COMPETITIVE POSITION OF NORTHEAST AGRICULTURE

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GENERAL BACKGROUND: NORTHEAST AGRICULTURE

The eleven state area of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont comprises the Northeast agricultural area. According to the latest farm number estimates in 1980, there are over 159,000 farms in the Northeast with the largest number of farms concentrated in Pennsylvania, New York and Maryland, respectively. Given the large number of farms and the diverse topography of the region, farmers in the Northeast produce a wide variety of agricultural commodities. In 1980, farm cash receipts in the Northeast were estimated at $8.2 billion with livestock and products accounting for about two thirds of the total and crops (including specialty crops) accounting for the balance. In terms of cash receipts, Pennsylvania is the largest agricultural production state in the Northeast followed by New York and Maryland.

Livestock and Products

Livestock and products accounted for approximately two thirds or $5.4 billion of the Northeast's estimated total cash receipts in 1980. In the livestock and products category, dairy products represented the largest segment, followed by poultry and eggs, meat animals (cattle, hogs, lambs and sheep), and miscellaneous products. In 1978, three states in the Northeast ranked among the top ten states in broiler production on a nationwide basis: Maryland (6th), Delaware (8th), and Pennsylvania (10th). Pennsylvania and Maine ranked seventh and tenth, respectively, in national egg production, while New York and Pennsylvania ranked third and fifth, respectively, as the largest producers of dairy products.

Crops

About one third of the Northeast's cash receipts are generated from crop production. In terms of cash receipts, specialty crops (mostly greenhouse/nursery products and mushrooms) are the major crops followed by all vegetables, fruits and nuts, corn, and oil crops. Production of corn and other feed grains represents a delicate supply/demand balance in parts of the Northeast agricultural sector, while other areas of the Northeast (especially the Northern states) have grain deficiencies.

Principal crops in terms of cash receipts in 1978 for the states in the Northeast are shown in Table 1.

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Table 1 indicates that in 1978 (latest available state data) Pennsylvania ranked 18th nationwide in state cash receipts (14th for livestock and products and 27th for crops), while New York ranked 24th overall and 17th and 30th for livestock and products, and crops, respectively. In addition, the table shows that while Pennsylvania and New York were the only two Northeastern states in the top one half for agricultural production, the other states in the Northeast rank near the bottom. Nevertheless, given the Northeastern terrain, weather patterns, growing season, etc., the Northeast makes a valuable contribution to overall agricultural production. Even though farm size and total output of the farming sector may be small, relative to the U.S. total, these factors are not necessarily the principal ingredients for a strong, viable farm unit or farming sector.

Interesting Facts About the Agricultural Base in the Northeast

In 1978 -

- Connecticut ranked ninth in tobacco production;
- Delaware ranked eighth in broiler production;
- Maryland ranked sixth in broiler production;
- Maine ranked tenth in egg production,
  - fourth in potato production;
- New York ranked third in dairy products,
  - sixth in greenhouse/nursery products,
  - ninth in potato production,
  - second in grape production,
  - second in apple production,
  - seventh in lettuce production;
- New Jersey ranked fifth in tomato production,
  - eighth in lettuce production;
- Pennsylvania ranked tenth in broiler production,
  - seventh in egg production,
  - fifth in dairy products,
  - fourth in greenhouse/nursery products,
  - sixth in hay production,
  - ninth in tomato production,
  - fifth in apple production,
  - sixth in grape production,
  - first in mushroom production.

NORTHEAST AGRICULTURE VERSUS THE UNITED STATES

Northeast agriculture can be classified as relatively small scale and very diverse. Some agricultural economists virtually write-off Northeast agriculture as an insignificant factor when put in the context of total U.S. agriculture. They contend that farm sizes are too small for large scale economies in production, weather conditions are harsh, energy inputs are high, population is declining, farm real estate prices are high, and the existing farmland available for production is being absorbed for non-agricultural uses. To a large extent, these critics are right.

