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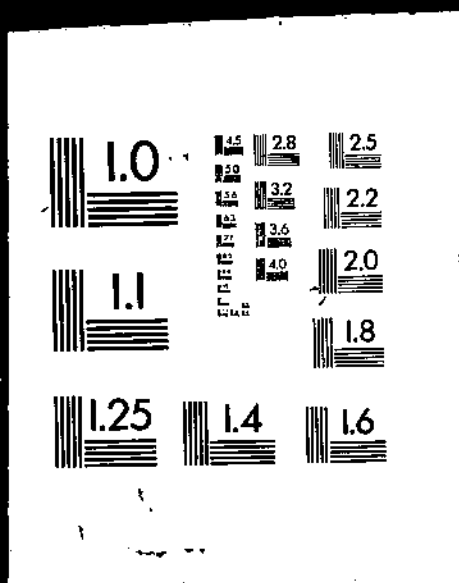
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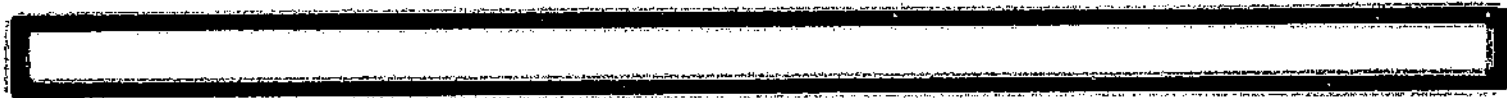
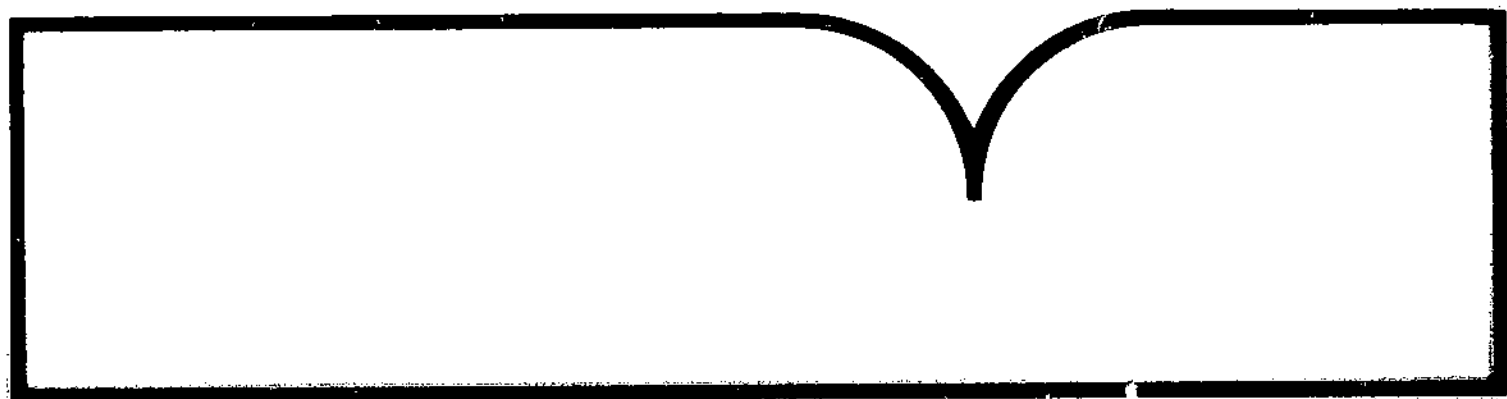


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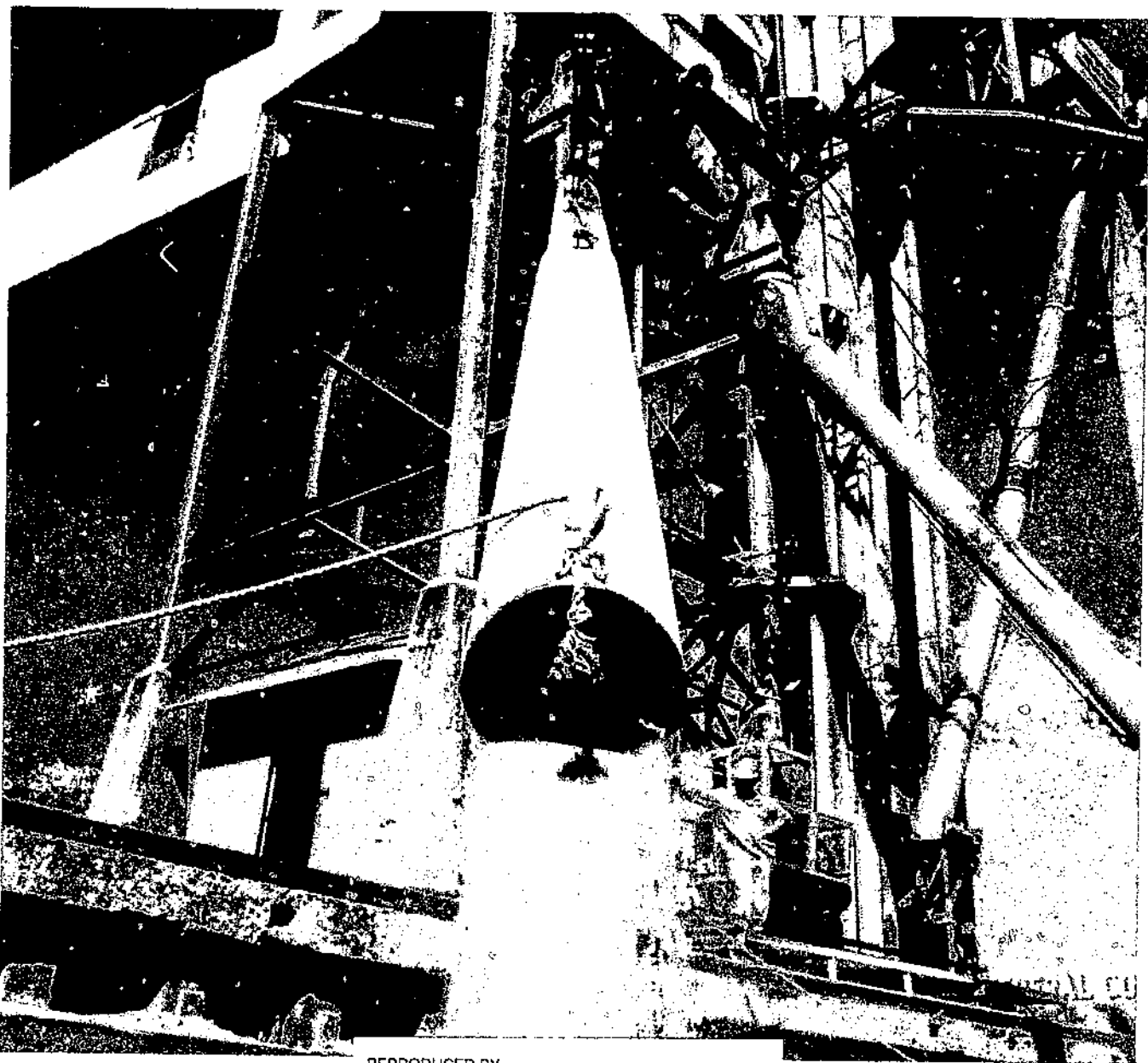
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Mark Ash
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THE U.S. FEED MANUFACTURING INDUSTRY, 1984. By Mark Ash, William Lin, and Mae Dean Johnson, Commodity Economics Division, Economic Research Service, U.S. Department of Agriculture. Statistical Bulletin No. 768.

ABSTRACT

Based on reported data for 1984, feed manufacturers have reported fewer but larger mills operating in the U.S. formula feed industry. The number of U.S. feedmills declined from nearly 8,000 in 1969 to about 6,700 in 1984. Yet, formula feed production rose to 110 million tons, from 105 million in 1975. This production remained centered in the Corn Belt. Corporations have remained the dominant form of ownership in the feed industry and have produced the bulk of manufactured feed. Primary feed production has trended upward, reaching 87 percent of the total feed tonnage. Despite the importance of complete feed, the production of supplements and premixes doubled since 1975. This report presents the results of the survey of feed manufacturers conducted in late 1985 and compares the present U.S. formula feed industry with available information on the industry in 1975.

Keywords: Formula feed, primary feed, secondary feed, complete feed

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SUMMARY

A 1984 survey of feed manufacturers identified fewer but larger feedmills in the U.S. formula feed industry. The number of U.S. feedmills declined from nearly 8,000 in 1969 to about 6,700 in 1984. Formula feed production totaled 110 million tons, up from 105 million in 1975. This production remained centered in the Corn Belt region. Corporations have remained the dominant form of ownership in the feed industry and have produced the bulk of manufactured feed. Primary feed production has trended upward, reaching 87 percent of total feed tonnage. Despite the importance of complete feed, the production of supplements and premixes has doubled since 1975.

This report presents the results of the 1984 survey of feed manufacturers, and compares the present U.S. formula feed industry with available information on the industry in 1975.

The Corn Belt continued to lead regional U.S. formula feed production by manufacturing more than 20 million tons of commercially prepared feed, or 18.6 percent of total feed production in 1984. The Lake States region ranked second in number of feedmills, and has increased its share of mills since 1975. The top four regions accounted for 55 percent of the national total in 1984.

Corporations owned almost 60 percent of total feed milling establishments and produced more than 70 percent of U.S. feed in 1984. Farmer cooperatives owned almost 30 percent of feedmills and manufactured more than 20 percent of the formula feed tonnage. The shares of partnership- and solely-owned feedmills have declined significantly since 1975, accounting for only 13 percent of mills and 7 percent of production in 1984.

The share of mills whose annual feed production capacity exceeds 50,000 tons has more than doubled since 1975, surpassing 70 percent in 1984. Mills with production capacity of less than 10,000 tons constituted a smaller share of mills, as these manufacturers have either modernized and expanded into larger size classes or have shut down. Larger feedmills with an annual capacity of 75,000 tons or more made up 5 percent of the total number of mills but accounted for 46 percent of U.S. production.

Production of supplement feeds increased markedly because of expanded onfarm feed mixing. Supplements and super concentrates in 1984 totaled 21.7 percent of U.S. primary feed tonnage, compared with 13.7 percent in 1975. Demand for nutritionally complete feeds has declined as livestock producers have substituted high-protein supplements and vitamin and mineral premixes that farmers mix with their own grains on the farm. More than 30 percent of formula feed production was consumed by the mill's own livestock. Wholesale and retail distributions rose modestly as both custom feeding and custom grinding and mixing operations declined in their share of feed distribution.

The U.S. Feed Manufacturing Industry, 1984

Mark Ash
William Lin
Mae Dean Johnson

INTRODUCTION

Feed purchases historically have been the largest U.S. farm production expenditure, surpassing rent, interest, fertilizer, and energy. Feed purchases totaled \$18.3 billion in 1984, or 14.3 percent of farm production expenses. More than 50 percent of feed outlays were for commercially prepared or formula feeds. The remaining expenditures were for grains, hays, and forages or other feed additives, and for grazing livestock on pasture (4).^{1/}

Although the feed manufacturing industry has played the lead role in farm inputs, little information about the industry's changing structure has been available since 1975 when the last survey was performed. In late 1985, the Economic Research Service of the U.S. Department of Agriculture mailed a survey to all known U.S. feed manufacturers to update the available information. This report presents statistical tables based on that survey and summarizes statewide data on feedmill production, number, size, ownership structure, distribution, milling and storage capacity, form of end products, ingredient use, employment, transportation, energy use, and type of livestock feed manufactured.

GENERAL INDUSTRY CHARACTERISTICS

This section highlights industry characteristics that apply to formula feed production, including number of feedmills and their location, size of operation, ownership structure, methods of distribution, and transportation.

Number of Mills and Location

The survey identified 6,723 U.S. feedmills in 1984, compared with 6,340 reported in 1975 and 7,917 reported in 1969 (2). Regional distributions of U.S. feedmills in 1984 showed patterns similar to those of 1975, although shares in the Southeast and Pacific regions were each down by more than 1 percent. As in 1975, the Corn Belt had the largest share of mills (29.5 percent) in 1984 (3). The Lake States ranked second in number of feedmills, with its share up from 13.7 percent in 1975 to 17.3 percent in 1984. The Northern Plains ranked third and maintained its share of mills at 13.7 percent.

^{1/} Underscored numbers in parentheses refer to sources cited in the References section.

U.S. formula feed production in 1984 totaled 109.6 million tons, an increase of nearly 5 percent above the 1975 output. The Corn Belt continued to lead the regions in formula feed production by manufacturing more than 20 million tons of formula feed, or 18.6 percent of total feed production. The Southern Plains, which has large-scale feedlot operations, ranked second. The Lake States and Pacific regions, because of their concentrations of poultry and dairy, ranked third and fourth. These four regions together produced 55 percent of U.S. formula feed in 1984, with the Lake States region expanding its share by 2 percentage points since 1975. In contrast, the share of formula feed production in the Northeast and Mountain regions declined modestly.

Size of Operation

U.S. feedmills manufactured an average of 16,300 tons of formula feed per mill in 1984, compared with 12,759 tons in 1969. Mill size, in terms of annual production tonnage, grew most rapidly in the Pacific and Southeast regions. The expansion in mill size in the Pacific region reflected the rapid growth in the dairy and broiler industries. Formula feed production in the Southeast region averaged 29,900 tons per mill in 1984, nearly 25 percent more than in 1975. Rapid growth in the Southeast region's broiler industry from 885 million head in 1975 to 1,327 million head in 1984 was the key to the rapid expansion in the size of its feed mills. Feedmills in the Corn Belt, Northern Plains, and Lake States regions were smaller, averaging production of 10,300 tons to 11,900 tons per year.

About three-quarters of U.S. feedmills in 1984 had the capacity to produce between 1,000 and 25,000 tons of feed per year. This typical size group, however, accounted for only 27.5 percent of the Nation's formula feed output. In contrast, large feedmills with an annual capacity of 75,000 tons or more made up only 5 percent of U.S. mills but accounted for 63.4 percent of formula feed production.

Milling Capacity

Total milling capacity for the United States was 164.7 million tons in 1984, up from 129.6 million tons in 1975. Annual milling capacity was estimated by multiplying the reported capacity of all mills for a 40-hour week by the number of shifts per day and a 50-week year.

The share of mills whose capacity exceeds 50,000 tons per year was 74.3 percent in 1984, compared with 34.2 percent in 1975. Mills with a capacity of less than 10,000 tons have constituted a small and declining share of production facilities because these manufacturers have either modernized and expanded into a larger size class or have entirely shut down operations.

Corporate-owned and farmer cooperative mills both increased their share of industry capacity to 72.9 and 20.6 percent. The shares of partnership-owned mills and mills operated by a single owner dropped to 6.6 percent of industry capacity.

The Northern Plains had the highest total capacity at 35.3 million tons, or 21.4 percent of the U.S. total. The Corn Belt followed closely with 32.8 million tons.

Mills used an average of 67 percent of their available capacity in 1984, down from 81 percent in 1975. The steady growth in the index of grain-consuming animal units during the latter part of the 1970's triggered the expansion in milling capacity for the formula feed industry. Grain-consuming animal units subsequently declined after 1980 and contributed to a lower rate of feedmill utilization. Greater use of portable onfarm mixing equipment has increased the demand for formula feed supplements to be mixed with feed grains, but has lowered the volume of complete feed rations manufactured at commercial mills.

Capacity for producing pelleted feeds more than doubled since 1975 to 69.4 million tons. Capacity to produce pelleted feeds accounted for 42 percent of U.S. milling capacity. Corporate-owned mills and mills with capacities annually exceeding 100,000 tons accounted for most of the pelleting capacity. The Corn Belt led in pelleting capacity at 11 million tons in 1984. The utilization rate was at 71.2 percent of the total U.S. pelleting capacity.

Forms of Ownership

Corporations have remained the dominant form of ownership in the feed industry and have produced the bulk of manufactured feed. In 1984, corporations accounted for 58.5 percent of feed manufacturers, up from 51 percent in 1975. Formula feed manufactured by corporate mills accounted for 71.1 percent of U.S. feed production in 1984, up from 66.6 percent in 1975.

Farmer cooperatives played a larger role in the formula feed industry in 1984 than in 1975. Cooperatives constituted 28.5 percent of U.S. feedmills in 1984, up from 25.6 percent in 1975. Formula feed manufactured by cooperatives accounted for 21.8 percent of formula feed tonnage in 1984, compared with 19.6 percent in 1975. Partnerships and sole proprietorships have declined in importance, as their combined share of U.S. feedmills fell to 13 percent in 1984 from 23 percent in 1975. The associated share of formula feed production by partnerships and sole proprietorships decreased from nearly 14 percent in 1975 to 7.1 percent in 1984.

Corporations were more common than other forms of ownership in every production region. The proportion of formula feed manufactured by corporations was higher except in the Southeast, Appalachian, and Mountain regions. Farmer cooperatives remained more common in the Northeast, Lake States, Corn Belt, and Northern Plains regions. Farmer cooperatives became relatively more important in the Southeast region partly because of the influence of farmer cooperatives in poultry operations.

Corporate-owned mills have remained more common in the large size groups above 25,000 tons, a pattern that has not changed since 1975. Farmer cooperatives operated about 30 percent of small mills with an annual capacity of less than 25,000 tons, and 20 percent of the largest mills with an annual capacity of 100,000 tons and more. Sole proprietorships operated 6-12 percent of smaller mills.

Distribution Channels

Formula feed is distributed by the following methods: wholesale, retail, feeding to one's own livestock, custom feeding, and custom grinding and mixing. The percentage of feed production consumed by the mill's own livestock was narrowly ahead of wholesale and retail sales in 1975. By 1984, this gap had widened, with

more than 30 percent of formula feed consumed by the mill's own livestock, compared with 25 percent in 1975.

This trend of onfarm milling has been mainly due to the expanding broiler industry, which is highly vertically integrated. As a result, nearly 70 percent of formula feed was fed to the mills' own animals in the Southeast and Delta regions, both major poultry producing areas.

Wholesale distribution rose modestly from 24.1 percent in 1975 to 28.7 percent in 1984. More than half the Corn Belt production has been marketed wholesale. Retail sales as a percentage of production rose slightly. Both custom feeding and custom grinding and mixing operations declined in importance. Operations that sell feed wholesale and feed their own livestock are concentrated in the above 50,000-ton size class. Therefore, we expect that as the industry becomes more heavily represented by large-sized mills, these distribution methods will become more prevalent. Custom feeding and custom grinding and mixing manufacturers are conversely clustered in the smallest capacity classes. Declines for custom feeding have been reported in the Northern Plains, Southern Plains, Mountain, and Pacific regions, while declines in custom grinding and mixing have been reported in all regions. Custom grinders and mixers are also frequently owned by partnerships and sole proprietorships, both of which are relatively fewer in number and lower in production volume.

Transportation

Inshipments of feed ingredients to mills continued to be carried largely by trucks, although a larger portion was hauled by rail in 1984 than in the 1970's. Deregulation of the trucking and rail industries in 1980 contributed to some of these changes in transportation methods. In 1975, 16 percent of feed ingredients used by feedmills were shipped by rail. By 1984, this proportion almost doubled to 31 percent, mostly at the expense of company-owned trucks. Trucks owned by independent firms still carried more than half of all inshipments of feed ingredients. The most dramatic turnabout has occurred in the Southeast region, where rail shipments increased from 28 percent in 1975 to 64 percent in 1984. Truck shipments were still the dominant form of transportation in the grain surplus regions, including the Lake States, Corn Belt, and Northern Plains, because of the shorter distance involved in the shipments.

Like the 1975 survey, virtually all outshipments of formula feed from feedmills were transported by company-owned, customer-owned, or other trucks. Rail and barge transportation accounted for only 1.5 percent of the formula feed hauled out in 1984, compared with 1.7 percent in 1975. Since 1975, a greater share of feed tonnage was hauled by company-owned and other trucks than by customer-owned trucks.

The distance that a ton of feed was hauled by trucks averaged 61 miles in 1984, compared with 69 miles in 1975 and 58 miles in 1969. Distance of shipments ranged from 36 miles in the Pacific region to 81 miles in the Mountain region. Feed is hauled greater distances by rail than other modes, averaging 232 miles in 1984, but average shipping distance was down from 303 miles in 1975. Independent trucks hauled feed farther (109 miles) than customer-owned (65 miles) or company-owned trucks (47 miles).

CHARACTERISTICS OF FORMULA FEED PRODUCTION

This section discusses specific characteristics of formula feed production, including primary and secondary production, type of livestock feed, kinds of primary feed, form of feed, storage and handling, and feed ingredients used to manufacture primary feed.

Primary and Secondary Production 2/

In 1984, almost 58 percent of U.S. feedmills engaged in only primary feed production, 21 percent in only secondary feed production, and 21 percent in both primary and secondary feed production. The number of mills manufacturing only primary feed showed a marked increase from 29 percent of all mills in 1975 to 58 percent in 1984, while the number manufacturing secondary feed dropped markedly.

Primary feed production accounted for 87 percent of all formula feed manufactured in the United States in 1984, up from 72 percent in 1975. Primary feed production was especially dominant in the Appalachian, Southeast, Delta, Mountain, and Pacific regions.

Primary feed production was also more common in large mills with an annual capacity of 25,000 tons or more. A substantial decline in secondary feed production was reported in 1984 for small mills with an annual capacity of less than 25,000 tons.

Type of Livestock Feed

The amount of livestock feed produced for poultry, dairy cattle, beef cattle, and swine has mirrored the changes in livestock inventory since 1975. Grain-consuming animal units, an index for comparing the grain concentrate consumption for all types of livestock and poultry, increased about 10 percent during 1975-84 (2). Total concentrates fed to livestock and poultry in 1984 were higher than the 1975 level by slightly more than 20 percent. The number of cattle on feed increased 19 percent, which is consistent with a 17-percent increase in primary beef and sheep feed tonnage. Swine (based on number slaughtered), layer, broiler, and turkey inventories rose 23, 45, 46, and 38 percent as feed consumption per head was up 7 percent for swine, up 7 percent for layers, down 9 percent for broilers, and unchanged for turkeys. The number of dairy cows and layers in 1984 was equivalent to the 1975 level. But annual milk production rose from 10,400 pounds to 12,600 pounds per cow, and egg production per layer increased from 232 eggs to 245 eggs per year.

