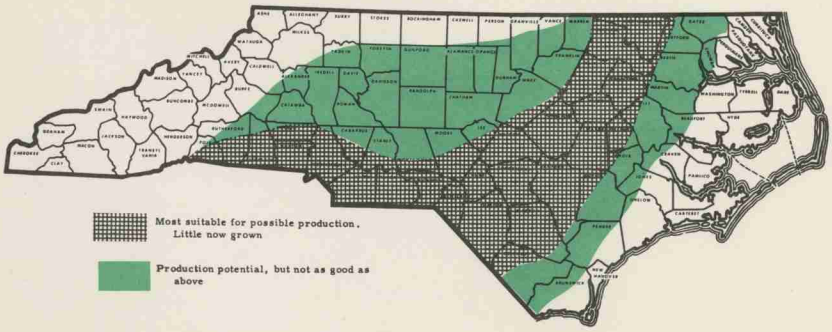
The well drained sandy loam to loam soils of the Coastal Plain are best suited for sesame...well drained, medium textured eastern Piedmont soils will probably produce just as well. Tests run in the state during the past five years indicate average yields of 500-700 lbs. per acre. Under very favorable conditions yields may reach 2,000 lbs. per acre.

Production Needs

Obtaining good planting seed and preparing the seed bed properly are critical problems with this crop. The high oil content seeds are easily damaged by mechanical harvesting, thus good seed are hard to find. Also, the seeds are susceptible to cold, damp soil.

For best results with sesame, begin planting the first of June. A clean seedbed is necessary to keep down weed competition since the plants start off slowly...any soil adapted for corn can be used, but less stand problems are encountered on sandy loam than heavy clay soils.

Possible Sesame Production Areas



Our Competitors

Since sesame is a warm weather crop, all of the southern states are interested in its potential as an oil crop, especially those areas with reduced cotton acreages. It is being grown most extensively in the dry areas of the Great Plains states...it will have to compete with other edible oils such as cotton, corn, soybean and peanut oils.

Plan To Do This

Of first importance is coordination of production and marketing.

Be sure a nearby oil processor will handle the volume of seed produced.

Safflower

Situation-Outlook

Considerable interest has been shown in safflower, primarily because of its high quality, edible oil that can be used by people with heart conditions. Very little is known about its production in the Southeast... it is grown primarily in areas of the western states where the maturity season is normally very dry. The seed heads are very susceptible to disease if wet, humid conditions prevail during the ripening season... this crop best adapted to the better, medium textured soils of the Piedmont area of North Carolina. Safflower is being grown only on trail basis in this state and currently there is no market.

Production Needs

Safflower is planted in rows, broadcast or in drill plantings... under humid conditions row planting with weed control is the best method. Medium, well drained soils suited to corn or cotton can be used for this crop.

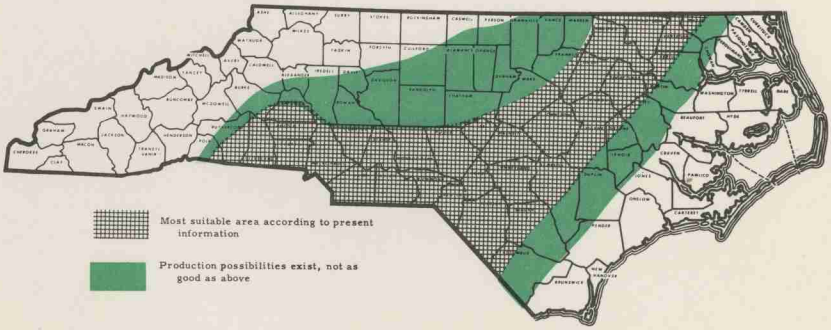
Our Competition

Bulk of the safflower crop is grown in the midwestern and western states.

Plan To Do This

Make sure the crop is adapted to your area.

Possible Safflower Production Areas



Grow a small trial planting or check the planting with the nearest research station.

Blueberries

Situation-Outlook

Blueberries are the only North Carolina fruit produced, packed and marketed on quality. North Carolina presently is the third largest producing area of cultivated blueberries... this position will soon be lost if plantings are not increased. Canker resistant varieties will encourage plantings.

Freezing plant at Lexington unable to purchase blueberries in 1956 and 1957... fresh market too high. An unofficial report from Duplin County shows 5,000 acres of blueberry land not planted... adjoining counties also have abundant suitable soil that needs drainage. Present industry built on a high demand for this product... tomorrow's projection in future indicates there will be a need for large volume and lower unit price. Possibilities in mountain areas still in experimental stage... production should be at about mid-season.

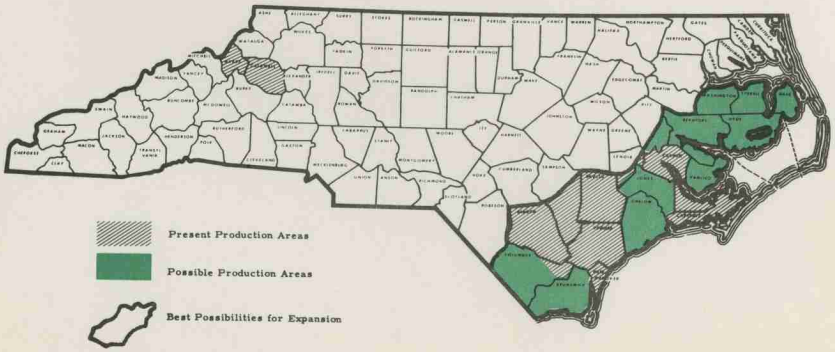
Production Needs

Plantings of small acreage can be successful in present blueberry area if growers are affiliated with marketing organizations. Present yields are good with best varieties on ideal soils. Soil can be too acid and too wet. Both irrigation and drainage are needed.

Our Competitors

Present blueberry fresh market mostly in Northeast... rest of the U. S. still a potential. Processed blueberries gaining but not being promoted as rapidly as fresh markets. New Jersey and

Blueberry Production Areas



Michigan are ahead of North Carolina in acreage. North Carolina has an advantage with earliness. New varieties are being adapted for use in Florida, Georgia, South Carolina. North Carolina must grow or will lose its standing.

Plan To Do This

Consult present marketing organizations and plant varieties that are needed.

Select only ideal soils.

Drain and irrigate.

Be willing to learn how to produce and market only the high quality product that is known to this industry.

Effective control measures for several diseases must be developed if industry is to be maintained or expanded.