Northeast agriculture production has limitations. On average, farms in the Northeast are about two fifths the size of a standard U.S. farm

Table 1: State Ranking by Various Categories of 1978 Cash Receipts for Northeastern States

States	National Ranking Total	Livestock and Products	Crops	Five Leading Commodities For Cash Receipts
Connecticut	45	42	43	Dairy Products, Eggs, Greenhouse/Nursery, Tobacco, Cattle/Calves
Delaware	42	41	42	Broilers, Soybeans, Corn, Dairy Products, Hogs
Maine	39	40	40	Eggs, Broilers, Potatoes, Dairy Products, Cattle/Calves
Maryland	36	33	37	Broilers, Dairy Products, Corn, Soybeans, Cattle/Calves
Massachusetts	44	45	39	Dairy Products, Greenhouse/Nursery, Cranberries, Eggs, Apples
New Hampshire	48	48	47	Dairy Products, Eggs, Cattle/Calves, Greenhouse/Nursery Apples
New Jersey	41	46	36	Dairy Products, Greenhouse/Nursery, Soybeans, Eggs, Peaches
New York	24	17	30	Dairy Products, Cattle/Calves, Greenhouse/Nursery, Apples
Pennsylvania	18	14	27	Dairy Products, Cattle/Calves, Mushrooms, Eggs Greenhouse/Nursery
Rhode Island	49	49	49	Greenhouse/Nursery, Dairy Products, Potatoes, Eggs, Hogs
Vermont	43	39	48	Dairy Products, Cattle/Calves, Eggs, Apples, Forest Products

and account for only seven percent of the number of farms and less than three percent of the land in farms. From 1978 to 1980, Northeastern states have lost 465,000 acres of farmland or 1.5 percent of the total. Moreover, the topography of the Northeast in terms of its average rainfall, weather, soil, terrain, and growing season suggests limited production possibilities. Overall, in 1978, states within the Northeast accounted for only 6.2 percent of total agricultural cash receipts, with livestock and products representing 7.8 percent of the U.S. total and crops making up 4.3 percent. These figures hardly suggest a healthy and prosperous agricultural sector. However, analyzing agricultural statistics on a national basis and making daily decisions to finance agricultural enterprises are completely different situations.

In the Northeast, urbanization is increasingly taking valuable farmland for nonfarm uses, part-time farms abound, a large portion of the family farm income is generated in nonfarm occupations, and population is shifting to the South and West. Even in rural areas the nonfarm population exceeds the farm population. So why is agriculture successful in the Northeast and able to compete with large scale farming operations?

Basically, the answer lies with competitive advantages. Farming in this part of the country has displayed remarkable adaptability. By concentrating on livestock products and high-value crops, net farm incomes have grown despite the squeeze on farmland. Intensive farm operations, as well as farm diversification, have created a favorable balance between crop and livestock product output. In addition, most of the Northeast's agricultural activities are situated around major metropolitan areas. This suggests that as transportation costs and energy costs increase, the Northeast's agricultural base should be and is poised to take advantage of the products produced for sale to local markets.

On a macro level, Northeast agricultural production statistics appear small relative to the United States as a whole. But, on a micro level, production statistics tell a different tale, and the comparative advantages of Northeast agriculture can be seen. Northeast agriculture, in terms of cash receipts in 1978, produced over 21 percent of the country's dairy products, over 14 percent of the country's poultry and eggs, over 17 percent of greenhouse/nursery products, 52 percent of the forest products and 55 percent of the mushrooms. These farm enterprises, along with others, accounted for a significant share of U.S. total production for these categories (Table 2). With concentration on selected profitable, high value farm commodities, Northeast agriculture has done reasonably well. While the topography of the area might not be conducive to produce citrus in Pennsylvania or crops on the hilly terrain in Vermont, Northeast farmers can graze cattle and plant orchards.