Despite the increase in grain-consuming animal units, improvement in feed conversion efficiency since 1975 and a marked increase in the proportion of supplement feeds limited formula feed tonnage in 1984. Feed conversion efficiency, for example, has improved nearly 3 percent for broilers since 1975, somewhat reducing feed requirements. The increased demand for supplements resulted from expanded onfarm feed mixing. Supplement feed tonnage more than

2/ Primary feed is processed and mixed from individual ingredients, although a premix is sometimes used at the rate of less than 100 pounds per ton of finished feed. Secondary feed is manufactured by mixing one or more grains and ingredients with a formula feed supplement at a rate of 100 pounds or more per ton of finished feed.

doubled during 1975-84 and accounted for about 22 percent of primary production in 1984, up from 14 percent in 1975. Accordingly, the 5-percent increase in formula feed production from 1975 to 1984 that the survey identified appears to be reasonable.

In 1984, poultry feed accounted for 35 percent of primary feed production (5.4 million tons), down from 38 percent in 1975. Poultry feed tonnage was most significant in the Southeast, where the tonnage accounted for 70 percent of primary feed production in 1984, up from 63 percent in 1975. The share of feed for beef cattle and sheep also declined, from 23 percent in 1975 to 19 percent in 1984. In contrast, the share of feed for dairy cattle and swine in 1984 rose by 3 and 2 percentage points above the 1975 level. The share of formula feed for all other animals (pet food, fish feed, lab animals) remained at 4 percent.

Kinds of Primary Feed

Although complete feeds have remained the dominant kind of primary feed manufactured, the volume of supplements and super concentrates has doubled since 1975. Supplements and super concentrates in 1984 totaled 21.7 percent of U.S. primary feed tonnage, compared with 13.7 percent in 1975. A supplement is a formula feed that requires the addition of grain and sometimes protein to make a complete ration. This feed is used at the rate of approximately 200 pounds or more (usually more than 300 pounds) per ton of complete feed. A super concentrate differs from a supplement in that it contains only part of the animal's protein requirements. A super concentrate is added with grain and other high-protein ingredients at the rate of 100 pounds or more per ton to make a balanced ration. A premix is a combination of one or more microingredients with a carrier. A premix is used at the rate of less than 100 pounds per ton of finished feed.

The greatest relative changes in supplement use have occurred with beef, dairy, and swine. Demand for nutritionally complete feeds has declined as livestock producers have substituted high-protein supplements and vitamin and mineral premixes that are mixed with their own grains on the farm. Many feeders have their own mixers and have thus cut heavily into the market once held by custom grinding and mixing operations.

Form of Feed

Primary feed has been categorized into five different forms: meal, pellets and crumbles, cubes, blocks, and liquids. In 1975, 55.5 percent of the primary feed production was ground into a meal or a mash form. However, mounting evidence of the nutritional benefits to livestock from consuming pelleted feeds has resulted in a substantial increase in pelleted feed use. By 1984, pelleted feeds made up 51.7 percent of U.S. primary feed production, compared with 41.7 percent in 1975. This trend has prevailed in all production regions. Poultry has accounted for much of this change, as both the poultry inventory and the share of pelleted feed for poultry have increased. Feed formed into cubes, blocks, and liquids has maintained a minor percentage of U.S. production. However, modest increases have occurred in certain regions. Cubed and liquid feeds have been significantly more important in the Mountain region.

Storage and Handling

Ingredient storage capacity for feed manufacturers was more than 42 million tons, of which bulk grain storage accounted for 86.7 percent of the total space. Storage of liquid fat and molasses made up 2.2 percent of total storage capacity. The Corn Belt region possessed the highest storage capacity, with 34 percent of the U.S. total capacity.

Average storage capacity per manufacturer has varied by region, mill capacity, and the other activities that the business is involved in such as grain storage and merchandising. Bulk grain storage averaged 7,433 tons per mill in 1984, and other bulk dry ingredients averaged 723 tons.

More than 56 percent of feed manufacturers reported ingredient weight loss or shrinkage of less than 1 percent, and 5.4 percent of the survey respondents indicated losses greater than 3 percent. The Southern Plains had the greatest share of manufacturers with shrinkage rates above 3 percent.

Bagged feed constituted 18 percent of formula feed production in 1984, down from 33 percent in 1975. Poultry feeds, which are largely complete feeds made on site, had only 6.9 percent bagged. Greater production of supplements and premixes for dairy, beef, and swine resulted in bagged formula feed of 13.2, 21.2, and 30.6 percent. The Corn Belt bagged the highest feed tonnage (32 percent of U.S. bagged feed) and also the highest proportion of formula feed of any region (31.7 percent of the Corn Belt's primary feed). Storage capacity for bagged manufactured feed in 1984 was 18.8 percent of the storage capacity for finished primary feed.

Feed Ingredients

Feed grains constituted 49 percent of the ingredient tonnage used to manufacture formula feeds (excluding shrinkage) in 1984, down from 53.4 percent in 1975. Oilseed meals, grain proteins, and animal proteins have risen proportionally to 19.9, 12.7, and 5.7 percent of feed ingredients. Minerals and microingredients (vitamins, drugs, and premixes), which constituted 3.8 percent and 1.1 percent of total ingredient tonnage in 1975, were 5.3 percent and 1.1 percent in 1984.

Corn accounted for 69.4 percent of feed grains used in formula feeds, consistent with the 70 percent in 1975. Wheat grain has increased its share from 2 percent to 6.1 percent during this timespan. However, compared with other grains in 1984, wheat prices were very favorable for feeding due to the drought and the 1983 payment-in-kind (PIK) program. Soybean meal has increased its share of the oilseed market at the expense of cottonseed meal, rising from 87 percent in 1975 to 90.6 percent in 1984. The 17.2 million tons of soybean meal and 1.05 million tons of cottonseed meal reported in the survey have compared very closely with the official USDA domestic disappearance of 17.6 and 1.13 million tons for the 1983/84 marketing year.

Wheat millfeeds remained the principal grain byproduct, accounting for 49.8 percent in 1984, up from 44 percent in 1975. Meat and bone meal was down from 56.4 percent in 1975 to 54.5 percent of the animal proteins in 1984. Poultry byproducts meal and feather meal have grown from 16.9 to 17.8 percent. Calcium constituted 41 percent of the total minerals used in 1975 but rose to 44 percent by 1984.

In the Corn Belt, the percentage of corn to all feed grains has dropped from 86.4 percent to 76.7 percent, while sorghum has increased from 0.2 percent to 10 percent. A similar pattern has existed in the Southeast and Delta States. But in the Pacific, the corn to sorghum ratio increased from 2:1 to 14:1. Use of oats declined in most regions and use of wheat increased in all regions. Use of soybean meal has increased compared with the use of cottonseed and other oilseed meals in every region except the Northern Plains, where use of soybean meal has declined from 92.5 percent to 77.3 percent of oilseed meals. Abundant local supplies of sunflower and linseed meals have been the major cause of this decline.

Tables 105-108 estimate regional consumption of specific feed ingredients for poultry. Although no direct data have been received, ingredients used by manufacturers producing 75 percent or more of their feed were aggregated and then expanded to the total poultry feed tonnage for each region. The tables represent a good estimate of the ingredients used, since all poultry feeds are mostly complete feeds and are produced by vertically integrated firms that do not generally manufacture livestock feeds other than their specialty.

TECHNOLOGY AND CUSTOM SERVICES

Computerized automation practices have become prevalent in large, modern manufacturing plants. In some feedmills, the entire process from mixing to pelleting to storing and shipping can be performed without routine manual operations. Accounting, energy management, purchasing, and formulation of feed rations may also be computerized. In addition to reducing labor costs, such technology reduces electricity costs by managing equipment starts and reduces storage costs through expedited ingredient purchasing and product shipping. The shorter production time may enable automated mills to better customize their production to buyers' specifications. Manufacturers using one or more automation practices have more than doubled since 1975.

Custom services such as least-cost formulation, feed blending, feed programs, and recordkeeping are among the complementary functions that feedmills provide their customers aside from selling feed. Farmer cooperatives, which perform a higher percentage of the custom grinding and mixing, offer more custom services than do other manufacturers. Midsized mills supply custom services more frequently than do the largest or smallest mills.

EMPLOYMENT

Total employment in the feed manufacturing industry numbered almost 37,000 production workers and almost 97,000 total employees. The Corn Belt employed the most people in the feed industry, with more than 27 percent of the national total feed manufacturing employment. Second to workers involved in the production of feed, most employees were engaged in office and management activities.

Employees involved in feed production activities increased from 2.2 employees per mill in the smallest mill size class to 17.4 production workers in mills where capacity exceeded 100,000 tons. The average was 5.5 production workers per manufacturer in 1984, which was down from 7.5 per manufacturer in 1975. Fewer production workers were used in most regions and mill sizes in 1984 than in 1975. Corporations typically have averaged a higher number of employees because they

are more heavily represented among the larger size classes. Average output was highest in the Pacific region and lowest in the Corn Belt. The number of mills running two or three shifts per day increases as mill capacities increase (which has resulted in higher utilization rates).

Productivity, measured by tons of feed manufactured per production employee, has improved significantly. Output per production worker averaged 2,963 tons in 1984, about a third larger than the 2,238 tons in 1975. This trend holds for all regions and size classes. Average production was highest in the Pacific region and lowest in the Corn Belt. These figures supersede the tables presented in (2) that were computed from unexpanded data.

Employment in other nonproduction activities (maintenance, warehouse, trucking, office and management, and sales) has increased at most feedmills, averaging 14.4 employees per manufacturer. Average output for all employees has consequently risen much less than output per production worker.

MANUFACTURERS BY MAJOR SOURCE OF GROSS INCOME

Feed manufacturing was the major source of gross income in all regions for nearly half of the survey respondents in 1984, up from a third in 1975. Grain merchandising ranked second as the major source of gross income, accounting for 18 percent of the manufacturing establishments.

Feed Manufacturing

Feedmills reporting feed manufacturing as their principal activity produced 56.2 million tons of feed in 1984, which is slightly higher than the 1975 survey tonnage. Primary feed accounted for 95 percent of this production, and secondary feed production amounted to more than 3 million tons.

Commercial feed manufacturers produced more than half of the feed for most classes of livestock. Commercial feed manufacturers produced 11.2 percent of formula feed for broilers and more than 75 percent for dairy and swine. Almost two-thirds of the feed produced by commercial mills was complete feed. This share of production was lower than that for the whole industry due to the greater emphasis on feed supplement production at commercial mills.

Distributions through wholesale and retail sales were 88 percent of the 1984 production, up from 73 percent of production in 1975. These mills accounted for 92 percent of wholesale distributions, 72 percent of retail sales, and 33 percent of custom grinding and mixing.

Annual feedmill capacity was 59 percent of U.S. capacity and 97.2 million tons, an increase from 43 percent of U.S. capacity in 1975. Commercial mills had a 69-percent share of pelleted feed production capacity.

Total employment per establishment averaged 17.5 full-time equivalent employees. Labor productivity averaged 978 tons in 1984, down from 1,518 tons in 1975. Output per production worker rose from 2,165 tons in 1969 to 2,238 in 1975 and to 2,611 tons in 1984.

Milk Production

Forty-eight manufacturers that reported milk production as their major source of gross income produced nearly 396,000 tons of formula feed. Primary feed made up two-thirds of production. Most of the primary feed came from manufacturing establishments exclusively making primary feed. Sixty percent of the feedmills reporting milk production as their major source of gross income were located in the Lake States.

Feed distributed to mills' own dairy cattle took 60 percent of the production of these operations in 1984, double the 29 percent in 1975. Wholesale, retail, custom feeding, and custom grinding and mixing distributions all declined proportionately. The 1984 feed milling capacity of 457,354 tons in these operations was not much higher than the 1975 level of 384,869 tons.

Production workers per feed manufacturer averaged 3.6 workers in 1984. An average 2,277 tons of output was generated by each production worker. In 1975, these feed manufacturers averaged 3.6 production workers who each averaged 1,585 tons of output.

Cattle Feeding

Three hundred and nine feed manufacturers reported cattle feeding as their major activity, and 64 percent were located in the Southern Plains and Northern Plains. Cattle feeders produced 9.3 million tons of feed, half of which was secondary feed. Custom feeding was the predominant method of disposition (56 percent), and feeding to mills' own livestock ranked second with a 35-percent share of total tonnage.

Cattle feeders averaged 5.2 production employees and 11 total employees per mill in 1984, compared with 6.1 and 9.4 in 1975. Output per production employee declined from 6,996 tons in 1975 to 5,738 tons in 1984.

Hog Production

The survey identified 168 feed manufacturers engaged primarily in hog production, with the largest number located in the Corn Belt. These hog feeders produced 813,378 tons of feed, 80 percent of which was primary feed. Most of this feed (56 percent) was fed to the manufacturers' own hogs. Equal amounts of the remainder were sold retail or custom mixed for others. Compared with production for their own use, hog producers' outside sales of feed have become proportionately smaller than they were in the past. Annual rated production capacity for these operations in 1984 was 1.2 million tons, reflecting negligible growth since 1975.

Hog producers manufacturing feed averaged 1.6 production workers and 3.6 total employees per manufacturer. Productivity improved from 1,432 tons per production worker in 1975 to 3,118 tons in 1984.

Turkey Production

Turkey production was the major source of income for 71 feed manufacturers. The majority of these manufacturers were located in the Corn Belt, Lake States, and Appalachian regions. Primary feed accounted for 93 percent of the 1.3-million-ton output from turkey producers manufacturing feed. Turkey producers' own

turkeys consumed 96 percent of their feed production in 1984, compared with 87 percent in 1975.

Milling capacity of turkey producers increased from 1.7 million tons in 1975 to 2.6 million tons in 1984. Turkey producers' capacity to produce pelleted feeds rose also to 1.4 million tons. Productivity improved from 2,911 tons per production worker in 1975 to 4,743 tons in 1984. Average employees per manufacturer dropped from 10.5 production workers and 13.2 total employees in 1975 to 3.9 and 9.5 in 1984.

Broiler Production

Feed manufacturers engaged primarily in broiler production numbered 250 in 1984, compared with 77 in 1975. Most of these manufacturers were in the Southeast, Delta, and Appalachian regions. Virtually all of broiler producers' 17.3-million-ton output in 1984 was primary feed, more than double the 7.7 million tons reported in the previous survey. Nearly all (98 percent) of the feed was fed to producers' own chickens. All of the reporting broiler producers manufactured some feed for their own use.

Broiler producers ranked second behind commercial feed manufacturers, whose milling capacity was 27.8 million tons in 1984. Broiler producers' share of U.S. feedmill capacity has grown from 3.6 percent in 1975 to 16.9 percent in 1984, and their capacity to produce pelleted feeds increased from 11 percent to 22 percent during 1975-84. Mills operated by broiler producers reported the highest feed output per employee of all the major feed manufacturers. Although the average number of production workers at these feedmills declined from 16.1 to 9.6, average output increased from 6,302 tons in 1975 to 7,188 tons in 1984.

Egg Production

Egg production was the major source of income for 144 feed manufacturers in 1984. These feed manufacturers, who were evenly distributed by region, produced nearly 2 million tons of formula feed. Primary feed constituted 79 percent of this feed output.

Like the other kinds of poultry, layers are usually part of an integrated facility in which 89 percent of the manufacturers' feed is fed internally, with small feed surpluses sold retail or custom mixed for external consumption. Egg producers' milling capacity was almost 2.5 million tons in 1984, down from 2.7 million in 1975. Feedmills engaged primarily in egg production employed an average of 2.7 production workers and 6.8 total employees. Output per production worker increased from 3,013 tons in 1975 to 5,113 tons in 1984.

INGREDIENT INVENTORIES

In 1984, formula feed manufacturers kept inventories for 43 working days for grains, 18 days for proteins, 20 days for byproduct feeds, 28 days for premixes, and 34 days for drugs. Supplies of ingredients on hand were generally held for a shorter period in the Delta region and for longer periods in the Appalachian and Northern Plains regions. The 1984 average ingredient inventory had declined from the 1975 levels of 62, 20, 25, 30, and 41 working days.

Commercial feed manufacturers generally maintained inventories of grains, proteins, and byproducts for fewer working days than the U.S. average. Grain storage facilities held the largest inventories. The ingredient supplies appear to be shorter in 1984, however, than in 1975. Broiler producers kept the smallest number of working days of grain, protein, and byproduct inventories of the major manufacturers.

METHODOLOGY

In late 1985, survey questionnaires were sent to all known or suspected feed manufacturing establishments in the United States. To be included in the survey, feedmills had to meet two criteria: (1) be involved in grinding and mixing at least two feed ingredients, and (2) have a normal weekly production capacity of 25 tons or more. The mills could manufacture feed for sale, for use in their own feeding operation, or for custom grinding and mixing operations. Data were collected from such large enterprises as cattle feedlots, poultry farms, hog-feeding operations, dairy farms, and commercial mills. About 8,300 surveys were mailed to feed manufacturers identified by a confidential list maintained by USDA's Agricultural Stabilization and Conservation Service (ASCS). Like the 1975 survey, response to the latest survey was not mandatory for recipients of the questionnaire. A copy of the survey form is included at the end of this report.

Mill managers who did not respond to the first mailing were contacted by ASCS county offices nationwide and urged to respond to the survey after receiving a second questionnaire. ERS analysts performed a telephone followup after the first and second mailings to resolve data quality problems including inconsistencies, errors in measurement units, or misinterpretations of questions. About 1,700 feedmills were discovered to be out of business or retail stores, or had addresses that could not be found. Six hundred and sixty of the responses were judged unusable, and about 1,700 were usable for summary purposes. The number of U.S. feed manufacturers actually in business at the time of this survey was determined to be about 6,723. The numbers may not be directly comparable due to a more complete ASCS list in 1984.

Data obtained from the nearly 1,700 usable survey forms were expanded into estimates of the population universe for the entire formula feed industry. Expansion factors were developed by State and by annual production capacity for 13 size classes ranging from less than 1,000 tons to 250,000 tons and above. The factors were derived by comparing the number of manufacturers on the ASCS list with the number of usable survey forms.^{3/} A smaller expansion factor means a higher response rate, while a larger expansion factor means a lower response rate. For example, an expansion factor of 2 indicates a 50-percent response rate, while an expansion factor of 5 indicates only a 20-percent response rate in terms of the number of feed manufacturers.

The overall response rate totals about 43 percent in terms of feed tonnage. Expansion factors for computing feed production for the 48 States are as follows:

^{3/} Mean capacity of respondents was generally found to be only slightly larger than that for all mills.

<u>State</u>	<u>Factor</u>	<u>State</u>	<u>Factor</u>
Connecticut	1.05	Alabama	1.41
Delaware	1.40	Florida	2.62
Maine	1.41	Georgia	1.13
Maryland	1.28	South Carolina	2.90
Massachusetts	1.44	Arkansas	1.98
New Hampshire	1.00	Louisiana	2.27
New Jersey	2.30	Mississippi	1.29
New York	1.88	Oklahoma	2.22
Pennsylvania	1.52	Texas	2.38
Vermont	1.03	Arizona	3.05
Michigan	5.40	Colorado	4.49
Minnesota	3.23	Idaho	8.55
Wisconsin	3.60	Montana	8.53
Illinois	5.09	Nevada	1.90
Indiana	4.01	New Mexico	2.00
Iowa	2.32	Utah	1.77
Missouri	2.35	Wyoming	138.72
Ohio	4.15	California	3.91
Kansas	2.26	Hawaii	1.27
Nebraska	2.84	Oregon	2.19
North Dakota	4.29	Washington	3.11
Kentucky	2.00		
North Carolina	1.29		
Tennessee	1.46		
Virginia	1.52		
West Virginia	4.21		

Despite all efforts to minimize problems with the data, inaccuracies in some tables may remain. The sources of these irregularities in the data are due to: (1) nonresponse bias, where surveys received from respondents may not be representative of the remaining population; (2) any remaining reporting errors caused by misinterpretations of questions on the survey regarding units of measurement; and (3) errors in data entry that have not been corrected. These errors may be compounded in the expansion process. We believe that the level of bias is small for most of the major feed-producing States. However, in States where feed production is more concentrated and survey response was low, the expansion may significantly vary from feed production levels indicated by animal numbers. For instance, we adjusted the total feed production for California to conform with the dairy feed production indicated by milk cow numbers and the State feed tonnage report. Low response rate and the omission of some important feed producers from the original mailing list made this adjustment necessary.

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Table 1--Feed manufacturers producing formula feed, by region and State, 1984

Region and State	Form of ownership				Total
	Corporation	Partnership	Single owner	Farmer cooperative	
	Number				
Northeast:					
Connecticut	0	0	0	9	9
Delaware	13	0	0	0	13
Maine	5	0	0	3	8
Maryland	22	6	13	19	60
Massachusetts	0	0	2	2	4
New Hampshire	1	0	0	1	2
New Jersey	0	0	0	12	12
New York	91	0	9	101	201
Pennsylvania	141	30	43	62	276
Vermont	11	0	0	4	14
Total	285	36	66	212	599
Lake States:					
Michigan	142	11	17	63	233
Minnesota	211	8	27	140	386
Wisconsin	216	27	93	208	544
Total	569	46	137	411	1,163
Corn Belt:					
Illinois	284	0	38	60	382
Indiana	256	7	44	88	395
Iowa	329	6	39	208	583
Missouri	191	5	28	84	307
Ohio	132	20	20	145	316
Total	1191	38	169	585	1,983
Northern Plains:					
Kansas	220	8	13	177	418
Nebraska	204	17	9	70	300
North Dakota	22	0	0	27	49
South Dakota	64	0	17	70	151
Total	510	26	38	344	918
Appalachian:					
Kentucky	93	12	15	31	151
North Carolina	125	8	32	12	177
Tennessee	46	12	15	8	81
Virginia	56	0	4	52	111
West Virginia	6	6	0	11	22
Total	325	37	67	113	542
Southeast:					
Alabama	48	6	0	30	84
Florida	57	0	0	12	69
Georgia	93	0	11	25	129
South Carolina	18	9	9	9	46
Total	216	15	20	77	328
Delta:					
Arkansas	45	3	6	6	60
Louisiana	38	0	0	6	44
Mississippi	48	5	11	16	80
Total	131	8	17	28	184
Southern Plains:					
Oklahoma	74	9	17	31	131
Texas	300	21	50	29	400
Total	374	30	67	60	531
Mountain:					
Arizona	21	0	0	0	21
Colorado	64	10	0	20	94
Idaho	50	0	6	6	63
Montana	33	0	0	13	46
Nevada	4	0	0	0	4
New Mexico	23	0	0	0	23
Utah	25	0	0	13	38
Wyoming	0	7	7	0	14
Total	222	17	13	51	303
Pacific:					
California	77	4	7	4	91
Hawaii	3	0	0	0	3
Oregon	22	11	0	11	43
Washington	13	4	0	18	35
Total	115	19	7	32	172
48-State total 1/	3,936	270	603	1,913	6,723

1/ Some totals may not add due to rounding.

Table 2--Number and production volume of feed manufacturers, by form of ownership, by region and State, 1984

Region and State	Manufacturers	Form of ownership				Total
		Corporation	Partnership	Single owner	Farmer cooperative	
	Number	----- 1,000 tons -----				
Northeast:						
Connecticut	9	0	0	0	349.2	349.2
Delaware	13	773.5	0	0	0	773.5
Maine	8	151.8	0	0	64.7	216.5
Maryland	60	1,329.1	6.2	16.9	196.9	1,549.1
Massachusetts	4	0	0	2.9	113.4	116.3
New Hampshire	2	75.1	0	0	53.1	128.2
New Jersey	12	0	0	0	188.9	188.9
New York	201	1,044.4	0	75.1	1,328.0	2,447.6
Pennsylvania	276	2,345.1	59.1	127.3	469.6	3,001.1
Vermont	14	392.8	0	0	82.7	475.5
Total	599	6,111.9	65.2	222.2	2,846.5	9,245.9
Lake States:						
Michigan	233	1,403.3	129.5	59.4	744.8	2,337.0
Minnesota	386	3,218.4	25.9	97.0	1,339.1	4,680.4
Wisconsin	544	2,726.5	79.1	845.3	2,784.1	6,435.1
Total	1,163	7,348.2	234.5	1,001.7	4,868.0	13,452.4
Corn Belt:						
Illinois	382	2,534.7	0	137.7	734.4	3,406.9
Indiana	395	3,017.9	8.0	56.2	718.4	3,800.4
Iowa	583	4,460.2	25.5	171.5	1,924.1	6,581.4
Missouri	307	3,150.8	7.1	44.7	928.8	4,131.3
Ohio	316	1,526.3	20.7	16.6	879.3	2,442.9
Total	1,983	14,689.9	61.3	426.7	5,184.9	20,362.8
Northern Plains:						
Kansas	418	4,596.2	2.3	9.1	679.6	5,287.2
Nebraska	300	2,898.1	497.7	31.3	440.8	3,867.9
North Dakota	49	244.4	0	0	188.7	433.0
South Dakota	151	610.1	0	45.1	664.2	1,319.4
Total	918	8,348.8	500.0	85.4	1,973.3	10,907.5
Appalachian:						
Kentucky	151	676.1	14.0	16.0	357.1	1,063.3
North Carolina	177	2,604.5	5.1	24.5	476.3	3,110.4
Tennessee	81	1,052.8	48.3	11.7	541.7	1,654.5
Virginia	111	570.1	0	1.5	645.9	1,217.5
West Virginia	22	155.8	4.2	0.0	4.2	164.2
Total	542	5,059.2	71.7	53.7	2,025.3	7,209.9
Southeast:						
Alabama	84	1,566.0	7.1	0	887.0	2,460.0
Florida	69	1,542.9	0	0	835.7	2,378.6
Georgia	129	2,514.1	0	162.0	1,778.4	4,454.5
South Carolina	46	109.7	251.2	8.7	141.5	511.1
Total	328	5,732.7	258.3	170.6	3,642.5	9,804.2
Delta:						
Arkansas	60	2,475.6	15.8	5.9	148.4	2,645.8
Louisiana	44	1,142.0	0	0	163.5	1,305.5
Mississippi	80	1,498.6	3.9	403.6	258.3	2,164.3
Total	184	5,116.2	19.7	409.5	570.2	6,115.6
Southern Plains:						
Oklahoma	131	2,417.7	11.1	37.8	286.7	2,753.3
Texas	400	9,376.8	557.0	576.1	1,078.4	11,588.2
Total	531	11,794.5	568.1	613.9	1,365.0	14,341.5
Mountain:						
Arizona	21	843.0	0	0	0	843.0
Colorado	94	1,601.9	139.5	0	351.0	2,092.4
Idaho	63	921.8	0	8.6	172.3	1,102.7
Montana	46	571.5	0	0	213.2	784.7
Nevada	4	72.1	0	0	0	72.1
New Mexico	23	441.8	0	0	0	441.8
Utah	38	116.5	0	0	192.5	309.0
Wyoming	14	0	0	138.7	0	138.7
Total	303	4,568.7	139.5	147.3	929.0	5,784.5
Pacific:						
California	91	7,891.0	27.5	2,580.6	145.3	10,644.3
Hawaii	3	83.6	0	0	0	83.6
Oregon	43	774.1	6.6	0	17.5	798.3
Washington	35	454.0	96.4	0	289.2	839.7
Total	172	9,202.7	130.5	2,580.6	452.1	12,365.9
48-State total 1/	6,723	77,972.8	2,048.9	5,711.6	23,856.9	109,590.2

1/ Some totals may not add due to rounding.

Table 3--Formula feed: Number of feed manufacturers with only primary, only secondary, and both primary and secondary manufacturing, by region and State, 1984

Region and State	Only primary	Only secondary	Both primary and secondary	Total manufacturers
Number				
Northeast:				
Connecticut	9	0	0	9
Delaware	13	0	0	13
Maine	5	0	3	8
Maryland	41	9	9	60
Massachusetts	2	0	2	4
New Hampshire	2	0	0	2
New Jersey	12	0	0	12
New York	118	28	56	201
Pennsylvania	145	43	89	276
Vermont	14	0	0	14
Total	360	80	159	599
Lake States:				
Michigan	91	74	68	233
Minnesota	203	94	90	386
Wisconsin	174	162	208	544
Total	467	329	366	1,163
Corn Belt:				
Illinois	204	113	65	382
Indiana	219	124	51	395
Iowa	284	151	148	583
Missouri	186	60	60	307
Ohio	151	59	105	316
Total	1,045	508	430	1,983
Northern Plains:				
Kansas	201	134	84	418
Nebraska	209	65	26	300
North Dakota	22	9	18	49
South Dakota	47	77	27	151
Total	479	285	154	918
Appalachian:				
Kentucky	70	39	43	151
North Carolina	125	32	20	177
Tennessee	69	8	4	81
Virginia	67	12	32	111
West Virginia	6	11	6	22
Total	337	102	104	542
Southeast:				
Alabama	66	0	18	84
Florida	65	4	0	69
Georgia	104	11	14	129
South Carolina	37	0	9	46
Total	272	15	41	328
Delta:				
Arkansas	48	3	9	60
Louisiana	38	3	3	44
Mississippi	55	16	9	80
Total	141	22	21	184
Southern Plains:				
Oklahoma	92	22	17	131
Texas	308	46	46	400
Total	400	68	63	531
Mountain:				
Arizona	14	7	0	21
Colorado	79	5	10	94
Idaho	44	6	13	63
Montana	38	8	0	46
Nevada	4	0	0	4
New Mexico	23	0	0	23
Utah	32	0	6	38
Wyoming	7	7	0	14
Total	241	34	29	303
Pacific:				
California	78	0	13	91
Hawaii	3	0	0	3
Oregon	22	0	22	43
Washington	35	0	0	35
Total	137	0	35	172
48-State total 1/	3,878	1,443	1,402	6,723

1/ Some totals may not add due to rounding.

Table 4--Formula feed production from feed manufacturers with only primary, only secondary, and both primary and secondary manufacturing, by region and State, 1984

Region and State	Only primary	Only secondary	Both primary and secondary		Total primary	Total secondary	Total formula feed
			Primary	Secondary			
1,000 tons							
Northeast:							
Connecticut	349.2	0	0	0	349.2	0	349.2
Delaware	773.5	0	0	0	773.5	0	773.5
Maine	151.8	0	63.3	1.4	215.1	1.4	216.5
Maryland	1,504.2	7.7	23.1	14.1	1,527.3	21.8	1,549.1
Massachusetts	113.4	0	2.9	0	116.3	0	116.3
New Hampshire	128.2	0	0	0	128.2	0	128.2
New Jersey	188.9	0	0	0	188.9	0	188.9
New York	1,566.6	71.4	612.4	197.2	2,179.0	268.6	2,447.6
Pennsylvania	2,544.9	159.1	191.0	106.1	2,735.8	265.2	3,001.1
Vermont	475.5	0	0	0	475.5	0	475.5
Total	7,796.2	238.2	892.6	318.9	8,688.8	557.1	9,245.9
Lake States:							
Michigan	1,484.2	356.2	161.9	334.6	1,646.1	690.8	2,337.0
Minnesota	3,442.4	617.4	174.5	446.1	3,617.0	1,063.4	4,680.4
Wisconsin	3,159.9	1,000.5	1,180.5	1,094.1	4,340.4	2,094.6	6,435.1
Total	8,086.6	1,974.1	1,516.9	1,874.8	9,603.5	3,848.9	13,452.4
Corn Belt:							
Illinois	2,368.0	366.7	488.9	183.3	2,856.9	550.0	3,406.9
Indiana	3,383.1	220.7	48.2	148.5	3,431.2	369.2	3,800.4
Iowa	5,155.7	493.8	357.0	574.9	5,512.7	1,068.7	6,581.4
Missouri	3,301.7	256.1	415.9	157.4	3,717.7	413.6	4,131.3
Ohio	1,625.8	290.3	352.5	174.2	1,978.4	464.5	2,442.9
Total	15,834.3	1,627.6	1,662.5	1,238.4	17,496.8	2,866.0	20,362.8
Northern Plains:							
Kansas	3,967.1	1,055.6	104.0	160.5	4,071.0	1,216.1	5,287.2
Nebraska	2,824.2	952.8	59.7	31.3	2,883.9	984.0	3,867.9
North Dakota	192.9	34.3	128.6	77.2	321.6	111.5	433.0
South Dakota	903.7	355.4	33.1	27.1	936.8	382.6	1,319.4
Total	7,887.8	2,398.1	325.5	296.1	8,213.3	2,694.2	10,907.5
Appalachian:							
Kentucky	927.4	34.0	66.0	36.0	993.4	70.0	1,063.3
North Carolina	2,976.5	38.6	82.4	12.9	3,058.9	51.5	3,110.4
Tennessee	1,644.3	10.2	0	0	1,644.3	10.2	1,654.5
Virginia	1,109.8	22.7	54.6	30.3	1,164.4	53.1	1,217.5
West Virginia	0	8.4	126.3	29.5	126.3	37.9	164.2
Total	6,658.0	114.0	329.3	108.6	6,987.3	222.7	7,209.9
Southeast:							
Alabama	2,441.6	0	11.3	7.1	2,452.9	7.1	2,460.0
Florida	2,268.6	110.0	0	0	2,268.6	110.0	2,378.6
Georgia	4,418.5	13.5	12.4	10.1	4,430.9	23.6	4,454.5
South Carolina	502.3	0	8.7	0	511.1	0	511.1
Total	9,631.0	123.5	32.4	17.2	9,663.4	140.7	9,804.2
Delta:							
Arkansas	2,622.0	4.0	7.9	11.9	2,630.0	15.8	2,645.8
Louisiana	1,262.3	6.8	13.6	22.7	1,275.9	29.5	1,305.5
Mississippi	2,125.8	24.4	7.7	6.4	2,133.5	30.8	2,164.3
Total	6,010.1	35.2	29.2	41.0	6,039.4	76.2	6,115.6
Southern Plains:							
Oklahoma	2,055.5	31.1	651.1	15.6	2,706.6	46.7	2,753.3
Texas	8,950.7	2,311.5	216.6	109.5	9,167.3	2,421.0	11,588.2
Total	11,006.2	2,342.6	867.7	125.1	11,873.9	2,467.6	14,341.5
Mountain:							
Arizona	219.9	623.1	0	0	219.9	623.1	843.0
Colorado	2,038.5	4.5	26.9	22.5	2,065.5	26.9	2,092.4
Idaho	880.5	51.3	162.4	8.5	1,042.9	59.8	1,102.7
Montana	716.5	68.2	0.0	0	716.5	68.2	784.7
Nevada	72.1	0	0	0	72.1	0	72.1
New Mexico	441.8	0	0	0	441.8	0	441.8
Utah	238.4	0	67.1	3.5	305.5	3.5	309.0
Wyoming	0	138.7	0	0	0	138.7	138.7
Total	4,607.7	885.9	256.5	34.5	4,864.1	920.4	5,784.5
Pacific:							
California	9,964.2	0	422.2	258.0	10,386.3	258.0	10,644.3
Hawaii	83.6	0	0	0	83.6	0	83.6
Oregon	24.1	0	651.3	122.8	675.4	122.8	798.3
Washington	839.7	0	0	0	839.7	0	839.7
Total	10,911.6	0	1,073.5	380.8	11,985.1	380.8	12,365.9
48-State total	88,429.5	9,739.3	6,986.1	4,435.3	95,415.6	14,174.6	109,590.2

Table 5--Northeast region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1964

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons
Corporation:											
Less than 1,000 tons	6	1.4	0	0	6	0	0	1.4	0	12	1.4
1,000-9,999 tons	40	91.8	15	90.3	18	11.5	15.8	103.2	106.1	74	209.3
10,000-24,999 tons	34	217.9	9	12.9	25	123.3	33.0	341.2	45.9	67	387.1
25,000-49,999 tons	40	559.1	0	0	15	119.0	45.9	678.1	45.9	55	724.0
50,000-74,999 tons	18	428.7	0	0	0	0	0	428.7	0	18	428.7
75,000-99,999 tons	18	425.8	0	0	0	0	0	425.8	0	18	425.8
100,000 tons and more	37	3,763.5	0	0	3	86.0	86.0	3,849.5	86.0	40	3,935.5
Total	193	5,488.2	25	103.2	67	339.8	180.6	5,828.0	283.9	285	6,111.9
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	10	4.5	16	19.7	3	4.5	1.5	9.1	21.2	29	30.3
10,000-24,999 tons	3	7.6	0	0	0	0	0	7.6	0	3	7.6
25,000-49,999 tons	3	27.3	0	0	0	0	0	27.3	0	3	27.3
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	16	39.4	16	19.7	3	4.5	1.5	44.0	21.2	36	65.2
Single owner:											
Less than 1,000 tons	6	1.6	0	0	0	0	0	1.6	0	6	1.6
1,000-9,999 tons	13	24.3	6	14.6	16	4.9	13.0	29.2	27.6	35	56.8
10,000-24,999 tons	13	47.0	0	0	6	27.6	6.5	74.6	6.5	19	81.1
25,000-49,999 tons	3	40.5	0	0	0	0	0	40.5	0	3	40.5
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	3	37.3	4.9	37.3	4.9	3	42.2
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	35	113.5	6	14.6	25	69.7	24.3	183.3	38.9	66	222.2
Farmer cooperative:											
Less than 1,000 tons	3	1.6	3	1.6	3	0	2	1.6	3.1	10	4.7
1,000-9,999 tons	23	34.4	10	20.4	23	20.4	12.5	54.8	32.9	56	87.7
10,000-24,999 tons	20	93.9	13	57.9	20	43.8	28.2	137.8	86.1	53	223.9
25,000-49,999 tons	17	222.3	0	0	7	29.7	17.2	252.1	17.2	23	269.3
50,000-74,999 tons	23	557.4	0	0	3	70.5	1.6	627.9	1.6	27	629.4
75,000-99,999 tons	17	482.2	0	0	0	0	0	482.2	0	17	482.2
100,000 tons and more	17	934.7	3	1.6	7	202.0	11.0	1,136.7	12.5	27	1,149.2
Total	119	2,326.7	30	81.4	63	366.4	72.0	2,693.1	153.4	212	2,846.5
All forms of ownership:											
Less than 1,000 tons	16	4.6	3	1.6	9	0	1.6	4.6	3.1	28	7.8
1,000-9,999 tons	85	155.1	48	145.0	61	41.2	42.8	196.3	187.8	194	384.1
10,000-24,999 tons	69	366.5	22	70.8	51	194.7	67.6	561.2	138.5	143	699.7
25,000-49,999 tons	63	849.3	0	0	22	148.7	63.1	998.1	63.1	85	1,061.2
50,000-74,999 tons	42	986.1	0	0	3	70.5	1.6	1,056.5	1.6	45	1,058.1
75,000-99,999 tons	35	908.1	0	0	3	37.3	4.9	945.4	4.9	38	950.2
100,000 tons and more	53	4,698.2	3	1.6	10	288.0	97.0	4,986.2	98.5	66	5,084.8
Total	363	7,967.9	77	219.0	159	780.5	278.5	8,748.3	497.5	599	9,245.8

Table 6--Lake States region: Production of primary and secondary formula feeds, by forms of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary				Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed	All manufacturers			All formula feed	
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons	
Corporation:												
Less than 1,000 tons	21	7.3	4	3.7	13	0.2	2	7.5	5.3	38	12.8	
1,000-9,999 tons	67	164.3	80	219.1	72	142.4	94.9	306.7	314.0	219	620.7	
10,000-24,999 tons	84	730.3	55	350.5	46	65.7	171.6	796.0	522.1	185	1,318.1	
25,000-49,999 tons	38	803.3	0	0	13	58.4	62.1	861.7	62.1	51	923.8	
50,000-74,999 tons	38	1,234.1	0	0	0	0	0	1,234.1	0	38	1,234.1	
75,000-99,999 tons	21	1,263.3	0	0	0	0	0	1,263.3	0	21	1,263.3	
100,000 tons and more	17	1,975.3	0	0	0	0	0	1,975.3	0	17	1,975.3	
Total	287	6,178.0	139	573.3	143	266.7	330.3	6,444.7	903.5	569	7,348.2	
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	
1,000-9,999 tons	8	34.4	17	30.1	13	4.3	43.0	38.7	73.1	38	111.9	
10,000-24,999 tons	4	21.5	4	101.1	0	0	0	21.5	101.1	8	122.6	
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	
Total	13	55.9	21	131.2	13	4.3	43.0	60.2	174.3	46	234.5	
Single owner:												
Less than 1,000 tons	4	0	0	0	4	0	0	0	0	8	0	
1,000-9,999 tons	16	32.9	28	65.8	24	18.3	62.1	51.2	126.0	69	179.1	
10,000-24,999 tons	12	128.0	28	219.4	12	11.0	76.8	138.9	296.1	52	435.0	
25,000-49,999 tons	4	14.6	0	0	0	0	0	14.6	0	4	14.6	
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	
100,000 tons and more	4	372.9	0	0	0	0	0	372.9	0	4	372.9	
Total	40	548.4	56	285.2	40	29.2	138.9	577.6	424.1	137	1,001.7	
Farmer cooperative:												
Less than 1,000 tons	0	0	4	0	4	0	0	0	0	8	0	
1,000-9,999 tons	65	289.8	57	165.1	77	150.4	638.3	440.2	803.4	199	1,243.6	
10,000-24,999 tons	37	234.8	37	308.1	65	598.0	414.5	832.7	722.7	138	1,555.4	
25,000-49,999 tons	16	388.9	8	165.1	20	359.5	253.1	748.4	418.2	45	1,166.6	
50,000-74,999 tons	12	418.2	0	0	0	0	0	418.2	0	12	418.2	
75,000-99,999 tons	0	0	4	352.2	4	95.4	36.7	95.4	388.9	8	484.2	
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	
Total	130	1,331.6	110	990.5	171	1,203.2	1,342.6	2,534.9	2,333.1	411	4,868.0	
All forms of ownership:												
Less than 1,000 tons	25	7.3	8	3.7	21	0	2	7.5	5.3	54	12.8	
1,000-9,999 tons	157	521.4	182	480.1	186	315.4	838.4	836.8	1,318.5	525	2,155.3	
10,000-24,999 tons	137	1,114.5	124	979.1	124	674.6	662.9	1,789.1	1,642.1	385	3,431.2	
25,000-49,999 tons	58	1,206.8	8	165.1	33	417.9	315.2	1,624.7	480.3	99	2,105.0	
50,000-74,999 tons	50	1,652.3	0	0	0	0	0	1,652.3	0	50	1,652.3	
75,000-99,999 tons	21	1,263.3	4	352.2	4	95.4	36.7	1,358.7	388.9	29	1,747.6	
100,000 tons and more	21	2,348.2	0	0	0	0	0	2,348.2	0	21	2,348.2	
Total	470	8,113.9	326	1,980.1	367	1,503.5	1,854.9	9,617.4	3,835.0	1,163	13,452.4	

Table 7--Corn Belt region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1964