Northeast Population

Population migration, while away from the Northeast corridor, has not resulted in an overall decline in this area's population. In 1980, population in the Northeast totaled 53.8 million, up slightly from 53.5 million in 1970. Even though the relative population of the Northeast declined from 26 percent of the U.S. total in 1970 to 24 percent in 1980, there are still more people to feed in this area than ever before. While the Northeast population might be stagnant, the absolute level is still comparable to many countries throughout Western Europe. For example, the population of the Northeast exceeds

Table 2

Dollar Volume Of Cash Receipts Generated By Individual States In The Northeast, By Commodity In 1978 And The Percent Of Total U.S. Cash Receipts

	States												
Total Cash Receipts	Connecticut	Delaware	Maine	Maryland	Massachusetts	New Hampshire	New Jersey	New York	Pennsylvania	Rhode Island	Vermont	Total	Percent of U.S. Total
All Commodities	$230.0	$319.8	$410.5	$770.5	$242.0	$86.7	$372.4	$1,918.8	$2,152.3	$30.1	$309.0	$6,842.1	6.2%
Livestock Products	140.5	218.0	286.5	511.4	112.1	61.4	104.4	1,347.3	1,510.7	12.4	287.1	4,591.8	7.8
Meat Animals	14.3	11.6	14.4	72.4	17.9	9.7	22.5	160.2	317.2	2.4	38.4	681.0	1.8
Dairy Products	70.8	14.3	72.9	171.7	67.4	37.8	59.2	1,085.6	878.2	6.4	239.9	2,704.2	21.3
Poultry and Eggs	54.2	191.1	198.8	259.9	23.6	13.2	19.4	87.9	294.2	3.4	7.9	1,153.6	14.2
Crops	89.5	101.8	123.9	259.2	129.9	25.3	268.0	571.6	641.6	17.7	21.9	2,250.4	4.3
Food Grains	0.0	2.2	0.0	8.1	0.0	0.0	2.8	5.3	16.1	0.0	0.0	34.5	0.6
Feed Crops	1.7	24.9	4.6	78.1	2.2	1.4	21.6	81.7	160.7	0.1	3.0	380.0	3.5
Tobacco	22.8	0.0	0.0	34.1	8.8	0.0	0.0	0.0	13.9	0.0	0.0	79.6	3.1
Oil Crops	0.0	41.0	0.0	65.4	0.0	0.0	37.1	2.7	11.9	0.0	0.0	158.1	1.3
Vegetables	14.0	21.5	88.5	28.8	27.5	5.1	98.9	200.1	61.2	6.7	2.7	555.0	9.1
Fruits and Nuts	9.9	1.7	20.1	13.9	36.7	8.3	49.5	159.8	76.2	0.8	6.0	382.9	7.0
All Other Crops	41.0	10.5	10.7	30.8	54.7	10.4	58.1	122.0	301.8	10.1	10.3	660.4	11.5
Greenhouse/Nursery	40.3	4.8	6.0	25.5	52.9	8.0	51.1	100.6	124.5	10.0	2.0	425.7	17.2
Forest Products	0.6	0.7	4.3	2.4	1.2	1.6	6.0	9.2	10.8	0.1	4.0	40.9	51.8
Mushrooms	0.0	4.9	0.0	0.0	0.0	0.0	0.5	6.7	164.7	0.0	0.0	176.8	55.1
All Other	0.1	0.1	0.4	2.9	0.6	0.8	0.5	5.5	1.8	0.1	4.3	17.0	0.8

Source: State Farm Income Statistics, U.S. Department of Agriculture, Economics, Statistics and Cooperatives Service, Supplement to Statistical Bulletin No. 629, January 1980.

or is only slightly less than France, Great Britain, Spain, Italy, or West Germany.