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----		Number	1,000 tons		
Corporation:											
Less than 1,000 tons	14	3.0	14	3.0	19	6.0	6.0	9.0	9.0	47	18.1
1,000-9,999 tons	191	508.7	167	276.9	56	51.2	51.2	559.9	328.1	414	888.0
10,000-24,999 tons	167	1,189.0	93	334.1	70	156.5	174.6	1,345.6	568.7	330	1,854.3
25,000-49,999 tons	144	2,561.7	14	186.6	37	162.6	192.7	2,724.3	379.3	195	3,103.5
50,000-74,999 tons	74	1,785.1	0	0	0	0	0	1,785.1	0	74	1,785.1
75,000-99,999 tons	70	2,814.6	0	0	5	204.7	9.0	3,019.3	9.0	74	3,028.3
100,000 tons and more	51	3,558.1	0	0	5	448.5	6.0	4,006.6	6.0	56	4,012.6
Total	712	12,420.2	288	800.7	191	1,029.5	639.5	13,449.7	1,240.2	1,191	14,689.9
Partnership:											
Less than 1,000 tons	11	2.9	0	0	0	0	0	2.9	0	11	2.9
1,000-9,999 tons	16	20.4	0	0	0	0	0	20.4	0	16	20.4
10,000-24,999 tons	5	29.2	0	0	0	0	0	29.2	0	5	29.2
25,000-49,999 tons	0	0	5	8.8	0	0	0	0	8.8	5	8.8
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	33	52.5	5	8.8	0	0	0	52.5	8.8	38	61.3
Single owner:											
Less than 1,000 tons	5	1	0	0	10	0.8	0.7	1.7	0.7	14	2.4
1,000-9,999 tons	39	42.7	39	79.4	19	12.2	6.1	54.9	85.5	97	140.4
10,000-24,999 tons	24	70.2	19	54.9	10	12.2	33.6	82.4	88.5	53	170.9
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	112.9	0	0	0	0	0	112.9	0	5	112.9
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	72	226.8	58	134.3	39	25.2	40.4	252.0	174.7	169	426.7
Farmer cooperative:											
Less than 1,000 tons	4	0	9	3.0	4	3.0	0	3.0	3.0	17	6.0
1,000-9,999 tons	99	278.9	86	218.9	77	96.0	146.9	374.8	365.9	262	740.7
10,000-24,999 tons	43	326.9	39	203.9	95	353.9	422.8	680.7	626.7	176	1,307.5
25,000-49,999 tons	43	977.6	9	117.0	22	69.0	239.9	1,046.6	356.9	75	1,403.4
50,000-74,999 tons	30	878.6	9	72.0	0	0	0	878.6	72.0	39	950.6
75,000-99,999 tons	9	230.9	0	0	0	0	0	230.9	0	9	230.9
100,000 tons and more	9	545.8	0	0	0	0.0	0.0	545.8	0.0	9	545.8
Total	237	3,238.7	151	614.8	198	521.8	809.7	3,760.5	1,424.4	585	5,184.9
All forms of ownership:											
Less than 1,000 tons	34	6.8	23	6.0	33	9.8	6.7	16.6	12.7	89	29.4
1,000-9,999 tons	345	850.8	292	575.2	153	159.3	204.2	1,010.1	779.4	789	1,789.6
10,000-24,999 tons	240	1,615.3	151	593.0	174	522.6	631.0	2,137.9	1,224.0	565	3,361.9
25,000-49,999 tons	187	3,539.3	28	312.3	59	231.5	432.6	3,770.8	744.9	274	4,515.7
50,000-74,999 tons	109	2,776.7	9	72.0	0	0	0	2,776.7	72.0	118	2,848.6
75,000-99,999 tons	78	3,045.5	0	0	5	204.7	9.0	3,250.2	9.0	83	3,259.2
100,000 tons and more	60	4,103.9	0	0	5	448.5	6.0	4,552.4	6.0	64	4,558.4
Total	1,053	15,938.2	502	1,558.5	427	1,576.5	1,289.6	17,514.7	2,848.1	1,983	20,362.8

Table 8--Northern Plains region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons
Corporation:											
Less than 1,000 tons	4	4.5	21	2.6	0	0	0	4.5	2.6	25	7.1
1,000-9,999 tons	67	193.8	80	304.9	25	28.4	25.8	222.2	330.8	173	553.0
10,000-24,999 tons	84	478.1	30	90.4	13	56.9	10.3	534.9	100.8	126	635.7
25,000-49,999 tons	63	1,033.7	0	0	4	7.8	5.2	1,041.4	5.2	67	1,046.6
50,000-74,999 tons	34	987.2	13	522.0	0	0	0	987.2	522.0	46	1,509.2
75,000-99,999 tons	21	940.6	4	72.4	0	0	0	940.6	72.4	25	1,013.0
100,000 tons and more	38	2,930.5	8	653.8	0	0	0	2,930.5	653.8	46	3,584.2
Total	312	6,568.3	156	1,646.1	42	93.0	41.3	6,661.3	1,687.5	510	8,348.8
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	5	2.9	0	0	5	0	0	2.9	0	10	2.9
10,000-24,999 tons	5	60.1	0	0	0	0	0	60.1	0	5	60.1
25,000-49,999 tons	5	9	0	0	0	0	0	8.6	0	5	8.6
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	5	428.5	0	0	0	0	428.5	5	428.5
Total	16	71.5	5	428.5	5	0	0.0	71.5	428.5	26	500.0
Single owner:											
Less than 1,000 tons	5	2.3	0	0	0	0	0	2.3	0	5	2.3
1,000-9,999 tons	0	0	19	46.2	5	0	4.6	0	50.8	24	50.8
10,000-24,999 tons	0	0	5	4.6	5	16.5	9.2	18.5	13.8	10	32.3
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	5	2.3	24	50.8	10	18.5	13.8	20.8	64.6	38	85.4
Farmer cooperative:											
Less than 1,000 tons	9	2.9	9	5.9	0	0	0	2.9	5.9	17	8.8
1,000-9,999 tons	47	126.3	52	102.8	52	20.6	47.0	146.8	149.8	151	296.6
10,000-24,999 tons	30	190.9	43	170.3	39	111.6	132.1	302.5	302.5	112	604.9
25,000-49,999 tons	22	249.6	9	64.6	13	64.6	79.3	314.2	143.9	43	458.1
50,000-74,999 tons	13	320.1	0	0	0	0	0	320.1	0	13	320.1
75,000-99,999 tons	4	96.9	0	0	0	0	0	96.9	0	4	96.9
100,000 tons and more	4	187.9	0	0	0	0	0	187.9	0	4	187.9
Total	129	1,174.6	112	343.6	103	196.7	258.4	1,371.3	602.0	344	1,973.3
All forms of ownership:											
Less than 1,000 tons	18	9.8	30	8.5	0	0	0	9.8	8.5	47	18.2
1,000-9,999 tons	120	322.9	151	453.9	87	49.0	77.4	371.9	531.3	357	903.2
10,000-24,999 tons	120	729.0	77	265.4	56	186.9	151.7	915.9	417.1	253	1,333.0
25,000-49,999 tons	90	1,291.8	9	64.6	17	72.4	84.5	1,364.2	149.1	116	1,513.3
50,000-74,999 tons	47	1,307.2	13	522.0	0	0	0	1,307.2	522.0	59	1,829.2
75,000-99,999 tons	25	1,037.5	4	72.4	0	0	0	1,037.5	72.4	30	1,109.9
100,000 tons and more	42	3,118.4	14	1,082.3	0	0	0	3,118.4	1,082.3	56	4,200.7
Total	461	7,816.7	297	2,469.0	160	308.2	313.6	8,124.9	2,782.6	918	10,907.5

Table 9--Appalachian region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----		Number	1,000 tons		
Corporation:											
Less than 1,000 tons	0	0	0	0	12	1.4	0	1.4	0	12	1.4
1,000-9,999 tons	48	108.7	32	47.8	20	4.3	15.9	113.0	63.8	100	176.8
10,000-24,999 tons	44	195.6	4	2.9	8	10.1	10.1	205.8	13.0	56	218.8
25,000-49,999 tons	28	256.5	4	18.8	12	50.7	18.8	307.2	37.7	44	344.9
50,000-74,999 tons	32	507.2	0	0	8	115.9	11.6	623.2	11.6	40	634.8
75,000-99,999 tons	16	443.5	0	0	0	0	0	443.5	0	16	443.5
100,000 tons and more	56	3,239.0	0	0	0	0	0	3,239.0	0	56	3,239.0
Total	225	4,750.5	40	69.6	60	182.6	56.5	4,933.1	126.1	325	5,059.2
Partnership:											
Less than 1,000 tons	0	0	0	0	4	0	0	0	0	4	0
1,000-9,999 tons	4	4.8	8	4.8	4	1.6	4.8	6.4	9.6	16	15.9
10,000-24,999 tons	8	51.0	8	4.8	0	0.0	0.0	51.0	4.8	16	55.8
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	12	55.8	16	9.6	8	1.6	4.8	57.4	14.3	37	71.7
Single owner:											
Less than 1,000 tons	4	0	4	0.3	0	0	0	0	0.3	8	0.3
1,000-9,999 tons	16	22.4	20	13.9	12	3.1	4.6	25.5	18.6	47	44.1
10,000-24,999 tons	8	6.2	0	0	0	0	0	6.2	0	8	6.2
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	4	3.1	0	0	0	0	0	3.1	0	4	3.1
Total	32	31.7	24	14.2	12	3.1	4.6	34.8	18.9	67	53.7
Farmer cooperative:											
Less than 1,000 tons	8	1.5	8	1.5	8	1.5	0	3.0	1.5	24	4.5
1,000-9,999 tons	4	6.0	8	1.5	12	4.5	6.0	10.5	7.5	24	18.1
10,000-24,999 tons	0	0	4	6.0	0	0	0	0	6.0	4	6.0
25,000-49,999 tons	16	108.3	0	0	4	45.1	7.5	153.5	7.5	20	161.0
50,000-74,999 tons	4	91.8	0	0	0	0	0	91.8	0	4	91.8
75,000-99,999 tons	8	136.9	0	0	0	0	0	136.9	0	8	136.9
100,000 tons and more	28	1,607.0	0	0	0	0	0	1,607.0	0	28	1,607.0
Total	69	1,951.6	20	9.0	24	51.2	13.5	2,002.7	22.6	113	2,025.3
All forms of ownership:											
Less than 1,000 tons	12	1.5	12	1.8	24	3.0	0.0	4.5	1.8	48	6.3
1,000-9,999 tons	72	141.9	68	68.0	48	13.6	31.4	155.5	99.4	188	254.9
10,000-24,999 tons	60	252.8	16	13.7	8	10.1	10.1	263.0	23.8	85	286.8
25,000-49,999 tons	44	364.8	4	18.8	16	95.9	26.4	460.7	45.2	64	505.9
50,000-74,999 tons	36	599.0	0	0	8	115.9	11.6	714.9	11.6	44	726.5
75,000-99,999 tons	24	580.4	0	0	0	0	0	580.4	0	24	580.4
100,000 tons and more	88	4,849.1	0	0	0	0	0	4,849.1	0	88	4,849.1
Total	337	6,789.6	100	102.4	104	238.4	79.5	7,028.0	181.9	542	7,209.9

Table 10--Southeast region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----		Number	1,000 tons		
Corporation:											
Less than 1,000 tons	8	1.4	0	0	0	0.0	0	1.4	0	8	1.4
1,000-9,999 tons	4	8.7	11	11.6	19	15.9	13.0	24.5	24.5	34	49.1
10,000-24,999 tons	23	89.5	4	7.2	4	4.3	0	93.9	7.7	30	101.5
25,000-49,999 tons	34	313.3	4	60.6	0	0	0	313.3	60.6	38	374.0
50,000-74,999 tons	19	248.4	0	0	0	0	0	248.4	0	19	248.4
75,000-99,999 tons	27	622.3	0	0	0	0	0	622.3	0	27	622.3
100,000 tons and more	61	4,336.0	0	0	0	0	0	4,336.0	0	61	4,336.0
Total	174	5,619.6	19	79.4	23	20.2	13.4	5,639.9	92.8	216	5,732.7
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	8	7.2	6.4	7.2	6.4	8	13.6
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	8	244.7	0	0	0	0	0	244.7	0	8	244.7
Total	8	244.7	0	0	8	7.2	6.4	251.9	6.4	15	258.3
Single owner:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	8.1	0	0	0	0	0	8.1	0	8	8.1
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	4	48.7	0	0	0	0	0	48.7	0	4	48.7
75,000-99,999 tons	4	23.2	0	0	0	0	0	23.2	0	4	23.2
100,000 tons and more	4	90.5	0	0	0	0	0	90.5	0	4	90.5
Total	20	170.6	0	0	0	0	0	170.6	0	20	170.6
Farmer cooperative:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	4	7	1.4	7	1.4	4	8.7
10,000-24,999 tons	0	0	0	0	4	7.1	2.8	7.1	2.8	4	9.9
25,000-49,999 tons	4	11.3	0	0	0	0	0	11.3	0	4	11.3
50,000-74,999 tons	17	1,068.7	0	0	0	0	0	1,068.7	0	17	1,068.7
75,000-99,999 tons	4	117.2	0	0	0	0	0	117.2	0	4	117.2
100,000 tons and more	43	2,426.8	0	0	0	0	0	2,426.8	0	43	2,426.8
Total	68	3,623.9	0	0	9	14.3	4.2	3,638.3	4.2	77	3,642.5
All forms of ownership:											
Less than 1,000 tons	8	1.4	0	0	0	0	0	1.4	0	8	1.4
1,000-9,999 tons	12	16.8	11	11.6	31	30.4	20.8	47.2	32.4	54	79.6
10,000-24,999 tons	23	89.5	4	7.2	8	11.4	3.3	100.9	10.5	35	111.4
25,000-49,999 tons	38	324.6	4	60.6	0	0	0	324.6	60.6	42	385.3
50,000-74,999 tons	40	1,365.8	0	0	0	0	0	1,365.8	0	40	1,365.8
75,000-99,999 tons	35	762.7	0	0	0	0	0	762.7	0	35	762.7
100,000 tons and more	115	7,098.0	0	0	0	0	0	7,098.0	0	115	7,098.0
Total	270	9,658.8	19	79.4	39	41.8	24.1	9,700.6	103.5	328	9,804.1

Table 11--Delta region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons
Corporation:											
Less than 1,000 tons	3	3.2	0	0	0	0	0	3.2	0	3	3.2
1,000-9,999 tons	16	33.3	5	10.5	14	22.8	22.8	56.0	33.3	35	89.3
10,000-24,999 tons	8	56.0	0	0	0	0	0	56.0	0	8	56.0
25,000-49,999 tons	25	444.6	0	0	0	0	0	444.6	0	25	444.6
50,000-74,999 tons	22	626.7	0	0	0	0	0	626.7	0	22	626.7
75,000-99,999 tons	3	162.8	0	0	0	0	0	162.8	0	3	162.8
100,000 tons and more	35	3,733.7	0	0	0	0	0	3,733.7	0	35	3,733.7
Total	112	5,060.2	5	10.5	14	22.8	22.8	5,082.9	33.3	131	5,116.2
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	4	0	3.9	0	3.9	4	3.9
10,000-24,999 tons	0	0	0	0	4	5.9	9.9	5.9	9.9	4	15.8
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	8	5.9	13.8	5.9	13.8	8	19.7
Single owner:											
Less than 1,000 tons	0	0	2	0	0	0	0	0	0	2	0
1,000-9,999 tons	2	1.3	5	3.9	0	0	0	1.3	3.9	7	5.1
10,000-24,999 tons	0	0	0	0	2	1.3	1.3	1.3	1.3	2	2.6
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	2	92.4	0	0	0	0	0	92.4	0	2	92.4
100,000 tons and more	2	309.4	0	0	0	0	0	309.4	0	2	309.4
Total	7	403.1	7	3.9	2	1.3	1.3	404.4	5.1	17	409.5
Farmer cooperative:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	126.3	5	21.3	0	0	0	126.3	21.3	13	147.6
10,000-24,999 tons	3	1.6	3	3.3	0	0	0	1.6	3.3	5	4.9
25,000-49,999 tons	5	101.7	0	0	0	0	0	101.7	0	5	101.7
50,000-74,999 tons	3	77.1	0	0	0	0	0	77.1	0	3	77.1
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	3	238.8	0	0	0	0	0	238.8	0	3	238.8
Total	20	545.6	8	24.6	0	0	0	545.6	24.6	28	570.2
All forms of ownership:											
Less than 1,000 tons	3	3.2	2	0	0	0	0	3.2	0	5	3.2
1,000-9,999 tons	26	160.9	15	35.7	18	22.8	26.7	183.6	62.4	59	246.0
10,000-24,999 tons	11	57.7	3	3.3	6	7.2	11.1	64.8	14.4	20	79.3
25,000-49,999 tons	30	546.3	0	0	0	0	0	546.3	0	30	546.3
50,000-74,999 tons	24	703.8	0	0	0	0	0	703.8	0	24	703.8
75,000-99,999 tons	5	255.2	0	0	0	0	0	255.2	0	5	255.2
100,000 tons and more	40	4,281.9	0	0	0	0	0	4,281.9	0	40	4,281.9
Total	140	6,008.9	20	39.0	24	29.9	37.8	6,038.8	76.8	184	6,115.6

Table 12--Southern Plains region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons
Corporation:											
Less than 1,000 tons	8	2.3	4	2.3	0	0	0	2.3	2.3	13	4.7
1,000-9,999 tons	59	100.9	17	117.3	21	18.8	7.0	119.7	124.4	97	244.1
10,000-24,999 tons	42	330.9	0	0	8	14.1	23.5	345.0	23.5	50	368.4
25,000-49,999 tons	50	891.7	4	82.1	4	61.0	61.0	952.8	143.1	59	1,095.9
50,000-74,999 tons	29	706.4	0	0	0	0	0	706.4	0.0	29	706.4
75,000-99,999 tons	25	1,053.7	0	0	4	117.3	4.7	1,171.0	4.7	29	1,175.7
100,000 tons and more	80	6,587.2	13	934.0	4	666.5	11.7	7,253.6	945.7	97	8,199.4
Total	294	9,673.1	38	1,135.8	42	877.7	107.9	10,550.8	1,243.7	374	11,794.5
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	6.9	0	0	4	5.2	0	12.1	0	9	12.1
10,000-24,999 tons	13	106.9	0	0	0	0	0	106.9	0	13	106.9
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	4	135.4	0	0	0	0	0	135.4	0	4	135.4
75,000-99,999 tons	4	313.5	0	0	0	0	0	313.5	0	4	313.5
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	26	562.7	0	0	4	5.2	0	567.9	0	30	568.1
Single owner:											
Less than 1,000 tons	4	0	0	0	0	0	0	0	0	4	0
1,000-9,999 tons	22	31.0	13	11.9	9	16.7	9.5	47.7	21.5	45	69.2
10,000-24,999 tons	4	14.3	0	0	4	2.4	4.8	16.7	4.8	9	21.5
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	4	198.5	0	0	0	0	0	198.5	0	4	198.5
100,000 tons and more	0	0	4	324.7	0	0	0	0	0	4	324.7
Total	36	243.9	18	336.6	13	19.1	14.3	263.0	350.9	67	613.9
Farmer cooperative:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	4.6	9	22.2	4	0	0	4.6	22.2	17	26.8
10,000-24,999 tons	13	30.2	0	0	0	0	0	30.2	0	13	30.2
25,000-49,999 tons	17	278.5	0	0	0	0	0	278.5	0	17	278.5
50,000-74,999 tons	4	97.5	0	0	0	0	0	97.5	0	4	97.5
75,000-99,999 tons	4	104.5	0	0	0	0	0	104.5	0	4	104.5
100,000 tons and more	0	0	4	812.4	0	0	0	0	812.4	4	812.4
Total	43	515.3	13	834.6	4	1	14	516.5	848.5	60	1,365.0
All forms of ownership:											
Less than 1,000 tons	13	2.3	4	2.3	0	0	0	2.3	2.3	17	4.7
1,000-9,999 tons	90	143.5	39	151.5	39	40.7	16.6	184.2	168.1	167	352.2
10,000-24,999 tons	72	482.3	0	0	13	16.5	28.2	498.7	28.2	85	527.0
25,000-49,999 tons	68	1,170.3	4	82.1	4	61.0	61.0	1,231.3	143.1	76	1,374.4
50,000-74,999 tons	38	939.2	0	0	0	0	0	939.2	0	38	939.2
75,000-99,999 tons	38	1,670.2	0	0	4	117.3	4.7	1,787.5	4.7	42	1,792.2
100,000 tons and more	80	6,587.2	21	2,071.1	4	666.5	11.7	7,253.6	2,082.8	105	9,336.4
Total	398	10,995.0	69	2,307.0	64	903.1	136.4	11,898.1	2,443.4	531	14,341.5

Table 13--Mountain region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----		Number	1,000 tons		
Corporation:											
Less than 1,000 tons	10	3.8	0	0	0	0	0	3.8	0	10	3.8
1,000-9,999 tons	44	229.9	15	30.7	10	19.2	11.5	249.1	42.1	69	291.2
10,000-24,999 tons	35	310.4	0	0	5	57.1	1.0	367.5	1.0	39	368.4
25,000-49,999 tons	39	915.8	0	0	10	165.5	19.2	1,081.3	19.2	49	1,100.5
50,000-74,999 tons	35	1,394.7	0	0	0	0	0	1,394.7	0	35	1,394.7
75,000-99,999 tons	10	387.0	5	241.4	0	0	0	387.0	241.4	15	628.4
100,000 tons and more	0	0	5	781.7	0	0	0	0	781.7	5	781.7
Total	173	3,241.6	25	1,053.7	25	241.8	31.6	3,483.4	1,085.3	222	4,568.7
Partnership:											
Less than 1,000 tons	6	0	0	0	0	0	0	0	0	6	0.0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
10,000-24,999 tons	6	72.0	0	0	0	0	0	72.0	0	6	72.0
25,000-49,999 tons	6	67.5	0	0	0	0	0	67.5	0	6	67.5
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0.0
Total	17	139.5	0	0	0	0.0	0.0	139.5	0	17	139.5
Single owner:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0.0
1,000-9,999 tons	0	0	7	63.6	0	0	0	0	63.6	7	63.6
10,000-24,999 tons	7	83.7	0	0	0	0	0	83.7	0	7	83.7
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0.0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0.0
Total	7	83.7	7	63.6	0	0	0	83.7	63.6	13	147.3
Farmer cooperative:											
Less than 1,000 tons	0	0.0	0	0	0	0	0	0	0	0	0.0
1,000-9,999 tons	0	0.0	5	24.1	0	0	0	0	24.1	5	24.1
10,000-24,999 tons	36	313.7	0	0	0	0	0	313.7	0	36	313.7
25,000-49,999 tons	0	0.0	0	0	0	0	0	0	0	0	0.0
50,000-74,999 tons	5	209.1	0	0	0	0	0	209.1	0	5	209.1
75,000-99,999 tons	0	0.0	0	0	0	0	0	0	0	0	0.0
100,000 tons and more	5	382.1	0	0	0	0	0	382.1	0	5	382.1
Total	46	904.9	5	24.1	0	0	0	904.9	24.1	51	929.0
All forms of ownership:											
Less than 1,000 tons	16	3.8	0	0	0	0	0	3.8	0	16	3.8
1,000-9,999 tons	44	229.9	26	118.4	10	19.2	11.5	249.1	129.9	81	379.0
10,000-24,999 tons	82	779.7	0	0	5	57.1	1.0	836.8	1.0	87	837.8
25,000-49,999 tons	45	983.3	0	0	10	165.5	19.2	1,148.8	19.2	55	1,168.0
50,000-74,999 tons	40	1,603.9	0	0	0	0	0	1,603.9	0.0	40	1,603.9
75,000-99,999 tons	10	387.0	5	241.4	0	0	0	387.0	241.4	15	628.4
100,000 tons and more	5	382.1	5	781.7	0	0	0	382.1	781.7	10	1,163.7
Total	242	4,369.6	36	1,141.5	25	241.8	31.6	4,611.4	1,173.1	303	5,784.5

Table 14--Pacific region: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total production			
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed	Total primary feed	Total secondary feed	All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----				Number	1,000 tons
Corporation:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	12	60.8	0	0	0	0	0	60.8	0	12	60.8
10,000-24,999 tons	12	175.3	0	0	4	46.5	75.1	221.8	75.1	16	296.9
25,000-49,999 tons	16	465.0	0	0	4	75.1	0	540.1	0	21	540.1
50,000-74,999 tons	4	114.5	0	0	4	171.7	89.4	286.1	89.4	8	375.5
75,000-99,999 tons	8	411.3	0	0	4	89.4	139.5	500.7	139.5	12	640.2
100,000 tons and more	37	6,098.2	0	0	8	1,062.3	128.8	7,160.4	128.8	45	7,289.2
Total	90	7,325.0	0	0	25	1,445.0	432.8	8,769.9	432.8	115	9,202.7
Partnership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	6	9.5	0	0	0	0	0	9.5	0.0	6	9.5
10,000-24,999 tons	6	22.3	0	0	0	0	0	22.3	0.0	6	22.3
25,000-49,999 tons	6	98.7	0	0	0	0	0	98.7	0.0	6	98.7
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	19	130.5	0	0	0	0	0	130.5	0.0	19	130.5
Single owner:											
Less than 1,000 tons	0	0	0	0	0	0	0	0.0	0	0	0
1,000-9,999 tons	0	0	0	0	0	0	0	0.0	0	0	0
10,000-24,999 tons	4	51.1	0	0	0	0	0	51.1	0	4	51.1
25,000-49,999 tons	0	0	0	0	0	0	0	0.0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0.0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0.0	0	0	0
100,000 tons and more	4	2,529.5	0	0	0	0	0	2,529.5	0	4	2,529.5
Total	7	2,580.6	0	0	0	0	0	2,580.6	0	7	2,580.6
Farmer cooperative:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	5	26.2	0	0	0	0	0	26.2	0	5	26.2
10,000-24,999 tons	5	75.4	0	0	0	0	0	75.4	0	5	75.4
25,000-49,999 tons	16	229.3	0	0	0	0	0	229.3	0	16	229.3
50,000-74,999 tons	5	121.2	0	0	0	0	0	121.2	0	5	121.2
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0
Total	32	452.1	0	0	0	0	0	452.1	0	32	452.1
All forms of ownership:											
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	24	96.6	0	0	0	0	0	96.6	0	24	96.6
10,000-24,999 tons	27	323.9	0	0	4	46.5	75.1	370.4	75.1	32	445.6
25,000-49,999 tons	39	793.0	0	0	4	75.1	0	868.1	0	43	868.1
50,000-74,999 tons	9	235.7	0	0	4	171.7	89.4	407.3	89.4	14	496.8
75,000-99,999 tons	8	411.3	0	0	4	89.4	139.5	500.7	139.5	12	640.2
100,000 tons and more	40	8,627.7	0	0	8	1,062.3	128.8	9,690.0	128.8	49	9,818.7
Total	148	10,488.2	0	0	25	1,445.0	432.8	11,933.1	432.8	173	12,365.9

Table 15--United States: Production of primary and secondary formula feeds, by form of ownership and capacity size, 1984

Form of ownership and capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----		Number	1,000 tons		
Corporation:											
Less than 1,000 tons	74	19.4	43	11.6	49	7.5	6.0	26.8	17.6	167	44.5
1,000-9,999 tons	549	1,501.1	424	1,109.4	255	314.5	258.0	1,815.5	1367	1,228	3,182.9
10,000-24,999 tons	534	3,773.5	194	798.3	183	535.0	498.3	4,308.5	1,296.5	911	5,605.1
25,000-49,999 tons	478	8,246.1	26	348.3	100	699.4	404.8	8,945.4	753.1	604	9,698.5
50,000-74,999 tons	305	8,034.5	13	522.3	12	287.6	101.0	8,322.1	623.3	330	8,945.4
75,000-99,999 tons	219	8,526.0	9	313.9	13	411.4	153.2	8,937.4	467.1	241	9,404.5
100,000 tons and more	412	36,226.1	26	2,370.0	20	2,263.3	232.5	38,489.4	2,602.6	458	41,092.0
Total	2,571	66,326.6	735	5,473.7	632	4,518.7	1,653.9	70,845.3	7,127.5	3,938	77,972.8
Partnership:											
Less than 1,000 tons	17	2.9	0	0	4	0	0	2.9	0	21	2.9
1,000-9,999 tons	54	83.4	41	54.3	41	23.6	58.5	107.0	112.8	137	219.8
10,000-24,999 tons	51	370.3	12	107.1	4	5.9	9.9	376.2	117.0	68	493.2
25,000-49,999 tons	20	202.0	5	8.8	0	0	0	202.0	8.8	26	210.8
50,000-74,999 tons	4	135.5	0	0	0	0	0	135.5	0	4	135.5
75,000-99,999 tons	4	313.8	0	0	0	0	0	313.8	0	4	313.8
100,000 tons and more	8	244.3	5	428.6	0	0	0	244.3	429	13	672.8
Total	159	1,352.2	64	598.8	49	29.5	68.3	1,381.7	667.1	272	2,048.8
Single owner:											
Less than 1,000 tons	28	6.1	6	0	14	0	0	6.1	0	48	6.1
1,000-9,999 tons	116	163.7	137	308.4	85	55.2	99.9	218.9	408.3	337	627.2
10,000-24,999 tons	71	390.8	52	279.1	40	72.5	132.1	463.2	411.2	163	874.4
25,000-49,999 tons	7	55.2	0	0	0	0	0	55.2	0	7	55.2
50,000-74,999 tons	9	162.3	0	0	0	0	0	162.3	0	9	162.3
75,000-99,999 tons	11	313.9	0	0	3	37.3	4.9	351.2	4.9	14	356.1
100,000 tons and more	18	3,305.4	4	324.9	0	0	0	3,305.4	324.9	22	3,630.3
Total	260	4,397.4	200	912.4	141	165.0	236.9	4,562.4	1,149.2	601	5,711.6
Farmer cooperative:											
Less than 1,000 tons	24	6.0	33	11.9	20	4.5	1.6	10.5	13.5	77	24.0
1,000-9,999 tons	256	892.5	231	577.5	250	291.8	852.2	1,184.3	1,429.7	737	2,614.0
10,000-24,999 tons	186	1,267.6	138	749.6	223	1,114.3	1,000.5	2,381.9	1,750.1	547	4,132.1
25,000-49,999 tons	156	2,570.4	25	346.6	65	568.0	597.1	3,138.4	943.7	247	4,082.1
50,000-74,999 tons	117	3,842.8	9	72.0	3	70.5	1.6	3,913.2	73.5	129	3,986.8
75,000-99,999 tons	46	1,169.9	4	352.2	4	95.4	36.7	1,265.3	388.9	54	1,654.2
100,000 tons and more	108	6,328.4	8	822.4	7	202.0	11.0	6,530.3	833.4	122	7,363.7
Total	893	16,077.6	448	2,932.3	572	2,346.4	2,500.5	18,424.0	5,432.8	1,913	23,856.8
All forms of ownership:											
Less than 1,000 tons	143	34	82	23.5	87	12.0	7.6	46.4	31.1	313	77.5
1,000-9,999 tons	975	2,640.6	833	2,049.6	631	685.0	1,268.6	3,325.7	3,318.2	2,439	6,643.9
10,000-24,999 tons	842	5,802.3	397	1,934.1	449	1,727.7	1,640.7	7,530.0	3,574.8	1,688	11,104.8
25,000-49,999 tons	662	11,073.7	57	703.6	165	1,267.4	1,001.9	12,341.0	1,705.5	884	14,046.5
50,000-74,999 tons	435	12,175.1	21	594.3	15	358.1	102.6	12,533.1	696.8	472	13,230.0
75,000-99,999 tons	280	10,323.6	13	666.0	20	544.1	194.8	10,867.7	860.8	314	11,728.5
100,000 tons and more	545	46,104.2	43	3,945.9	27	2,465.3	243.5	48,569.4	4,189.4	615	52,758.8
Total	3,883	88,153.8	1,447	9,917.1	1,394	7,059.5	4,459.6	95,213.3	14,376.7	6,724	109,590.0

Table 16--United States: Production of primary and secondary formula feeds, by capacity size, 1984

Capacity size	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons				Number	1,000 tons
Less than 1,000 tons	143	39.2	83	23.5	87	11.9	7.6	46.6	31.1	313	82.2
1,000-9,999 tons	980	2,645.0	837	2,039.4	634	673.6	1,269.7	3,288.3	3,322.8	2,451	6,610.9
10,000-24,999 tons	831	5,618.9	399	1,932.2	453	2,363.4	1,590.5	7,965.3	3,567.6	1,682	11,502.7
25,000-49,999 tons	655	10,715.8	57	702.3	166	1,281.0	1,002.2	11,979.7	1,986.0	878	13,701.4
50,000-74,999 tons	418	11,228.4	22	593.4	15	358.0	102.6	11,582.2	794.5	455	12,282.5
75,000-99,999 tons	282	10,023.5	8	424.6	20	544.1	194.8	10,558.9	923.1	311	11,186.9
100,000 tons and more	560	47,370.6	43	2,851.8	27	1,840.2	291.9	49,210.8	3,134.9	631	52,354.5
Total	3,869	88,327.1	1,449	9,717.6	1,403	7,073.7	4,454.5	95,400.8	14,172.1	6,721	109,573.0
Percent distribution (column)											
Less than 1,000 tons	3.7	2/	5.7	0.2	6.2	0.2	0.2	2/	0.2	4.7	0.1
1,000-9,999 tons	25.3	3.0	57.8	21.0	45.2	9.5	28.5	3.4	23.4	36.5	6.0
10,000-24,999 tons	21.5	6.4	27.5	19.9	32.3	33.4	35.7	8.3	25.2	25.0	10.5
25,000-49,999 tons	16.9	12.1	3.9	7.2	11.8	18.1	22.5	12.6	14.0	13.1	12.5
50,000-74,999 tons	10.8	12.7	1.5	6.1	1.1	5.1	2.3	12.1	5.6	6.8	11.2
75,000-99,999 tons	7.3	11.3	0.6	4.4	1.4	7.7	4.4	11.1	6.5	4.6	10.2
100,000 tons and more	14.5	53.6	3.0	29.3	1.9	26.0	6.6	51.6	22.1	9.4	47.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)											
Less than 1,000 tons	45.7	47.6	26.4	28.6	27.8	14.5	9.2	56.7	37.8	100.0	100.0
1,000-9,999 tons	40.0	40.0	34.1	30.8	25.9	10.2	19.2	49.7	50.3	100.0	100.0
10,000-24,999 tons	49.4	48.8	23.7	16.8	26.9	20.5	13.8	69.2	31.0	100.0	100.0
25,000-49,999 tons	74.6	78.2	6.5	5.1	18.9	9.3	7.3	87.4	14.5	100.0	100.0
50,000-74,999 tons	91.9	91.4	4.8	4.8	3.4	2.9	0.8	94.3	6.5	100.0	100.0
75,000-99,999 tons	90.8	89.6	2.7	3.8	6.5	4.9	1.7	94.4	8.3	100.0	100.0
100,000 tons and more	88.9	90.5	6.8	5.4	4.3	3.5	0.6	94.0	6.0	100.0	100.0
Total	57.6	80.6	21.6	8.9	20.9	6.5	4.1	87.1	12.9	100.0	100.0

2/ Less than .1 percent.

Table 17--Production of primary and secondary formula feeds, by form of ownership, United States, 1984

Form of ownership	Primary production		Secondary production		Both primary and secondary			Total primary feed	Total secondary feed	Total production	
	Manufacturers	Primary feed only	Manufacturers	Secondary feed only	Manufacturers	Primary feed	Secondary feed			All manufacturers	All formula feed
	Number	1,000 tons	Number	1,000 tons	Number	-----1,000 tons-----			Number	1,000 tons	
Corporation	2,575	66,478.9	730	5,281.4	632	4,547.3	1,663.7	71,026.2	6,945.2	3,938	77,971.4
Partnership	159	1,351.0	64	598.6	49	29.5	68.2	1,380.4	666.8	272	2,047.2
Single owner	260	4,397.4	200	912.4	141	165.0	236.9	4,562.4	1,149.2	601	5,711.6
Farmer cooperative	875	16,099.9	458	2,928.4	580	2,338.9	2,489.7	18,438.7	5,418.1	1,913	23,856.8
Total	3,869	88,327.1	1,449	9,717.6	1,403	7,073.7	4,454.5	95,400.8	14,172.1	6,721	109,573.0
Percent distribution (column)											
Corporation	66.6	75.3	50.4	54.3	45.1	64.3	37.3	74.5	49.0	58.6	71.2
Partnership	4.1	1.5	4.4	6.2	3.5	0.4	1.5	1.4	4.7	4.0	1.9
Single owner	6.7	5.0	13.8	9.4	10.1	2.3	5.3	4.8	8.1	8.9	5.2
Farmer cooperative	22.6	18.2	31.6	30.1	41.4	33.1	55.9	19.3	38.2	28.5	21.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)											
Corporation	65.4	85.3	18.5	6.8	16.1	5.8	2.1	91.1	8.9	100.0	100.0
Partnership	58.3	66.0	23.7	29.2	18.0	1.4	3.3	67.4	32.6	100.0	100.0
Single owner	43.3	77.0	33.2	16.0	23.5	2.9	4.1	79.9	20.1	100.0	100.0
Farmer cooperative	45.8	67.5	23.9	12.3	30.3	9.8	10.4	77.3	22.7	100.0	100.0
Total	57.6	80.6	21.6	8.9	20.9	6.5	4.1	87.1	12.9	100.0	100.0

Table 18--Formula feed from primary manufacturing: Production by livestock type, by region and State, 1984

Region and State	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hogs	Horse	All other	Total
Tons									
Northeast:									
Connecticut	179,918	5,892	4,593	143,725	1,047	2,048	3,360	8,621	349,204
Delaware	93,032	647,409	422	20,616	34	9,278	2,389	337	773,515
Maine	12,022	0	0	203,078	0	0	0	0	215,100
Maryland	790,675	547,268	333	123,159	5,868	17,160	34,701	8,136	1,527,300
Massachusetts	56,792	37	1,567	55,461	490	742	1,112	89	116,291
New Hampshire	16,113	6,398	5,029	52,519	3,518	4,611	25,011	15,049	128,248
New Jersey	17,001	8,497	2,832	37,774	28,330	28,185	56,660	9,592	188,871
New York	203,656	3,469	6,587	1,721,401	44,405	37,804	80,918	80,918	2,179,000
Pennsylvania	616,088	591,383	229,929	839,009	58,693	224,962	110,676	65,060	2,735,800
Vermont	21,381	1,416	2,582	367,806	2,932	7,131	30,666	41,582	475,496
Total	2,006,678	1,811,768	253,874	3,564,548	145,317	331,920	345,493	229,226	8,688,825
Lake States:									
Michigan	513,845	24,985	134,066	424,146	64,305	408,987	38,911	36,855	1,646,100
Minnesota	535,944	404,819	800,378	548,870	194,576	916,258	103,669	112,486	3,617,000
Wisconsin	363,900	5,838	691,781	2,408,623	149,809	530,084	33,118	157,247	4,340,400
Total	1,413,689	435,642	1,626,225	3,381,639	408,690	1,855,329	175,698	306,588	9,603,500
Corn Belt:									
Illinois	162,440	21,149	14,904	405,541	365,072	1,714,484	63,041	110,270	2,856,900
Indiana	471,198	20,050	26,422	531,476	209,922	1,354,662	80,053	737,419	3,431,200
Iowa	323,184	14,683	188,301	492,038	783,008	3,510,643	29,520	171,324	5,512,700
Missouri	240,240	668,340	546,924	626,998	647,458	828,494	44,601	114,645	3,717,700
Ohio	247,025	2,549	98,432	611,544	149,637	491,245	101,875	276,093	1,978,400
Total	1,444,086	726,770	874,983	2,667,596	2,155,697	7,899,528	319,089	1,409,750	17,496,900
Northern Plains:									
Kansas	112,875	9,568	5,993	418,266	3,045,894	287,535	45,036	145,833	4,071,000
Nebraska	101,546	97,983	45,600	94,002	960,491	1,516,496	13,365	54,416	2,883,900
North Dakota	6,764	615	496	79,248	170,708	34,613	5,007	24,149	321,600
South Dakota	45,607	3,476	12,876	74,283	443,665	325,287	3,256	28,349	936,800
Total	266,792	111,642	64,965	665,799	4,620,759	2,163,931	66,664	252,747	8,213,300
Appalachian:									
Kentucky	123,779	13,137	2,810	473,488	66,755	191,759	51,671	70,000	993,400
North Carolina	568,213	1,194,700	540,804	155,027	13,278	501,394	27,212	58,271	3,058,900
Tennessee	252,045	542,074	21,959	499,717	112,635	158,349	41,719	15,802	1,644,300
Virginia	197,995	222,347	260,745	298,523	32,878	77,022	46,508	28,382	1,164,400
West Virginia	1,416	0	0	83,566	937	18,841	21,540	0	126,300
Total	1,143,449	1,972,258	826,317	1,510,320	226,484	947,365	188,651	172,456	6,987,300
Southeast:									
Alabama	495,266	1,612,706	189	79,531	33,469	28,079	11,159	192,501	2,452,900
Florida	576,405	636,540	0	744,428	129,197	34,092	69,363	78,575	2,268,600
Georgia	852,574	2,107,344	92,908	908,492	124,243	245,883	47,900	51,556	4,430,900
South Carolina	131,729	201,627	25,988	68,664	3,133	59,298	5,532	15,092	511,061
Total	2,055,973	4,558,217	119,085	1,801,115	290,041	367,352	133,954	337,724	9,663,461
Delta:									
Arkansas	493,182	1,628,838	25,648	155,615	93,830	144,667	20,980	67,240	2,630,000
Louisiana	506,797	265,326	0	196,399	148,322	15,773	86,682	56,602	1,275,900
Mississippi	583,710	1,078,586	0	33,842	47,255	12,510	16,472	361,125	2,133,500
Total	1,583,689	2,972,750	25,648	385,856	289,406	172,949	124,133	484,967	6,039,400
Southern Plains:									
Oklahoma	529,298	210,784	165,072	221,292	1,244,697	122,847	152,600	60,009	2,706,600
Texas	573,526	1,145,008	296,487	694,218	5,732,691	153,769	373,802	197,799	9,167,300
Total	1,102,824	1,355,792	461,558	915,510	6,977,389	276,616	526,402	257,808	11,873,900
Mountain:									
Arizona	0	0	0	66,088	153,079	0	0	733	219,900
Colorado	80,099	9,073	3,810	361,192	1,200,321	91,258	221,138	98,608	2,065,500
Idaho	129,444	17,165	6,077	403,429	457,037	21,688	7,887	172	1,042,900
Montana	61,409	591	1,371	31,296	570,501	37,989	6,967	6,376	716,500
Nevada	0	0	0	2,344	42,699	142	3,167	23,704	72,056
New Mexico	144,333	0	0	32,470	192,051	20,780	38,442	13,762	441,838
Utah	4,365	177	159,399	51,653	66,878	5,227	3,444	14,357	305,500
Wyoming	0	0	0	0	0	0	0	0	0
Total	419,650	27,007	170,656	948,473	2,682,566	177,085	281,046	157,711	4,864,194
Pacific:									
California	1,269,750	2,046,816	386,571	4,085,796	2,175,726	78,883	177,395	165,410	10,386,347
Hawaii	40,073	0	0	13,956	7,324	3,869	2,073	16,305	83,600
Oregon	31,718	18,003	2,643	523,664	30,842	11,153	16,681	40,696	675,400
Washington	118,464	2,285	357	496,441	194,621	4,641	839	22,019	839,667
Total	1,460,004	2,067,104	389,571	5,119,857	2,408,513	98,546	196,988	244,431	11,985,014
48-State total	12,896,835	16,038,950	4,812,883	20,960,714	20,204,262	14,290,621	2,358,118	3,853,410	95,415,794

Table 19--Complete feed from primary manufacturings: Production by livestock type, by region and State, 1984