Production Gaps and Agricultural "Trade"

Economists and general agricultural researchers often point out the large gap between Northeast production and consumption. Figures suggest a growing Northeast dependency on vegetables, beef, pork, and a myriad of other products. According to a recent publication, The Pennsylvania Food System: Crash or Self-Reliance? by the Cornucopia Project of Rodale Press, Pennsylvania, the largest Northeast agricultural production state imports over 70 percent of its food, including 99 percent of its lettuce, 96 percent of its broccoli, 88 percent of its carrots, 82 percent of its pork, 77 percent of its beef, and 60 percent of its potatoes. Arguments of food dependency center around the fact that if the largest production state in the Northeast cannot be self-sufficient, what about the other states? To this statement the question has to arise--does the Northeast want to be or can it afford to be self-sufficient? Not only does the growing season and other topography factors limit production possibilities, but consumer preference plays a large role. Northeast consumers could have all the "homegrown" lettuce they could consume at reasonable prices during the traditional growing season. But, there is consumer demand for lettuce during the off-growing season that must be met from other regions as long as transportation costs are less than the alternative. Northeastern states could produce all the lettuce they need within confined production systems (greenhouses); however, it is doubtful if the Northeast consumer is willing to pay $2.00 for a head of "homegrown" lettuce when lettuce would be available for $.75 from California in mid-winter. On the other side of the coin, Pennsylvania "exports" to other states a large quantity of its apple and mushroom production; Vermont exports maple products; Maine exports potatoes. Albeit, total "imports" exceed total "exports" by a wide margin. Farmers in the Northeast continue to produce what they do best and produce products consistent with the comparative advantage of the natural topography.

Intensive Farm Operations and Size Efficiencies

Despite production shortfalls and the Northeast's dependency on various agricultural products, agricultural production in the Northeast is quite intensive. For the average U.S. farm in 1978, cash receipts per acre of land in farms totalled slightly over $100. Comparable data for Northeast agricultural enterprises shows cash receipts per acre in excess of $300, with Connecticut and Delaware averaging over $500 per acre and New Hampshire (the lowest Northeast cash receipts per acre state) averaging about $150. According to the study A Time to Choose: Summary Report On The Structure Of Agriculture, issued by former Secretaty of Agriculture, Bob Bergland, in January 1981, most agricultural enterprises in the Northeast have reached sufficient economies of scale for efficient production. The report indicated "the conventional wisdom has been that technological advancements over time have created potential efficiencies that could be captured more effectively by farms growing larger. That is, in substituting newer machines for labor, the investment cost per acre or per unit of production can be reduced, to a point, by increasing the size of operation." For the most part, consumers have benefited from the past gains in efficiency in agriculture that have lowered relative food costs and at the same time reduced the number of farms.

In the report the Department of Agriculture reexamined technical economies of size and qualified estimates of least-cost farm size. The Department of Agriculture estimates confirmed previous studies that found unit cost to fall rapidly as farms grow from a relatively small size, and then costs remain relatively stable. But, according to the report, most of the technical economies of combining various amounts of input are attained at relatively small sizes. Thus, "increasing average size of farms does not necessarily imply the existence of attainable economies of size. It only implies the absence of significant diseconomies of size."

The USDA report indicates that medium size farms (those with annual sales between $40,000 - $200,000) have reached most major economies of scale. "While undoubtedly there are some part-time farmers at the lower end of the medium size farm bracket, by-in-large, farming is the major source of income for these farm families." The study results show that most of the technical economies are achieved at sizes well within this $40,000 - $200,000 bracket. "In fact, by the time gross sales reach the neighborhood of $130,000, the technical economies have been fully attained and most available market economies probably have been achieved as well."

Another recent report, Research and the Family Farm, a paper prepared for the Experiment Station Committee on Organization and Policy, February, 1981, indicates: "...in 1978, most economies of size were realized on farms with average sales of about $60,000 (tobacco farms could be smaller; some fruit, vegetable, and cattle feeding operations could be much larger)." Nevertheless, some off-farm income would be needed to keep total family farm income on par with nonfarm family income. From the estimates made in the above reports, it appears that a large number of agricultural enterprises in the Northeast have progressed to the point where most economies of scale can be realized and where any further economies might be realized through better management techniques, or consolidation of very small farming operations.