Region and State	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hogs	Horse	All other	Total
Tons									
Northeast:									
Connecticut	179,918	5,892	4,593	143,725	1,047	2,048	3,360	8,621	349,204
Delaware	93,032	647,409	422	20,616	34	9,278	2,389	337	773,515
Maine	12,022	0	0	203,078	0	0	0	0	215,100
Maryland	790,508	547,268	333	99,466	5,725	15,503	34,049	7,708	1,500,560
Massachusetts	55,767	37	1,567	54,856	490	742	1,112	89	114,660
New Hampshire	16,113	6,398	5,029	52,519	3,518	4,611	25,011	15,049	128,248
New Jersey	17,001	8,497	2,832	37,774	28,330	28,185	56,660	9,592	188,871
New York	196,216	3,469	6,545	1,461,351	44,163	32,554	80,903	80,760	1,905,960
Pennsylvania	584,657	591,352	224,859	571,221	41,213	167,983	104,031	60,539	2,345,854
Vermont	21,381	1,416	2,582	355,125	2,932	7,131	30,666	41,582	462,815
Total	1,966,614	1,811,737	248,761	2,999,731	127,452	268,035	338,181	224,277	7,984,788
Lake States:									
Michigan	445,691	7,618	124,756	231,221	23,161	246,304	37,012	20,236	1,135,998
Minnesota	436,843	399,258	732,748	263,595	53,764	370,593	98,929	54,707	2,408,439
Wisconsin	280,431	4,904	669,840	771,817	45,277	189,966	26,993	103,874	2,093,102
Total	1,160,965	411,779	1,527,345	1,266,632	122,202	806,864	162,935	178,817	5,637,539
Corn Belt:									
Illinois	131,022	10,627	14,522	115,550	135,658	853,327	54,027	65,599	1,380,333
Indiana	363,257	19,285	23,119	268,597	48,599	496,094	73,488	713,704	2,006,144
Iowa	266,665	9,785	157,186	93,846	198,015	931,434	16,536	43,630	1,717,098
Missouri	222,760	668,171	545,668	571,942	499,818	441,779	43,963	106,508	3,100,607
Ohio	162,845	2,483	78,093	437,468	87,433	267,052	96,243	268,395	1,400,011
Total	1,146,550	710,350	818,589	1,487,402	969,523	2,989,685	284,257	1,197,836	9,604,192
Northern Plains:									
Kansas	99,108	8,367	1,916	339,915	1,977,841	111,216	24,301	111,452	2,674,117
Nebraska	86,810	4,173	45,351	42,370	474,313	705,602	10,367	31,277	1,400,263
North Dakota	5,134	6,615	4,888	34,765	109,418	23,898	4,315	12,938	191,572
South Dakota	31,070	2,136	11,949	28,188	178,094	74,060	2,611	18,978	307,088
Total	222,123	15,292	59,704	445,238	2,739,667	914,777	41,594	174,645	4,613,041
Appalachian:									
Kentucky	121,992	13,137	2,810	366,600	50,761	144,898	49,445	40,131	789,772
North Carolina	564,468	1,194,611	540,772	145,285	11,401	364,828	27,149	58,271	2,906,785
Tennessee	240,401	486,276	290	487,067	75,241	86,358	41,314	15,202	1,432,167
Virginia	190,952	222,347	260,745	258,195	24,972	52,681	45,114	25,145	1,080,150
West Virginia	1,249	0	0	75,236	937	16,759	21,540	0	115,722
Total	1,119,062	1,916,371	804,617	1,332,403	163,311	665,523	184,561	138,749	6,324,596
Southeast:									
Alabama	469,804	1,412,172	189	74,615	24,821	19,604	11,159	191,733	2,204,097
Florida	572,826	636,299	0	729,546	180,374	32,412	63,992	35,541	2,170,991
Georgia	836,441	2,101,888	92,705	883,735	109,051	176,627	47,173	50,792	4,298,411
South Carolina	129,665	201,627	24,762	66,983	2,953	40,819	5,532	15,092	487,432
Total	2,008,737	4,351,986	117,656	1,754,879	237,199	269,461	127,856	293,157	9,160,931
Delta:									
Arkansas	493,182	1,628,838	25,648	155,315	92,963	144,189	20,980	67,240	2,628,354
Louisiana	505,156	265,326	0	192,007	117,270	12,943	85,837	56,602	1,235,142
Mississippi	583,710	787,141	0	33,842	46,582	10,067	16,472	360,933	1,838,748
Total	1,582,048	2,681,305	25,648	381,164	256,816	167,199	123,289	484,775	5,702,244
Southern Plains:									
Oklahoma	505,176	210,784	165,072	204,820	891,306	106,419	145,057	60,009	2,288,644
Texas	541,788	1,144,161	295,705	610,674	4,657,493	118,662	320,038	150,182	7,838,701
Total	1,046,964	1,354,945	460,777	815,494	5,548,798	225,081	465,095	210,191	10,127,345
Mountain:									
Arizona	0	0	0	64,256	153,079	0	0	733	218,068
Colorado	75,732	1,189	3,317	295,434	602,660	57,506	180,710	96,397	1,312,946
Idaho	129,358	17,165	6,077	128,612	269,042	14,977	7,887	172	573,289
Montana	59,524	591	531	22,641	167,338	12,040	2,442	3,154	268,261
Nevada	0	0	0	1,551	37,518	0	2,994	23,704	65,766
New Mexico	144,333	0	0	29,745	190,688	20,780	39,442	13,762	437,750
Utah	4,144	177	159,399	44,878	52,319	4,874	3,216	14,357	283,364
Wyoming	0	0	0	0	0	0	0	0	0
Total	413,091	19,123	169,324	587,116	1,472,644	110,177	235,692	152,278	3,159,445
Pacific:									
California	1,253,194	1,977,867	386,571	3,231,300	2,137,385	76,441	176,177	153,952	9,392,887
Hawaii	40,073	0	0	13,956	7,324	3,869	2,073	16,305	83,600
Oregon	31,687	17,992	2,636	514,344	30,393	10,798	16,420	7,194	631,465
Washington	118,464	2,285	357	495,508	194,310	4,112	839	22,019	837,895
Total	1,443,418	1,998,144	389,564	4,255,109	2,369,412	95,221	195,510	199,471	10,945,847
48-State total	12,109,572	15,271,031	4,621,984	15,325,169	14,007,023	6,512,023	2,158,969	3,254,196	73,259,968

Table 20--Supplement feed from primary manufacturing: Production by livestock type, by region and State, 1984

Region and State	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hogs	Horse	All other	Total
Tons									
Northeast:									
Connecticut	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0
Maine	0	0	0	0	0	0	0	0	0
Maryland	167	0	0	23,627	130	1,644	652	217	26,438
Massachusetts	0	0	0	605	0	0	0	0	605
New Hampshire	0	0	0	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0	0	0	0
New York	2,343	0	43	210,406	238	5,247	15	0	218,293
Pennsylvania	26,653	31	4,138	262,084	17,480	52,084	6,568	4,460	373,497
Vermont	0	0	0	2,843	0	0	0	0	2,843
Total	29,163	31	4,180	499,566	17,848	58,975	7,236	4,677	621,676
Lake States:									
Michigan	37,714	773	7,370	182,676	37,987	133,253	1,899	8,259	409,931
Minnesota	65,368	1,520	48,333	258,816	131,363	508,189	4,431	49,448	1,067,468
Wisconsin	55,498	368	19,589	1,145,982	93,675	283,549	5,793	33,255	1,637,710
Total	158,579	2,662	75,293	1,587,474	263,025	924,991	12,123	90,962	3,115,109
Corn Belt:									
Illinois	24,758	692	243	266,160	189,122	631,499	6,770	34,397	1,153,640
Indiana	92,071	173	2,061	256,035	149,399	643,609	6,388	21,760	1,171,496
Iowa	46,424	4,158	11,672	340,704	531,901	2,202,723	7,416	98,692	3,243,691
Missouri	16,306	169	529	53,433	137,077	330,046	146	4,969	542,675
Ohio	40,702	66	16,419	77,791	37,633	140,099	4,431	7,699	324,839
Total	220,261	5,259	30,924	994,122	1,045,131	3,947,977	25,150	167,516	6,436,341
Northern Plains:									
Kansas	7,553	1,200	4,033	76,399	985,738	160,839	18,107	19,534	1,273,404
Nebraska	13,587	89,834	249	35,258	425,237	656,317	2,924	16,911	1,240,316
North Dakota	1,629	0	8	10,494	18,760	10,506	692	11,160	53,249
South Dakota	13,497	820	3	41,593	237,736	220,828	645	9,370	524,493
Total	36,266	91,854	4,293	163,744	1,667,471	1,048,491	22,367	56,976	3,091,463
Appalachian:									
Kentucky	1,390	0	0	44,175	10,389	40,085	835	4,671	101,545
North Carolina	3,702	0	32	7,681	1,154	132,832	63	0	145,464
Tennessee	10,730	55,798	18	11,268	31,182	66,049	406	179	175,630
Virginia	7,043	0	0	32,913	7,906	23,544	1,394	3,238	76,038
West Virginia	167	0	0	8,329	0	2,082	0	0	10,578
Total	23,032	55,798	49	104,367	50,631	264,593	2,698	8,087	509,256
Southeast:									
Alabama	3,180	0	0	4,916	8,648	8,450	0	0	25,194
Florida	3,500	241	0	3,021	27,040	1,679	5,240	0	40,742
Georgia	4,652	593	203	22,157	12,616	51,664	33	753	92,670
South Carolina	539	0	933	1,452	180	16,984	0	0	20,088
Total	11,872	834	1,136	31,546	48,503	78,777	5,273	753	178,693
Delta:									
Arkansas	0	0	0	300	867	478	0	0	1,646
Louisiana	1,641	0	0	2,122	31,051	2,830	844	0	38,489
Mississippi	0	291,445	0	0	672	2,442	0	192	294,752
Total	1,641	291,445	0	2,422	32,591	5,750	844	192	334,886
Southern Plains:									
Oklahoma	18,832	0	0	10,482	323,306	13,883	7,543	0	374,046
Texas	26,287	847	782	78,904	836,292	33,399	53,617	47,617	1,077,746
Total	45,119	847	782	89,386	1,159,599	47,282	61,160	47,617	1,451,791
Mountain:									
Arizona	0	0	0	1,832	0	0	0	0	1,832
Colorado	4,367	0	492	45,139	596,202	32,721	40,428	2,211	721,561
Idaho	69	0	0	94,581	24,838	6,712	0	0	126,200
Montana	1,808	0	840	5,613	372,981	21,904	4,439	2,237	409,822
Nevada	0	0	0	793	5,181	142	174	0	6,290
New Mexico	0	0	0	0	1,363	0	0	0	1,363
Utah	221	0	0	4,778	13,905	353	219	0	19,477
Wyoming	0	0	0	0	0	0	0	0	0
Total	6,465	0	1,332	152,737	1,014,470	61,831	45,260	4,448	1,286,544
Pacific:									
California	16,556	68,950	0	811,962	26,313	2,046	1,218	0	927,044
Hawaii	0	0	0	0	0	0	0	0	0
Oregon	0	0	0	7,225	180	195	151	484	8,234
Washington	0	0	0	311	311	466	0	0	1,088
Total	16,556	68,950	0	819,498	26,803	2,707	1,369	484	936,366
48-State total	548,954	517,679	117,990	4,444,861	5,326,073	6,441,374	183,480	381,712	17,962,125

Table 21--Feed premix from primary manufacturing: Production by livestock type, by region and State, 1984

Region and State	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hogs	Horse	All other	Total
Tons									
Northeast:									
Connecticut	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0
Maine	0	0	0	65	13	13	0	0	91
Maryland	0	0	0	0	0	0	0	0	0
Massachusetts	0	0	0	0	0	0	0	0	0
New Hampshire	0	0	0	0	0	0	0	0	0
New Jersey	0	0	0	1,015	4	2	0	0	1,564
New York	543	0	768	1,793	0	501	77	61	4,293
Pennsylvania	1,092	0	0	362	0	0	0	0	362
Vermont	0	0	0	0	0	0	0	0	0
Total	1,636	0	768	3,235	17	516	77	61	6,310
Lake States:									
Michigan	2,703	16,594	0	712	0	8,027	0	0	28,036
Minnesota	7,730	4,041	1,678	12,983	2,336	5,783	302	8,331	43,185
Wisconsin	2,809	566	2,351	27,648	4,874	25,565	331	17,576	81,721
Total	13,242	21,201	4,030	41,343	7,210	39,375	633	25,907	152,941
Corn Belt:									
Illinois	2,392	95	0	5,862	5,022	47,998	1,910	10,274	73,553
Indiana	7,787	0	0	2,644	35	39,847	177	47	50,538
Iowa	2,050	543	16,493	41,058	20,563	132,356	4,624	12,771	230,458
Missouri	0	0	0	750	2,908	9,408	0	0	13,066
Ohio	1,097	0	898	4,601	166	9,302	0	0	16,064
Total	13,325	638	17,391	54,916	28,694	238,911	6,711	23,092	383,679
Northern Plains:									
Kansas	2,060	0	44	969	68,612	12,662	393	3,027	87,767
Nebraska	321	771	0	7,893	39,994	36,754	75	6,219	92,026
North Dakota	0	0	0	42	98	208	0	51	399
South Dakota	0	0	53	214	7,315	7,481	0	0	15,063
Total	2,381	771	97	9,119	116,017	57,105	467	9,296	195,254
Appalachian:									
Kentucky	298	0	0	51,145	4,810	3,223	1,392	2,625	63,492
North Carolina	43	89	0	209	0	2,961	0	0	3,303
Tennessee	7	0	21,651	1,015	1,536	2,827	0	422	27,458
Virginia	0	0	0	1,264	0	0	0	0	1,264
West Virginia	0	0	0	0	0	0	0	0	0
Total	349	89	21,651	53,633	6,346	9,011	1,392	3,046	95,518
Southeast:									
Alabama	22,282	200,534	0	0	0	0	0	0	222,816
Florida	0	0	0	11,861	0	0	0	0	11,861
Georgia	2,651	4,863	0	1,446	1,241	2,536	694	0	13,431
South Carolina	1,524	0	293	159	0	614	0	0	2,591
Total	26,457	205,398	293	13,466	1,241	3,151	694	0	250,698
Delta:									
Arkansas	0	0	0	0	0	0	0	0	0
Louisiana	0	0	0	0	0	0	0	0	0
Mississippi	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Southern Plains:									
Oklahoma	43	0	0	0	4,998	1,270	0	0	6,311
Texas	27	0	0	53	29,965	34	0	0	30,078
Total	71	0	0	53	34,963	1,303	0	0	36,389
Mountain:									
Arizona	0	0	0	0	0	0	0	0	0
Colorado	0	0	0	18,769	251	846	0	0	19,866
Idaho	0	0	0	171,654	0	0	0	0	171,654
Montana	77	0	0	3,042	8,141	326	86	857	12,529
Nevada	0	0	0	0	0	0	0	0	0
New Mexico	0	0	0	2,726	0	0	0	0	2,726
Utah	0	0	0	795	159	0	0	0	954
Wyoming	0	0	0	0	0	0	0	0	0
Total	77	0	0	196,986	8,551	1,171	86	857	207,728
Pacific:									
California	0	0	0	42,534	12,029	396	0	11,458	66,417
Hawaii	0	0	0	0	0	0	0	0	0
Oregon	31	11	7	271	20	11	109	32,974	33,434
Washington	0	0	0	0	0	0	0	0	0
Total	31	11	7	42,805	12,048	407	109	44,433	99,851
48-State total	57,568	228,169	44,237	415,556	215,088	350,949	10,170	106,693	1,428,369

Table 22--Super concentrate from primary manufacturing: Production by livestock type, by region and State, 1984

Region and State	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hogs	Horse	All other	Total
Tons									
Northeast:									
Connecticut	0	0	0	0	0	0	0	0	0
Delaware	0	0	0	0	0	0	0	0	0
Maine	0	0	0	0	0	0	0	0	0
Maryland	0	0	0	0	0	0	0	0	0
Massachusetts	1,026	0	0	0	0	0	0	211	211
New Hampshire	0	0	0	0	0	0	0	0	1,026
New Jersey	0	0	0	0	0	0	0	0	0
New York	4,553	0	0	48,629	0	0	0	0	0
Pennsylvania	3,686	0	164	3,912	0	4,394	0	0	53,183
Vermont	0	0	0	9,476	0	0	0	0	12,156
Total	9,265	0	164	62,017	0	4,394	0	211	76,051
Lake States:									
Michigan	27,738	0	1,940	9,537	3,157	21,403	0	8,360	72,135
Minnesota	28,003	0	17,618	13,476	7,112	31,692	7	0	97,909
Wisconsin	25,163	0	0	463,175	5,983	31,004	0	2,541	527,867
Total	80,904	0	19,558	486,189	16,252	84,099	7	10,901	697,911
Corn Belt:									
Illinois	4,268	9,734	138	17,969	35,270	181,660	334	0	249,374
Indiana	8,082	591	1,241	4,201	11,889	175,111	0	1,907	203,022
Iowa	8,045	197	2,950	16,429	32,529	244,130	943	16,230	321,454
Missouri	1,174	0	727	873	7,655	47,262	492	3,169	61,351
Ohio	42,381	0	3,022	91,684	24,406	74,793	1,201	0	237,486
Total	63,950	10,522	8,079	131,157	111,749	722,955	2,970	21,307	1,072,688
Northern Plains:									
Kansas	4,153	0	0	984	13,703	2,817	2,235	11,820	35,712
Nebraska	829	3,205	0	8,480	20,947	117,823	0	10	151,295
North Dakota	0	0	0	33,946	42,433	0	0	0	76,379
South Dakota	1,040	520	870	4,287	20,520	22,918	0	0	50,156
Total	6,022	3,725	870	47,698	97,604	143,559	2,235	11,830	313,542
Appalachian:									
Kentucky	99	0	0	11,568	795	3,553	0	22,574	38,590
North Carolina	0	0	0	1,852	724	772	0	0	3,348
Tennessee	907	0	0	347	4,676	3,115	0	0	9,045
Virginia	0	0	0	6,150	0	798	0	0	6,948
West Virginia	0	0	0	0	0	0	0	0	0
Total	1,006	0	0	19,917	6,195	8,238	0	22,574	57,931
Southeast:									
Alabama	0	0	0	0	0	25	0	769	794
Florida	79	0	0	0	1,763	0	131	43,034	45,007
Georgia	8,829	0	0	1,155	1,335	15,056	0	11	26,387
South Carolina	0	0	0	70	0	881	0	0	950
Total	8,908	0	0	1,224	3,099	15,963	131	43,814	73,139
Delta:									
Arkansas	0	0	0	0	0	0	0	0	0
Louisiana	0	0	0	2,270	0	0	0	0	2,270
Mississippi	0	0	0	0	0	0	0	0	0
Total	0	0	0	2,270	0	0	0	0	2,270
Southern Plains:									
Oklahoma	5,247	0	0	5,990	25,088	1,276	0	0	37,600
Texas	5,424	0	0	4,588	208,941	1,675	147	0	220,775
Total	10,671	0	0	10,577	234,029	2,950	147	0	258,374
Mountain:									
Arizona	0	0	0	0	0	0	0	0	0
Colorado	0	7,884	0	1,849	1,208	186	0	0	11,127
Idaho	17	0	0	8,583	163,157	0	0	0	171,757
Montana	0	0	0	0	22,041	3,719	0	129	25,889
Nevada	0	0	0	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0	0	0	0
Utah	0	0	0	1,202	495	0	9	0	1,705
Wyoming	0	0	0	0	0	0	0	0	0
Total	17	7,884	0	11,633	186,901	3,905	9	129	210,477
Pacific:									
California	0	0	0	0	0	0	0	0	0
Hawaii	0	0	0	0	0	0	0	0	0
Oregon	0	0	0	1,824	250	149	0	44	2,266
Washington	0	0	0	622	0	62	0	0	684
Total	0	0	0	2,445	250	211	0	44	2,950
48-State total	180,741	22,131	28,671	775,128	656,078	986,275	5,499	110,809	2,765,332

Table 23--Formula feed from primary manufacturing: Production by livestock type, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hog	Horse	All other	Total
Tons									
Corporation:									
Less than 1,000 tons	3,107	162	342	16,718	7,657	18,932	3,609	1,610	52,138
1,000-9,999 tons	187,062	19,192	39,384	576,931	671,208	892,086	133,705	69,002	2,588,571
10,000-24,999 tons	513,896	44,655	175,701	1,722,187	1,258,518	1,606,205	188,527	240,891	5,750,580
25,000-49,999 tons	1,445,181	248,247	410,729	2,715,225	3,483,868	2,738,738	402,947	1,668,280	13,113,216
50,000-74,999 tons	1,197,299	218,437	201,662	1,631,947	2,114,623	2,063,654	289,088	250,002	7,966,712
75,000-99,999 tons	1,156,032	570,911	152,272	1,463,650	1,841,613	1,145,869	243,747	211,034	6,785,128
100,000 tons and more	5,468,607	11,352,577	2,323,336	3,306,908	7,564,922	2,156,264	612,500	947,281	33,732,394
Total	9,971,185	12,454,180	3,303,426	11,433,567	16,942,409	10,621,748	1,874,124	3,388,100	69,988,739
Partnership:									
Less than 1,000 tons	420	0	0	5,174	1,641	1,589	971	191	9,986
1,000-9,999 tons	2,339	234	687	57,583	30,299	55,065	18,949	4,025	169,182
10,000-24,999 tons	94,821	26,194	78,724	44,455	55,916	72,953	1,412	1,516	375,992
25,000-49,999 tons	62,553	0	0	0	0	0	0	0	62,553
50,000-74,999 tons	0	0	0	0	152,669	0	0	0	152,669
75,000-99,999 tons	34,574	113,866	0	0	0	0	0	0	148,440
100,000 tons and more	0	0	0	0	352,312	0	0	0	352,312
Total	194,707	140,294	79,412	107,213	592,837	129,607	21,331	5,733	1,271,134
Single owner:									
Less than 1,000 tons	1,106	88	4	9,164	8,210	4,132	1,456	1,043	25,204
1,000-9,999 tons	26,873	49	528	119,715	92,156	120,192	24,941	2,859	387,314
10,000-24,999 tons	1,291	606	51,160	92,073	26,797	60,035	94	35,147	267,202
25,000-49,999 tons	84,501	354	0	4,318	22,393	63,757	692	1,036	177,051
50,000-74,999 tons	14,323	106,086	0	0	0	0	0	0	120,409
75,000-99,999 tons	10,344	119,184	0	0	221,967	0	0	0	351,495
100,000 tons and more	159,938	1,163,513	215,992	207,502	20,285	18,522	2,464	4,548	1,792,764
Total	298,376	1,389,880	267,684	432,773	391,808	266,638	29,647	44,634	3,121,440
Farmer cooperative:									
Less than 1,000 tons	282	7	0	5,043	5,226	4,852	1,045	38	16,493
1,000-9,999 tons	21,972	1,141	22,222	492,964	269,231	535,199	34,414	15,557	1,392,700
10,000-24,999 tons	101,777	4,281	4,772	765,619	436,771	516,020	35,094	40,760	1,905,094
25,000-49,999 tons	260,265	7,598	70,244	2,151,282	776,872	879,572	79,647	149,617	4,375,098
50,000-74,999 tons	320,608	16,977	190,470	801,173	326,516	406,484	51,685	37,446	2,151,359
75,000-99,999 tons	393,740	89,425	222,102	1,129,953	129,966	210,937	163,228	126,211	2,465,561
100,000 tons and more	1,333,923	1,935,166	652,551	3,641,128	332,625	719,563	67,902	45,316	8,728,174
Total	2,432,568	2,054,595	1,162,362	8,987,162	2,277,207	3,272,628	433,016	414,944	21,034,480
All forms of ownership:									
Less than 1,000 tons	4,916	257	346	36,100	22,735	29,505	7,081	2,882	103,821
1,000-9,999 tons	238,246	20,616	62,822	1,247,194	1,062,894	1,602,543	212,009	91,444	4,537,768
10,000-24,999 tons	711,786	75,736	310,357	2,624,334	1,778,002	2,255,213	225,126	318,314	8,298,868
25,000-49,999 tons	1,852,500	256,199	480,973	4,870,826	4,283,134	3,682,068	483,287	1,818,932	17,727,918
50,000-74,999 tons	1,532,230	341,500	392,132	2,433,120	2,593,808	2,470,138	340,774	287,447	10,391,149
75,000-99,999 tons	1,594,689	893,386	374,374	2,593,603	2,193,546	1,356,806	406,976	337,245	9,750,624
100,000 tons and more	6,962,468	14,451,256	3,191,879	7,155,537	8,270,144	2,894,349	682,866	997,146	44,605,645
Total	12,896,835	16,038,950	4,812,883	20,960,714	20,204,262	14,290,621	2,358,118	3,853,410	95,415,793