CREDIT POLICIES

Credit policies have been influential on the structure of farming. For the most part, credit is allocated among farmers based on profitability of their operations and, as a consequence, the larger, more profitable farms have received a disproportionate amount of credit. To some extent, Federal credit policies through programs such as Farmers Home Administration and the Small Business Administration have helped allocate funds to the small and middle size farmers.

However, the magnitude of these credit programs tends to be relatively small and with the Administration's attempt to reduce funding for these agencies, credit to smaller-medium size farms may become more difficult to obtain. The Farm Credit Banks of Baltimore and the entire Farm Credit System in the Northeast have attempted to fill the void of the credit needs of the small and medium size farmer without changing credit standards or attempting to meet a social need. While the average profile of the Federal Land Bank of Baltimore (FLB) borrower in 1979 reveals more traditional Northeast farm characteristics, a large number of FLB borrowers were classified as part-time operators.

Table 3 shows the types of farm enterprises financed throughout the Northeast by the Baltimore and Springfield FLBs during 1979 (the two Farm Credit Districts that finance agriculture in the Northeast). Production Credit loan volume generally parallels FLB financing activity.

Agricultural lenders, especially in the Northeast, know that a lot of interesting things can be done with limited land resources. For the most part, farmers tend to duplicate the actions of their neighbors and regional models tend not to show exceptions or the increased potential that can be realized by innovation. The combination of good management ability and the desire to do something different with agricultural land that others have not tried have yielded some interesting results. Rocky, hilly marginal land has been turned into high yielding peach and apple orchards that produce top grade fruit; labor intensive Amish operations produced excellent yields for wheat and other agricultural products; acres of greenhouses have supplied a large portion of the Northeast with tomato, vegetable, and flower plants as well as fresh cut flowers. From a lender's perspective, the Farm Credit Banks have a vast interest in a healthy, viable agricultural sector in the Northeast--and exploring some aspects of why farmers in the Northeast produce what they produce can shed interesting light on the potential of Northeast agriculture.

ASPECTS OF NORTHEAST AGRICULTURE

Interregional competition among agricultural sectors is becoming more intense, and not only for identical products, but also for substitutable products. Although orange juice is a product that is promoted suitable "not only for breakfast anymore," apple juice producers are marketing their products to compete more efficiently with citrus juice producers. Frozen apple juice concentrates are starting to enter the marketing channels as a way to reduce bulk transportation costs and to cover a broader marketing area. As such, Northeast apple producers are in a strong position to expand their operations, given the large East Coast markets and aggressive marketing strategies. Many other Northeast agricultural enterprises are in a similar position to take advantage of their most important marketing tool--a large population.

Vegetable Production

Vegetable production in the Northeast, mostly potatoes, tomatoes, cabbage, and beans, accounts for around 9-10 percent of the U.S. total. While vegetable production is an important aspect of Northeast agriculture, aggregate output in vegetables is constrained by three factors. First, the growing season in the Northeast is relatively short compared to California, Texas, Florida and parts of the Southeast. Second, the processing industry has relocated to other areas of the country where production is more evenly distributed throughout the year, and third, consumer preference favors some products that are difficult to produce in the Northeast.

Despite limited seasonal growing conditions, Northeast vegetable producers fill an important

Table 3: Percent Distribution of Number and Amount of Federal Land Bank Loans Made In the Baltimore and Springfield Districts, by Type of Farm, in 1979

	Percent of Number		Percent of Volume	
Type of Farm	Baltimore	Springfield	Baltimore	Springfield
Wheat	-0-	0.1	-0-	0.1
Tobacco	5.2	0.2	3.1	0.4
Peanuts	2.2	-0-	1.7	-0-
Vegetables	1.8	8.1	2.2	7.5
Timber	4.1	0.8	2.0	6.5
Fruits and Nuts	3.2	6.9	2.3	6.5
Corn Grains	11.3	13.3	14.4	10.4
Cash Field Crops	8.5	1.6	7.0	1.2
Dairy	10.9	37.9	16.8	37.9
Stock Farms	31.7	11.8	28.8	10.7
Broilers	6.9	0.4	9.8	0.2
Eggs	1.4	1.3	3.4	7.3
Other	11.4	10.1	7.8	8.6

market void during peak production periods. Peak Northeast production coincides with relatively weaker production periods of the Southeast and other vegetable producing areas. As a result, during the Northeast harvest period, fresh vegetables are shipped throughout the southern corridor and local produce fills major Northeast distribution centers. Larger sophisticated local producers, however, make judgments about market conditions well before harvest. During the planting season, larger producers are aware of likely supplies that will be coming to markets during the harvest period, transportation costs, and what can be sold to home canners. These factors influence producers' decisions on what to produce and how much to produce. Arguments that are critical of Northeast producers' decisions on production and the Northeast's dependency on other regions are perhaps missing a very fundamental question. Although Northeastern states could produce considerably more fresh vegetables than current levels suggest, where would the "surplus" production go?

In talking with Northeast vegetable farmers, a central reason for the Northeast dependency emerges. A considerable amount of acreage that is well suited for vegetable production is left idle or planted in less profitable feed crops because the fresh market cannot absorb the extra production and processing facilities are not available to handle the production. Although the canning industry is widespread geographically, the heaviest concentration is in California. In 1977, California had about 16 percent of all canning plants which represented 35 percent of sales. Tomato canning is even more concentrated with Califronia accounting for almost 90 percent of the canning tomato production in 1979.

Overall, the increased concentration of canners reflects the steady progression of a long-term trend. In 1950, only one third of U.S. processing tomato production was in California. Production shifted steadily away from the East and Midwest in order to take advantage of more favorable growing conditions in California. This shift was facilitated by relatively low-cost transportation, which made it economically feasible to ship finished products to distant consuming areas. How much transportation costs will have to rise in order to reverse this trend is difficult to project. But transportation costs are only one part of the equation. California producers have higher yields, more mechanization and produce several crops per year, while the Northeast production is constrained by natural factors.

Another reason for more limited processing facilities in the Northeast reflects consumer and institutional preference. Until the 1960's, New York and California were about equal in onion production. New York produced the major late summer/early fall crop, and California produced the major spring crop. In the late 1950's and in the 1960's, onion dehydration became an important method of utilizing the onion crop, and most of the production shifted away from New York to California. This production shift reflected conconsumer preference for white onions which are more difficult to grow in New York and harder to process because of New York onions' high moisture content.

Overall, vegetable production in the Northeast is an important part of the area's agricultural composition. However, geography, processing facilities and consumer preference are constraining factors limiting output. Transportation and other cost considerations will have to increase significantly before the full potential of Northeast vegetable production will be realized.

Dairy

The dairy industry represents the largest agricultural sector borrowing from the Banks. In 1978, over one fifth of the area's cash receipts were generated through the sales of dairy products, and current Bank data suggest that the dairy industry accounts for around 20 percent of Land Bank outstandings and 30 percent of the shorter-term credit. Thus, concerns about where the Northeast dairy industry is headed is not only of academic interest, but one that could significantly impact lending operations.

Questions of concern that professors, students, and lenders will be grappling with include: How will the Reagan Administration's parity support proposal affect the Northeast dairy operations? If milk prices fall significantly below parity, what happens? Who will be shipping milk and how far can fluid milk be economically transported? These questions are merely points to ponder; concrete answers are illusive.

The large concentration of the dairy industry throughout the Northeast, reflects, to a great extent, fewer agricultural land use alternatives in the Northeastern states and centrally located population centers. But, the Department of Agriculture estimates indicated that production costs are slightly higher in the Northeast relative to the United States as a whole, and considerably higher in the upper most areas of the Northeast. Higher output costs in this part of the region reflect feed grain deficiencies and transportation costs of dairy feed.