Table 24--Complete feed from primary manufacturing: Production by livestock type, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hog	Horse	All other	Total
Tons									
Corporation:									
Less than 1,000 tons	2,910	133	88	11,355	7,333	13,084	3,493	1,603	40,000
1,000-9,999 tons	163,427	7,160	37,014	436,018	448,519	606,046	124,391	80,425	1,903,001
10,000-24,999 tons	462,115	43,609	156,153	1,172,320	518,124	837,034	173,115	237,951	3,600,419
25,000-49,999 tons	1,325,119	244,559	390,264	1,716,714	2,524,490	1,250,347	378,131	472,386	8,302,010
50,000-74,999 tons	1,096,040	218,259	188,310	967,767	1,250,525	533,350	250,590	290,744	4,795,585
75,000-99,999 tons	1,067,644	552,042	137,767	1,062,753	715,406	515,507	232,533	285,643	4,569,295
100,000 tons and more	5,241,555	10,978,833	2,277,066	2,717,286	6,148,758	1,051,293	544,332	1,281,176	30,240,300
Total	9,358,810	12,044,595	3,186,662	8,084,214	11,613,154	4,806,662	1,706,585	2,649,928	53,450,610
Partnership:									
Less than 1,000 tons	400	0	0	4,370	680	618	962	281	7,311
1,000-9,999 tons	2,226	235	682	46,017	29,093	40,132	18,788	5,911	143,083
10,000-24,999 tons	91,662	26,276	78,084	41,119	53,723	48,813	1,283	2,226	343,187
25,000-49,999 tons	61,334	0	0	0	0	0	0	0	61,334
50,000-74,999 tons	0	0	0	0	150,230	0	0	0	150,230
75,000-99,999 tons	33,900	114,222	0	0	0	0	0	0	148,122
100,000 tons and more	0	0	0	0	346,685	0	0	0	346,685
Total	189,521	140,733	78,766	91,506	580,411	89,563	21,033	8,417	1,199,952
Single owner:									
Less than 1,000 tons	928	89	4	7,516	7,456	2,678	1,444	1,532	21,648
1,000-9,999 tons	26,209	49	521	62,706	75,267	90,249	22,526	3,455	280,983
10,000-24,999 tons	1,266	608	45,245	83,365	26,369	50,097	93	51,608	258,651
25,000-49,999 tons	81,498	327	0	1,572	3,446	15,042	686	1,521	104,091
50,000-74,999 tons	14,044	106,418	0	0	0	0	0	0	120,462
75,000-99,999 tons	10,143	119,064	0	0	218,422	0	0	0	347,629
100,000 tons and more	153,310	803,886	211,707	29,197	2,626	1,502	0	0	1,208,907
Total	287,398	1,030,440	257,477	184,356	333,587	159,568	24,749	64,794	2,342,370
Farmer cooperatives:									
Less than 1,000 tons	172	3	0	4,460	5,016	4,060	923	56	14,691
1,000-9,999 tons	19,306	575	16,965	339,181	192,980	346,574	28,330	11,866	955,778
10,000-24,999 tons	93,197	1,260	297	532,817	309,009	233,313	33,741	44,155	1,247,789
25,000-49,999 tons	214,657	6,370	57,921	1,527,509	479,686	289,346	70,164	188,860	2,834,513
50,000-74,999 tons	276,567	16,209	188,919	591,418	117,398	125,940	47,113	44,747	1,408,311
75,000-99,999 tons	377,888	89,625	220,248	886,896	125,067	162,357	161,819	183,738	2,207,636
100,000 tons and more	1,292,056	1,941,220	614,729	3,082,813	250,714	294,640	64,512	57,635	7,598,318
Total	2,273,843	2,055,262	1,099,079	6,965,093	1,479,870	1,456,230	406,602	531,056	16,267,036
All forms of ownership:									
Less than 1,000 tons	4,410	225	92	27,701	20,486	20,441	6,823	3,471	83,649
1,000-9,999 tons	211,168	8,019	55,182	883,923	745,859	1,083,001	194,035	101,656	3,282,844
10,000-24,999 tons	648,240	71,752	279,779	1,829,622	907,225	1,169,257	208,231	335,941	5,450,046
25,000-49,999 tons	1,682,608	251,256	448,185	3,245,794	3,007,622	1,554,734	448,981	662,767	11,301,948
50,000-74,999 tons	1,386,650	340,887	377,230	1,559,185	1,518,153	659,290	297,704	335,491	6,474,589
75,000-99,999 tons	1,489,574	874,953	358,014	1,949,649	1,058,895	677,864	394,351	469,381	7,272,681
100,000 tons and more	6,686,922	13,723,939	3,103,501	5,829,296	6,748,783	1,347,435	608,843	1,345,490	39,394,210
Total	12,109,572	15,271,031	4,621,984	15,325,169	14,007,023	6,512,023	2,158,969	3,254,196	73,259,967

Table 25--Supplement feed from primary manufacturing: Production by livestock type, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hog	Horse	All other	Total
Tons									
Corporations:									
Less than 1,000 tons	195	27	370	2,771	211	4,190	96	940	8,800
1,000-9,999 tons	12,150	9,353	2,871	103,382	182,816	201,801	6,723	19,934	539,030
10,000-24,999 tons	54,754	629	1,848	430,343	594,206	663,830	12,093	67,833	1,825,535
25,000-49,999 tons	103,323	528	18,240	924,066	789,851	1,209,167	21,297	42,353	3,108,826
50,000-74,999 tons	92,756	689	16,490	684,487	826,827	1,287,355	40,195	74,585	3,023,385
75,000-99,999 tons	77,474	14,110	17,824	373,724	1,139,113	599,000	9,837	22,474	2,253,556
100,000 tons and more	76,089	153,956	35,035	395,583	1,016,060	892,173	69,638	80,070	2,718,603
Total	416,741	179,293	92,677	2,914,356	4,549,084	4,857,517	159,880	308,188	13,477,736
Partnership:									
Less than 1,000 tons	17	0	0	476	126	325	0	0	944
1,000-9,999 tons	102	0	0	9,942	753	13,505	0	0	24,302
10,000-24,999 tons	1,952	0	0	83	808	14,473	132	0	17,448
25,000-49,999 tons	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0
Total	2,071	0	0	10,500	1,688	28,303	132	0	42,693
Single owner:									
Less than 1,000 tons	232	0	0	1,321	649	1,328	0	0	3,530
1,000-9,999 tons	203	0	3	32,977	13,443	23,011	2,473	918	73,028
10,000-24,999 tons	0	0	6,495	2,613	0	7,982	0	0	17,089
25,000-49,999 tons	0	0	0	1,797	19,391	2,216	0	0	23,404
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	456	0	0	0	0	0	0	456
100,000 tons and more	5,228	335,902	3,734	180,010	16,437	14,633	2,742	0	558,687
Total	5,664	336,357	10,232	218,717	49,920	49,170	5,215	918	676,194
Farmer cooperative:									
Less than 1,000 tons	157	3	0	287	131	633	126	0	1,338
1,000-9,999 tons	3,294	299	6,501	136,666	71,130	155,861	1,996	10,393	386,140
10,000-24,999 tons	8,781	229	6,163	156,543	107,884	253,940	1,184	19,374	556,099
25,000-49,999 tons	50,565	664	2,341	558,728	259,776	404,114	9,864	25,128	1,311,180
50,000-74,999 tons	53,063	759	3	201,803	209,152	266,647	1,897	11,756	745,081
75,000-99,999 tons	3,866	74	71	190,692	2,940	42,564	27	459	240,693
100,000 tons and more	4,752	0	0	56,569	74,368	382,624	3,158	5,496	526,968
Total	124,478	2,029	15,080	1,301,288	725,381	1,506,384	18,254	72,606	3,765,500
All forms of ownership:									
Less than 1,000 tons	601	30	370	4,855	1,118	6,476	222	940	14,613
1,000-9,999 tons	15,749	9,652	9,375	282,966	268,143	394,179	11,191	31,245	1,022,501
10,000-24,999 tons	65,487	858	14,506	589,581	702,898	940,226	13,409	87,207	2,414,170
25,000-49,999 tons	153,888	1,192	20,581	1,484,591	1,069,018	1,615,496	31,162	67,481	4,443,410
50,000-74,999 tons	145,819	1,449	16,493	886,290	1,035,979	1,554,003	42,093	86,341	3,768,466
75,000-99,999 tons	81,340	14,640	17,896	564,416	1,142,052	641,564	9,864	22,932	2,494,705
100,000 tons and more	86,069	489,858	38,769	632,162	1,106,865	1,289,431	75,538	85,566	3,804,259
Total	548,954	517,679	117,990	4,444,861	5,326,073	6,441,374	183,480	381,712	17,962,123

Table 26--Feed premix from primary manufacturing: Production by livestock type, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Starter-grower layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hog	Horse	All other	Total
Tons									
Corporation:									
Less than 1,000 tons	6	0	0	158	0	17	0	0	180
1,000-9,999 tons	69	1,809	54	13,615	18,358	30,021	968	4,560	69,455
10,000-24,999 tons	1,844	391	12,953	58,587	50,336	58,414	2,336	18,744	203,603
25,000-49,999 tons	6,053	466	1,296	166,385	116,486	83,564	2,326	9,086	385,663
50,000-74,999 tons	7,793	105	393	40,974	1,269	41,201	104	14,926	106,766
75,000-99,999 tons	3,920	4,936	901	696	2,753	12,213	146	4,385	29,951
100,000 tons and more	35,437	220,177	41	10,091	12,088	8,214	397	40,448	326,894
Total	55,122	227,884	15,639	290,505	201,291	233,644	6,278	92,150	1,122,512
Partnership:									
Less than 1,000 tons	0	0	0	121	766	661	0	0	1,548
1,000-9,999 tons	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	0	0	0	0	494	8,330	0	0	8,824
25,000-49,999 tons	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0
Total	0	0	0	121	1,259	8,991	0	0	10,372
Single owner:									
Less than 1,000 tons	0	0	0	0	0	41	0	0	41
1,000-9,999 tons	0	0	0	931	403	1,435	0	0	2,768
10,000-24,999 tons	0	0	901	0	0	0	0	0	901
25,000-49,999 tons	0	0	0	0	0	1,168	0	0	1,168
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	901	2,023	1,235	0	0	0	4,159
Total	0	0	1,803	2,954	1,637	2,644	0	0	9,037
Farmer cooperative:									
Less than 1,000 tons	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	27	225	0	16,140	756	18,733	3,076	1,627	41,384
10,000-24,999 tons	323	0	0	81,580	1,504	23,800	0	0	107,207
25,000-49,999 tons	747	0	142	8,841	6,043	33,705	17	12,094	61,589
50,000-74,999 tons	1,349	0	0	3,447	2,546	13,031	0	823	21,196
75,000-99,999 tons	0	0	0	4,625	5	3	0	0	4,632
100,000 tons and more	0	0	26,653	7,344	47	16,398	0	0	50,441
Total	2,446	225	26,795	121,976	10,900	105,671	3,892	14,543	286,449
All forms of ownership:									
Less than 1,000 tons	6	0	0	279	766	719	0	0	1,770
1,000-9,999 tons	96	2,034	54	30,685	19,516	50,189	4,844	6,187	113,606
10,000-24,999 tons	2,166	391	13,854	140,167	52,334	90,545	2,336	18,744	320,536
25,000-49,999 tons	6,800	466	1,439	175,226	122,529	118,437	2,343	21,180	448,420
50,000-74,999 tons	9,142	105	393	44,421	3,815	54,232	104	15,749	127,961
75,000-99,999 tons	3,920	4,936	901	5,321	2,758	12,215	146	4,385	34,583
100,000 tons and more	35,437	220,177	27,595	19,457	13,370	24,613	397	40,448	381,495
Total	57,568	228,109	44,237	415,556	215,088	350,949	10,170	106,693	1,428,370

Table 27--Super concentrate from primary manufacturing: Production by livestock type, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Starter-grower Layer-breeder	Broiler	Turkey	Dairy	Beef and sheep	Hog	Horse	All other	Total
Tons									
Corporation:									
Less than 1,000 tons	0	0	0	2,727	0	1,350	0	0	4,077
1,000-9,999 tons	18,935	0	60	19,224	20,883	39,400	1,272	44	99,818
10,000-24,999 tons	5,212	195	1,608	96,694	118,033	31,875	665	2,468	256,750
25,000-49,999 tons	26,932	8,391	4,818	24,203	27,498	196,981	16	107,124	395,962
50,000-74,999 tons	13,189	0	96	20,618	44,126	238,008	131	166	316,334
75,000-99,999 tons	16,238	0	143	23,707	2,193	11,220	246	123	53,871
100,000 tons and more	57,175	5,244	5,439	66,316	374,883	205,243	547	547	715,395
Total	137,681	13,830	12,164	253,489	587,618	724,077	2,876	110,472	1,842,207
Partnership:									
Less than 1,000 tons	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Single owner:									
Less than 1,000 tons	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	6	0	0	31,898	2,554	2,556	0	0	37,014
10,000-24,999 tons	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	2,182	69	0	1,510	0	51,633	0	0	55,394
50,000-74,999 tons	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	39,905	319	3,006	0	0	43,231
Total	2,188	69	0	73,313	2,873	57,195	0	0	135,639
Farmer cooperative:									
Less than 1,000 tons	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	1,017	9,684	3,592	3,972	5	64	18,333
10,000-24,999 tons	631	6,909	395	16,431	19,156	1,536	0	0	45,059
25,000-49,999 tons	9,444	1,323	15,095	66,126	35,624	172,710	0	0	300,322
50,000-74,999 tons	1,403	0	0	0	830	1,660	2,617	0	6,510
75,000-99,999 tons	8,986	0	0	22,630	0	0	0	67	31,682
100,000 tons and more	20,407	0	0	333,456	6,385	25,125	0	246	385,620
Total	40,871	8,232	16,507	448,327	65,587	205,003	2,623	377	787,526
All forms of ownership:									
Less than 1,000 tons	0	0	0	2,727	0	1,350	0	0	4,077
1,000-9,999 tons	18,941	0	1,077	60,806	27,029	45,927	1,277	108	155,165
10,000-24,999 tons	5,843	7,104	2,004	113,125	137,189	33,411	665	2,468	301,808
25,000-49,999 tons	38,558	9,783	19,913	91,839	63,122	421,325	16	107,124	751,679
50,000-74,999 tons	14,593	0	96	20,618	44,956	239,667	2,748	166	322,845
75,000-99,999 tons	25,224	0	143	46,337	2,193	11,220	246	190	85,553
100,000 tons and more	77,583	5,244	5,439	439,677	381,588	233,375	547	793	1,144,246
Total	180,741	22,131	28,671	775,128	656,078	986,275	5,499	110,849	2,765,372

Table 28--Total primary feed production: Manufacturers by form of feed, by region and State, 1984

Region and State	Meal	Pellets and crumbles	Cubes	Blocks	Liquid	Total primary
	Number					
Northeast:						
Connecticut	9	9	0	0	0	9
Delaware	7	13	0	0	0	13
Maine	8	8	3	0	0	8
Maryland	38	31	0	0	3	50
Massachusetts	4	2	0	0	0	4
New Hampshire	2	2	1	0	0	2
New Jersey	12	12	0	0	0	12
New York	170	89	6	3	12	173
Pennsylvania	221	105	7	7	3	234
Vermont	14	12	2	0	0	14
Total	484	284	18	10	18	519
Lake States:						
Michigan	159	47	24	12	6	159
Minnesota	285	113	47	23	31	293
Wisconsin	362	155	56	36	48	382
Total	806	316	126	71	85	834
Corn Belt:						
Illinois	269	163	101	34	17	269
Indiana	255	182	66	15	15	270
Iowa	429	266	166	88	60	432
Missouri	218	150	87	39	19	247
Ohio	256	118	39	13	20	256
Total	1,427	879	459	188	131	1,474
Northern Plains:						
Kansas	259	125	69	17	30	285
Nebraska	222	145	85	51	51	235
North Dakota	36	31	18	13	4	40
South Dakota	74	50	37	24	17	74
Total	591	352	209	105	103	634
Appalachian:						
Kentucky	113	55	27	12	8	113
North Carolina	120	83	25	4	4	145
Tennessee	69	50	23	15	15	73
Virginia	90	65	22	17	9	99
West Virginia	12	6	0	0	0	12
Total	405	258	97	48	36	442
Southeast:						
Alabama	78	60	12	0	6	84
Florida	57	24	4	0	4	65
Georgia	106	72	20	6	17	118
South Carolina	46	37	18	0	0	46
Total	287	193	55	6	27	313
Delta:						
Arkansas	51	30	15	9	3	57
Louisiana	32	28	13	6	3	41
Mississippi	51	38	4	2	2	64
Total	133	96	32	18	8	162
Southern Plains:						
Oklahoma	100	76	47	14	0	109
Texas	328	145	90	55	47	354
Total	428	221	137	70	47	463
Mountain:						
Arizona	14	7	0	0	0	14
Colorado	79	64	40	20	15	89
Idaho	50	14	7	0	14	57
Montana	34	25	17	8	4	38
Nevada	4	4	4	0	0	4
New Mexico	23	13	10	3	0	23
Utah	32	32	6	13	0	38
Wyoming	7	0	0	0	0	7
Total	242	160	84	44	33	270
Pacific:						
California	81	60	11	4	4	91
Hawaii	3	3	0	0	0	3
Oregon	32	43	11	0	11	43
Washington	35	18	4	0	4	35
Total	151	123	26	4	19	172
48-State total	4,955	2,882	1,242	563	507	5,283

Table 29--Primary feed production: Quantity by form of feed, by region and State, 1984

Region and State	Meal	Pellets	Cubes	Blocks	Liquid	Total
Tons						
Northeast:						
Connecticut	273,122	76,082	0	0	0	349,204
Delaware	75,471	698,044	0	0	0	773,515
Maine	20,136	194,964	0	0	0	215,100
Maryland	138,528	1,388,772	0	0	0	1,527,300
Massachusetts	62,859	53,432	0	0	0	116,291
New Hampshire	34,813	92,535	900	0	0	128,248
New Jersey	104,029	84,842	0	0	0	188,871
New York	986,236	1,182,699	2,979	27	7,058	2,179,000
Pennsylvania	1,268,916	1,465,527	876	30	451	2,735,800
Vermont	84,737	389,514	1,245	0	0	475,496
Total	3,048,847	5,626,411	6,000	57	7,510	8,688,825
Lake States:						
Michigan	1,206,764	409,826	27,340	1,355	815	1,646,100
Minnesota	2,113,567	1,426,648	8,485	2,940	65,360	3,617,000
Wisconsin	2,322,275	1,969,581	14,624	9,307	24,614	4,340,400
Total	5,642,606	3,806,054	50,449	13,602	90,789	9,603,500
Corn Belt:						
Illinois	1,571,112	1,201,096	63,071	15,475	6,146	2,856,900
Indiana	1,794,932	1,567,976	44,982	401	22,910	3,431,200
Iowa	2,963,190	2,223,849	173,144	76,601	75,916	5,512,700
Missouri	880,930	2,617,435	101,677	100,889	16,769	3,717,700
Ohio	1,096,111	875,374	5,355	300	1,260	1,978,400
Total	8,306,276	8,485,730	388,228	193,666	123,000	17,496,900
Northern Plains:						
Kansas	2,453,745	1,277,810	164,297	75,058	100,090	4,071,000
Nebraska	1,793,626	894,172	81,291	26,054	88,758	2,883,900
North Dakota	88,285	172,310	46,777	13,885	343	321,600
South Dakota	399,409	414,966	45,500	25,946	50,978	936,800
Total	4,735,065	2,759,257	337,866	140,942	240,169	8,213,300
Appalachian:						
Kentucky	410,283	539,657	33,892	7,324	2,245	993,400
North Carolina	872,327	2,179,698	2,781	3,698	396	3,058,900
Tennessee	467,528	1,132,536	18,725	18,319	7,192	1,644,300
Virginia	307,360	808,127	11,834	35,755	1,325	1,164,400
West Virginia	41,756	84,544	0	0	0	126,300
Total	2,099,255	4,744,561	67,232	65,095	11,157	6,987,300
Southeast:						
Alabama	494,464	1,946,063	5,974	0	6,399	2,452,900
Florida	1,501,236	726,539	7,894	0	32,931	2,268,600
Georgia	1,625,958	2,720,764	12,903	50,347	20,928	4,430,900
South Carolina	180,821	328,983	1,258	0	0	511,061
Total	3,802,479	5,722,348	28,029	50,347	60,258	9,663,461
Delta:						
Arkansas	1,109,440	1,469,214	22,722	28,624	0	2,630,000
Louisiana	204,803	1,006,548	29,086	32,740	2,723	1,275,900
Mississippi	386,317	1,715,088	7,731	20,198	4,165	2,133,500
Total	1,700,560	4,190,850	59,540	81,562	6,888	6,039,400
Southern Plains:						
Oklahoma	1,086,763	1,446,094	165,350	8,394	0	2,706,600
Texas	4,635,750	3,474,665	563,910	363,477	129,498	9,167,300
Total	5,722,513	4,920,759	729,260	371,871	129,498	11,873,900
Mountain:						
Arizona	212,572	7,328	0	0	0	219,900
Colorado	901,767	972,376	142,868	30,040	18,449	2,065,500
Idaho	617,940	194,172	8,219	0	222,569	1,042,900
Montana	244,635	327,374	112,792	29,128	2,571	716,500
Nevada	19,694	41,989	10,373	0	0	72,056
New Mexico	244,207	46,804	140,220	10,608	0	441,838
Utah	239,410	51,356	1,149	13,585	0	305,500
Wyoming	0	0	0	0	0	0
Total	2,480,225	1,641,400	415,621	83,361	243,588	4,864,194
Pacific:						
California	4,446,509	5,858,493	53,905	7,056	20,384	10,386,347
Hawaii	26,125	57,475	0	0	0	83,600
Oregon	222,596	452,633	61	0	109	675,400
Washington	368,146	463,748	1,555	0	6,219	839,667
Total	5,063,376	6,832,349	55,521	7,056	26,712	11,985,014
48-State total	42,601,201	48,729,719	2,137,745	1,007,559	939,570	95,415,794

Table 30--Poultry primary feed production: Quantity by form of feed, by region and State, 1984