If price supports to dairy are curtailed, the Northeast may not bear the full brunt of the reduction in terms of Government payments or lost production. With declining price supports, U.S. milk production is likely to fall (over the longer-term), but the fluid milk market is large throughout Northeastern states, and transportation costs of fluid milk are substantial. In addition, the South has relatively little processing capacity and better suited land use alternatives. If the crop sector becomes more profitable relative to the dairy sector, some acreage allocated to dairy herds in the Southeast and parts of the Great Plains might be better utilized for grain or alternative crop production. If these production shifts occur, certain sections of the Northeast dairy industry most likely will be less impacted. The upper Northeast still will be plagued with high production costs and the need to transport feed grains for dairy herds, while the lower Northeast (New York state and below) should not fully experience similar problems. As such, parts of the upper

Northeast's dairy industry could suffer disproportionate production cutbacks of fluid milk, with the entire Northeast dairy sector experiencing only a limited adverse impact, especially for fluid milk production.

Poultry

The poultry sector is another agricultural enterprise in the Northeast that makes a significant contribution to total area cash receipts. In 1978, over 14 percent of the Northeast cash receipts were generated in the poultry and egg sector. Nationwide the poultry sector has benefited from a number of considerations that have resulted in increased broiler production year to year. In part, the growth in the broiler industry was fueled by improved marketing methods and declining average costs curves. While the average costs curves have not shown much improvement since 1973, the industry has continued to expand due to aggressive marketing and consumer preference for lighter and lower fat meats.

Trends toward improved efficiencies established in the 1960's and early 1970's are not expected to continue as rapidly in the coming years, but the broiler industry is still expected to grow. Chase Econometrics forecasts that broiler production will increase during the 1980's from about 11 billion pounds in 1980 to almost 15 billion pounds by 1990. During the same period, 1980 to 1990, the average annual consumption of broilers is expected to increase from around 49 pounds per person per year to about 58 pounds. Broiler consumption is expected to increase more rapidly than the consumption of either beef or pork during the coming decade, and by 1990 the broiler industry's share of total meat consumption is projected to be around 23 percent of all meat consumed, compared with 20 percent in 1980.

Over the current decade, the broiler industry will be receiving a boost from several sources. First, pork production is expected to decline as pork output reached record levels in 1980, and that level of production is not expected to be achieved again any time in the 1980's. Broilers compete closely with pork in the market place as a close substitute, and lower supplies of pork will be an advantage to the broiler industry. Second, the broiler industry is likely to benefit from the introduction of chicken franks as well as fast food chains greatly increasing their marketing efforts of broiler products, and third, export demand for broilers will remain strong, adding additional impetus to the industry. Although the huge rate of growth of broiler exports between 1970 and 1980 (14 percent per year) will slow during the 1980's, exports are still expected to increase at a rate of about 5 percent per year.

Given these demand considerations expected to develop in the broiler industry throughout the 1980's, Northeast producers are in a strong competitive position to take advantage of these potential developments. Although production growth might be somewhat hampered by the delicate grain balance existing through much of the lower Northeast, the broiler industry is still the most efficient livestock industry in terms of feed conversion. Thus, even if the Northeastern states have to "import" a large amount of the poultry feed grains, conversion ratios are attractive enough to make this profitable. Overall, the Northeast is still populous enough to support expanding poultry markets, and the industry is feed efficient enough to import the grain as opposed to importing the final product. In addition, because of the grain needs for the livestock sector, especially the poultry industry, more marginal lands in the Northeast may be brought into grain production to support this industry. With the grain acreage expansion that took place throughout the grain belt over the last few years, further rapid production expansion is not likely. But, improved grain prices and profitability could induce Northeast producers to cultivate marginal lands and increase the total supply of feed grains for regional use.

Barriers to Entry

Although Northeast agriculture holds attractive opportunities, the barriers to entry can be quite steep. For the most part, land prices throughout the Northeast are two-to-three times higher than the national average (only Maine and New York are below the national average); taxes on farm real estate are relatively high; new production equipment is increasingly expensive and designed more for large farm operations in the major production areas. In fact, preliminary data for 1980 shows that value of farmland failed to keep pace with inflation for the first time since 1970. These factors, coupled with the fact that a number of important farm enterprises (cattle, hogs, eggs, and broilers) have been, at best, only marginally profitable over the last few years have increased the already significant barriers to entry.

The Farm Credit System will become more aggressive in extending credit to young and beginning farmers. Recent legislative changes (Public Law 96-592) to the System's operating charter will permit the Federal Land Banks to make farm loans with a loan-to-value ratio of 97 percent, if the loan or any portion of the loan is guaranteed by a government instrumentality. Previous law set a maximum loan-to-value ratio at 85 percent. Some bank units within the System also are moving into leasing and other services that may help lower equity farmers.

The Baltimore Banks realize their responsibility in financing young entry farmers. Currently, about 20 percent of the Banks' Production Credit Association (PCA) volume outstanding is held by farmers under 35 years old, and about 35 percent of the PCA new borrowers can be classified as young farmers. On average, about 20-25 percent of the Baltimore FLB loans go to farmers under 35 years of age. Overall, current trends suggest that the Farm Credit Banks will play an expanding role in financing entry level, lower equity farmers. Recent legislation (previously mentioned) calls upon the System to "go the extra mile" in assisting beginning farm operations. In addition, with reduced funding for Farmers Home Administration, the System may be called upon to extend even larger amounts of credit.

SUMMING UP NORTHEAST AGRICULTURE

Although the Northeast has lost a considerable amount of agricultural land to non-agricultural uses during the 1960's and early 1970's, this trend seems to have slowed somewhat in recent years. Topography constraints in the Northeast have resulted in relatively modest field crops and meat animals production relative to poultry and dairy products, which combined make up over half of the area's total farm output. Specialty crop production (fruits, vegetables, mushrooms, etc.) are other important agricultural enterprises located throughout the Northeast. These highly perishable products traditionally have been grown near densely populated markets. Specialty crops allow for intensive land use, yielding higher economic returns per acre than most other agricultural enterprises.

On the whole, several factors are making Northeast agriculture more attractive and increasingly competitive relative to the rest of the country. First, West Coast valley areas are experiencing considerable loss of valuable farmland due to population pressures. This reduction in farmland has resulted in West Coast production increasingly moving to areas that require a greater use of irrigation and, with the uncertainty about the continual availability of water for irrigation, the longer-term outlook for increasing supplies of West Coast products is uncertain. Other regions of the country, notably Texas, also are experiencing water problems. Second, the increasing cost of refrigeration and transportation over long distances is likely to support longer-term growth in Northeast agriculture, and third, while the population in the Northeast has been relatively stagnant over the last decade, the overall population still represents about one quarter of the nation's total and is equal to most Western European countries.

Emerging competition for water rights in the West and Southwest, increasing transportation costs, and dense population centers of the Northeast suggest favorable trends for a number of Northeast agricultural industries. These factors, coupled with the fact that if the United States is to meet expected growth in export and domestic food demands during the 1980's, U.S. agricultural production will have to run closer to capacity than in any other time in the postwar period. Significantly more of this country's farm and nonfarm resources will have to be employed and used more intensively. While supply and demand conditions likely will exhibit fairly wide gyrations over the next five years, the overall agricultural outlook indicates the United States is moving into a period of managing a modest scarcity of commodities, as opposed to managing a surplus food supply that prevailed during most of the 1970's. In fact, the president of Farmland Industries, the nation's largest cooperative, recently commented that "no dramatic breakthroughs in production technology are in sight...and the first global food crisis will likely occur sometime in the next five years."

Demographers and macroeconomic forecasters studying the early 1980's conclude that, despite lower population and income growth, demand for agricultural products is likely to expand by more than 2.5 percent annually. Increases of this magnitude imply that the volume of farm product demand in the 1980's would rise nearly one and a half times faster than in the 1970's. While most of the increased demands likely will be met from increased production in areas other than the Northeast (and perhaps outside the United States), the Northeast's role in overall agricultural output is significant and likely to become increasingly important.