Region and State	Total primary	Meal	Pellets and crumbles
Tons			
Northeast:			
Connecticut	190,403	164,255	26,148
Delaware	709,992	65,302	644,690
Maine	12,022	12,022	0
Maryland	1,333,068	26,934	1,306,134
Massachusetts	58,866	49,578	9,289
New Hampshire	27,540	10,062	17,478
New Jersey	28,330	18,888	9,442
New York	307,359	224,446	82,913
Pennsylvania	1,408,671	550,490	858,181
Vermont	25,379	17,432	7,946
Total	4,101,630	1,139,410	2,962,220
Lake States:			
Michigan	592,195	540,067	52,128
Minnesota	1,715,155	987,257	727,898
Wisconsin	1,040,639	222,884	817,755
Total	3,347,989	1,750,208	1,597,781
Corn Belt:			
Illinois	192,391	132,272	60,119
Indiana	599,260	475,445	123,815
Iowa	439,349	233,365	205,984
Missouri	1,464,699	182,773	1,281,926
Ohio	349,550	236,535	113,015
Total	3,045,250	1,260,390	1,784,859
Northern Plains:			
Kansas	130,820	93,326	37,494
Nebraska	245,212	205,970	39,241
North Dakota	7,710	884	6,826
South Dakota	61,718	52,255	9,463
Total	445,460	352,435	93,025
Appalachian:			
Kentucky	140,576	113,748	26,828
North Carolina	2,312,654	521,422	1,791,232
Tennessee	828,605	271,476	557,129
Virginia	667,583	170,972	496,611
West Virginia	1,416	167	1,249
Total	3,950,834	1,077,784	2,873,050
Southeast:			
Alabama	2,131,516	435,715	1,695,801
Florida	1,212,946	583,317	629,629
Georgia	3,055,618	587,186	2,468,432
South Carolina	359,343	124,887	234,456
Total	6,759,422	1,731,105	5,028,317
Delta:			
Arkansas	2,125,217	879,921	1,245,296
Louisiana	772,123	25,178	746,945
Mississippi	1,663,278	347,032	1,316,245
Total	4,560,618	1,252,131	3,308,487
Southern Plains:			
Oklahoma	887,144	452,313	434,831
Texas	2,159,714	635,679	1,524,035
Total	3,046,858	1,087,992	1,958,866
Mountain:			
Arizona	0	0	0
Colorado	276,904	237,198	39,706
Idaho	182,768	182,768	0
Montana	63,372	58,796	4,576
Nevada	0	0	0
New Mexico	140,429	121,206	19,224
Utah	163,940	159,549	4,391
Wyoming	0	0	0
Total	827,414	759,517	67,897
Pacific:			
California	6,563,913	1,199,443	5,364,471
Hawaii	37,881	19,594	18,288
Oregon	52,364	16,274	36,090
Washington	120,880	103,057	17,822
Total	6,775,038	1,338,367	5,436,671
48-State total	36,860,512	11,749,340	25,111,173

Table 31--Ruminant primary feed production: Quantity by form of feed, by region and State, 1984

Region and State	Total primary	Meal	Pellets and crumbles	Cubes	Blocks	Liquid
Tons						
Northeast:						
Connecticut	144,773	101,621	43,152	0	0	0
Delaware	40,171	10,168	30,002	0	0	0
Maine	203,078	8,115	194,964	0	0	0
Maryland	134,051	73,207	60,844	0	0	0
Massachusetts	56,401	12,633	43,768	0	0	0
New Hampshire	56,037	7,486	48,551	0	0	0
New Jersey	66,104	18,888	47,216	0	0	0
New York	1,686,770	654,673	1,023,866	1,174	0	7,058
Pennsylvania	893,996	536,188	356,970	357	30	451
Vermont	370,738	54,477	315,016	1,245	0	0
Total	3,652,118	1,477,455	2,164,348	2,775	30	7,510
Lake States:						
Michigan	516,500	277,275	238,140	0	1,085	0
Minnesota	752,429	289,139	403,260	1,056	2,940	56,034
Wisconsin	2,582,386	1,636,839	909,155	2,657	9,121	24,614
Total	3,851,314	2,203,253	1,550,555	3,713	13,147	80,647
Corn Belt:						
Illinois	817,752	286,954	497,797	12,281	14,574	6,146
Indiana	753,838	213,859	515,939	930	200	22,910
Iowa	1,331,201	338,004	828,597	32,582	65,603	66,415
Missouri	1,281,736	290,452	801,858	75,893	96,764	16,769
Ohio	758,279	273,999	478,687	4,033	300	1,260
Total	4,942,806	1,403,268	3,122,879	125,718	177,441	113,499
Northern Plains:						
Kansas	3,453,238	2,083,852	1,045,015	161,397	65,108	97,867
Nebraska	1,042,935	341,294	529,785	60,170	23,328	88,358
North Dakota	252,747	55,676	136,967	45,876	13,885	343
South Dakota	535,399	144,649	299,983	36,280	17,676	36,812
Total	5,284,320	2,625,470	2,011,750	303,722	119,996	223,380
Appalachian:						
Kentucky	534,688	129,123	394,506	1,490	7,324	2,245
North Carolina	168,974	37,549	129,279	1,750	0	396
Tennessee	596,539	73,401	480,636	17,444	17,867	7,192
Virginia	344,383	77,596	236,988	1,176	27,298	1,325
West Virginia	84,503	13,702	70,801	0	0	0
Total	1,729,086	331,372	1,312,209	21,860	52,488	11,157
Southeast:						
Alabama	105,345	27,192	66,953	4,801	0	6,399
Florida	873,625	823,328	15,864	6,741	0	27,691
Georgia	1,028,139	803,082	144,141	10,110	50,214	20,591
South Carolina	71,796	7,789	63,140	866	0	0
Total	2,078,904	1,661,391	290,099	22,519	50,214	54,680
Delta:						
Arkansas	273,615	57,906	164,362	22,722	28,624	0
Louisiana	344,643	81,214	207,356	29,032	24,318	2,723
Mississippi	85,415	16,034	37,286	7,731	20,198	4,165
Total	703,673	155,155	409,004	59,485	73,140	6,888
Southern Plains:						
Oklahoma	1,437,212	525,163	739,687	163,969	8,394	0
Texas	5,762,062	3,240,891	1,542,534	502,474	346,666	129,498
Total	7,199,274	3,766,054	2,282,220	666,443	355,059	129,498
Mountain:						
Arizona	219,900	212,572	7,328	0	0	0
Colorado	1,378,450	510,917	709,961	109,334	29,789	18,449
Idaho	832,742	423,193	178,762	8,219	0	222,569
Montana	601,797	153,138	305,513	111,447	29,128	2,571
Nevada	45,043	5,974	39,069	0	0	0
New Mexico	230,398	74,540	6,357	138,894	10,608	0
Utah	118,532	67,712	36,313	1,149	13,357	0
Wyoming	0	0	0	0	0	0
Total	3,426,861	1,448,046	1,283,303	369,043	82,881	243,588
Pacific:						
California	3,294,663	2,832,472	434,947	0	7,056	20,188
Hawaii	20,116	0	20,116	0	0	0
Oregon	554,506	171,373	383,072	61	0	0
Washington	697,498	256,516	433,208	1,555	0	6,219
Total	4,566,783	3,260,361	1,271,343	1,616	7,056	26,407
48-State total	37,435,141	18,331,825	15,697,712	1,576,895	931,453	897,256

Table 32--Swine primary feed production: Quantity by form of feed, by region and State, 1984

Region and State	Total primary	Meal	Pellets and crumbles	Cubes	Blocks	Liquid
Tons						
Northeast:						
Connecticut	2,048	0	2,048	0	0	0
Delaware	18,049	0	18,049	0	0	0
Maine	0	0	0	0	0	0
Maryland	17,511	13,990	3,521	0	0	0
Massachusetts	757	630	126	0	0	0
New Hampshire	4,611	1,154	3,457	0	0	0
New Jersey	28,185	18,886	9,299	0	0	0
New York	35,304	23,854	11,422	0	27	0
Pennsylvania	220,343	88,623	131,427	293	0	0
Vermont	7,127	1,362	5,765	0	0	0
Total	333,934	148,499	185,114	293	27	0
Lake States:						
Michigan	439,277	330,471	102,647	6,078	0	81
Minnesota	924,507	692,078	215,751	7,351	0	9,327
Wisconsin	528,804	353,574	165,790	9,255	186	0
Total	1,892,588	1,376,124	484,188	22,684	186	9,408
Corn Belt:						
Illinois	1,655,156	1,026,732	577,153	50,764	506	0
Indiana	1,253,355	826,922	392,445	33,988	0	0
Iowa	3,562,671	2,284,966	1,122,665	137,632	7,906	9,501
Missouri	810,291	322,567	460,827	23,344	3,554	0
Ohio	497,566	328,445	167,870	1,251	0	0
Total	7,779,038	4,789,633	2,720,960	246,979	11,966	9,501
Northern Plains:						
Kansas	292,350	199,051	90,287	2,901	111	0
Nebraska	1,505,251	1,204,382	277,561	21,074	2,109	125
North Dakota	34,999	12,413	21,685	901	0	0
South Dakota	306,361	197,376	78,455	8,826	7,995	13,709
Total	2,138,960	1,613,221	467,988	33,702	10,216	13,834
Appalachian:						
Kentucky	192,526	110,137	78,888	3,501	0	0
North Carolina	491,457	273,150	217,276	1,031	0	0
Tennessee	160,891	88,058	71,099	1,281	452	0
Virginia	73,401	26,726	46,022	652	0	0
West Virginia	18,841	6,347	12,494	0	0	0
Total	937,115	504,418	425,779	6,465	452	0
Southeast:						
Alabama	26,177	9,835	15,885	456	0	0
Florida	34,092	27,728	6,147	217	0	0
Georgia	248,109	179,042	66,288	2,779	0	0
South Carolina	59,298	28,210	30,711	377	0	0
Total	367,675	244,816	119,031	3,829	0	0
Delta:						
Arkansas	143,599	136,339	7,261	0	0	0
Louisiana	15,773	3,132	12,641	0	0	0
Mississippi	7,456	3,855	3,601	0	0	0
Total	166,828	143,326	23,503	0	0	0
Southern Plains:						
Oklahoma	120,402	30,624	88,866	913	0	0
Texas	166,325	52,390	106,008	7,764	162	0
Total	286,727	83,014	194,874	8,677	162	0
Mountain:						
Arizona	0	0	0	0	0	0
Colorado	79,611	34,299	45,279	32	0	0
Idaho	25,962	10,551	15,410	0	0	0
Montana	37,989	26,026	11,603	360	0	0
Nevada	142	142	0	0	0	0
New Mexico	20,218	0	20,218	0	0	0
Utah	5,227	3,888	1,339	0	0	0
Wyoming	0	0	0	0	0	0
Total	169,148	74,905	93,850	392	0	0
Pacific:						
California	161,048	106,281	54,767	0	0	0
Hawaii	10,189	0	10,189	0	0	0
Oregon	11,153	22	11,021	0	0	109
Washington	4,642	1,719	2,923	0	0	0
Total	187,032	108,022	78,900	0	0	109
48-State total	14,259,046	9,085,977	4,794,187	323,022	23,009	32,852

Table 33--All other primary feed production: Quantity by form of feed, by region and State, 1984

Region and State	Total primary	Meal	Pellets and crumbles	Cubes	Blocks	Liquid
Tons						
Northeast:						
Connecticut	11,981	7,246	4,735	0	0	0
Delaware	5,303	0	5,303	0	0	0
Maine	0	0	0	0	0	0
Maryland	42,671	24,397	18,273	0	0	0
Massachusetts	267	19	248	0	0	0
New Hampshire	40,060	16,111	23,049	900	0	0
New Jersey	66,252	47,366	18,886	0	0	0
New York	149,567	83,263	64,499	1,806	0	0
Pennsylvania	212,790	93,615	118,950	226	0	0
Vermont	72,252	11,467	60,785	0	0	0
Total	601,143	283,483	314,728	2,931	0	0
Lake States:						
Michigan	98,129	58,951	16,912	21,262	270	734
Minnesota	224,909	145,093	79,739	78	0	0
Wisconsin	188,571	108,978	76,880	2,713	0	0
Total	511,608	313,021	173,530	24,053	270	734
Corn Belt:						
Illinois	191,601	125,154	66,027	25	395	0
Indiana	824,747	278,706	535,776	10,065	200	0
Iowa	179,480	106,856	66,603	2,930	3,092	0
Missouri	160,973	85,138	72,824	2,441	571	0
Ohio	373,005	257,131	115,802	71	0	0
Total	1,729,806	852,985	857,032	15,532	4,258	0
Northern Plains:						
Kansas	194,592	77,516	105,014	0	9,839	2,223
Nebraska	90,503	41,980	47,584	47	617	275
North Dakota	26,143	19,312	6,831	0	0	0
South Dakota	33,322	5,131	27,065	395	275	457
Total	344,560	143,939	186,493	442	10,730	2,955
Appalachian:						
Kentucky	125,611	57,275	39,435	28,901	0	0
North Carolina	85,815	40,206	41,911	0	3,698	0
Tennessee	58,265	34,593	23,671	0	0	0
Virginia	79,034	32,066	28,505	10,006	8,457	0
West Virginia	21,540	21,540	0	0	0	0
Total	370,265	185,681	133,523	38,906	12,155	0
Southeast:						
Alabama	189,863	21,723	167,424	717	0	0
Florida	147,938	66,863	74,899	935	0	5,240
Georgia	99,034	56,647	41,903	13	133	337
South Carolina	20,624	19,934	675	14	0	0
Total	457,459	165,167	284,902	1,680	133	5,577
Delta:						
Arkansas	87,569	35,274	52,295	0	0	0
Louisiana	143,360	95,279	39,605	54	8,422	0
Mississippi	377,351	19,396	357,956	0	0	0
Total	608,281	149,948	449,856	54	8,422	0
Southern Plains:						
Oklahoma	261,841	78,664	182,710	468	0	0
Texas	1,079,199	706,789	302,089	53,672	16,650	0
Total	1,341,041	785,453	484,799	54,140	16,650	0
Mountain:						
Arizona	0	0	0	0	0	0
Colorado	330,536	119,353	177,431	33,501	251	0
Idaho	1,428	1,428	0	0	0	0
Montana	13,343	6,676	5,682	985	0	0
Nevada	26,871	13,578	2,920	10,373	0	0
New Mexico	50,792	48,461	1,005	1,326	0	0
Utah	17,801	8,261	9,312	0	228	0
Wyoming	0	0	0	0	0	0
Total	440,771	197,757	196,350	46,186	479	0
Pacific:						
California	366,722	308,313	4,308	53,905	0	196
Hawaii	15,414	6,531	8,883	0	0	0
Oregon	57,377	34,927	22,450	0	0	0
Washington	16,647	6,853	9,794	0	0	0
Total	456,161	356,625	45,435	53,905	0	196
48-State total	6,861,095	3,434,059	3,126,648	237,828	53,097	9,463

Table 34--All formula feed: Feed manufacturers, by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Own livestock	Custom feeding	Custom grind and mix	Total
	Number					
Northeast:						
Connecticut	5	9	0	0	0	9
Delaware	9	9	9	0	4	13
Maine	6	4	2	0	0	8
Maryland	16	32	22	0	35	60
Massachusetts	2	2	0	0	4	4
New Hampshire	2	1	0	0	0	2
New Jersey	12	0	0	0	0	12
New York	85	151	3	3	66	201
Pennsylvania	102	227	49	7	158	276
Vermont	11	12	0	0	2	14
Total	248	446	85	10	268	599
Lake States:						
Michigan	44	144	39	17	139	233
Minnesota	104	278	35	19	205	386
Wisconsin	117	396	39	12	319	544
Total	265	819	112	48	662	1,163
Corn Belt:						
Illinois	120	277	63	0	173	382
Indiana	117	278	59	7	205	395
Iowa	185	410	42	12	218	583
Missouri	99	185	68	23	158	307
Ohio	81	235	20	13	235	316
Total	603	1,385	251	55	989	1,983
Northern Plains:						
Kansas	71	238	50	33	209	418
Nebraska	100	200	61	17	87	300
North Dakota	22	36	0	0	36	49
South Dakota	30	74	7	7	97	151
Total	224	548	118	58	429	918
Appalachian:						
Kentucky	66	120	15	0	97	151
North Carolina	44	93	93	0	60	177
Tennessee	39	39	35	4	35	81
Virginia	44	75	12	4	63	111
West Virginia	11	17	6	0	22	22
Total	203	343	160	8	277	542
Southeast:						
Alabama	30	30	48	0	12	84
Florida	24	32	32	4	4	69
Georgia	65	59	73	3	31	129
South Carolina	28	28	28	0	9	46
Total	146	149	181	7	56	328
Delta:						
Arkansas	18	27	27	0	15	60
Louisiana	28	28	9	0	0	44
Mississippi	16	32	27	2	30	80
Total	62	87	64	2	45	184
Southern Plains:						
Oklahoma	57	70	17	9	48	131
Texas	115	243	124	82	107	400
Total	172	313	141	91	155	531
Mountain:						
Arizona	0	7	14	14	0	21
Colorado	45	74	10	10	20	94
Idaho	25	44	19	13	25	63
Montana	25	38	4	4	17	46
Nevada	4	4	0	4	0	4
New Mexico	12	12	6	6	3	23
Utah	15	38	8	8	15	38
Wyoming	5	9	5	0	9	14
Total	130	226	65	58	89	303
Pacific:						
California	40	64	24	10	20	91
Hawaii	3	3	0	0	0	3
Oregon	14	36	14	0	7	43
Washington	13	26	4	4	9	35
Total	71	129	42	14	36	172
48-State total	2,125	4,445	1,220	351	3,007	6,723

Table 35--All formula feed: Production by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Own livestock	Custom feeding	Custom grind and mix	Total
Tons						
Northeast:						
Connecticut	49,946	299,258	0	0	0	349,204
Delaware	2,004	149,560	381,737	0	240,214	773,515
Maine	90,929	122,794	2,791	0	0	216,514
Maryland	115,277	92,688	1,301,522	0	39,621	1,549,108
Massachusetts	105,000	1,872	0	0	9,418	116,291
New Hampshire	98,248	30,000	0	0	0	128,248
New Jersey	188,871	0	0	0	0	188,871
New York	1,210,591	1,014,875	113,266	14,158	94,689	2,447,579
Pennsylvania	1,121,496	1,156,125	514,655	2,018	206,793	3,001,086
Vermont	297,785	171,511	0	0	6,199	475,496
Total	3,280,148	3,038,683	2,313,970	16,176	596,935	9,245,912
Lake States:						
Michigan	653,364	849,026	322,476	15,889	496,206	2,336,961
Minnesota	1,515,892	1,431,776	594,929	55,985	1,081,807	4,680,389
Wisconsin	2,122,061	1,630,479	60,917	643,036	1,978,567	6,435,060
Total	4,291,316	3,911,281	978,322	714,911	3,556,580	13,452,410
Corn Belt:						
Illinois	1,960,468	926,760	60,349	0	459,273	3,406,850
Indiana	2,054,525	615,995	409,315	3,912	716,695	3,800,443
Iowa	3,771,123	1,964,268	169,552	10,072	666,370	6,581,384
Missouri	2,133,093	469,067	1,203,623	13,960	311,535	4,131,278
Ohio	1,147,239	638,537	108,918	10,143	538,056	2,442,892
Total	11,066,448	4,614,626	1,951,757	38,087	2,691,929	20,362,847
Northern Plains:						
Kansas	1,489,421	854,772	922,035	1,727,580	293,343	5,287,150
Nebraska	1,400,331	1,147,198	967,822	247,263	105,325	3,867,938
North Dakota	140,423	140,300	0	0	152,316	433,038
South Dakota	752,461	203,618	23,487	3,764	336,050	1,319,380
Total	3,782,636	2,345,888	1,913,344	1,978,606	887,033	10,907,506
Appalachian:						
Kentucky	584,221	300,749	97,637	0	80,705	1,063,311
North Carolina	522,605	333,693	2,083,429	0	170,705	3,110,432
Tennessee	876,642	32,180	445,196	3,013	297,501	1,654,532
Virginia	365,788	364,381	448,575	161	38,580	1,217,485
West Virginia	41,965	89,296	105	0	32,809	164,175
Total	2,391,221	1,120,298	3,074,942	3,175	620,299	7,209,935
Southeast:						
Alabama	341,154	81,740	2,033,274	0	3,843	2,460,010
Florida	246,115	614,527	1,491,925	2,818	23,210	2,378,594
Georgia	605,772	959,406	2,815,446	225	73,642	4,454,491
South Carolina	75,349	112,583	322,406	0	723	511,061
Total	1,268,390	1,768,255	6,663,050	3,043	101,417	9,804,156
Delta:						
Arkansas	298,452	212,267	2,120,743	0	14,320	2,645,782
Louisiana	478,086	98,859	728,507	0	0	1,305,453
Mississippi	284,890	198,621	1,659,741	2,012	19,056	2,164,320
Total	1,061,429	509,747	4,508,991	2,012	33,376	6,115,555
Southern Plains:						
Oklahoma	742,531	381,784	660,015	918,269	50,675	2,753,274
Texas	1,892,480	2,028,615	3,877,326	2,779,282	1,010,537	11,588,241
Total	2,635,012	2,410,399	4,537,341	3,697,551	1,061,212	14,341,515
Mountain:						
Arizona	0	67,250	263,283	512,515	0	843,048
Colorado	612,586	999,644	94,933	354,110	31,127	2,092,401
Idaho	29,591	481,447	293,356	160,079	138,235	1,102,709
Montana	141,631	490,460	55,457	67,231	29,954	784,733
Nevada	56,381	10,080	0	5,594	0	72,056
New Mexico	86,062	106,804	89,137	119,778	40,057	441,838
Utah	34,503	203,159	15,856	15,856	39,641	309,016
Wyoming	0	138,037	219	0	460	138,716
Total	960,755	2,496,882	812,240	1,235,165	279,474	5,784,517
Pacific:						
California	309,710	3,289,883	6,466,099	513,003	65,648	10,644,344
Hawaii	63,817	19,783	0	0	0	83,600
Oregon	360,272	412,282	25,357	0	342	798,253
Washington	9,325	619,903	97,741	109,506	3,192	839,667
Total	743,124	4,341,851	6,589,197	622,509	69,183	12,365,864
48-State total	31,480,479	26,557,910	33,343,156	8,311,234	9,897,437	109,590,217

Table 36--Dry formula feed: Feed manufacturers by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Own livestock	Custom feeding	Custom grind and mix	Total
	Number					
Northeast:						
Connecticut	5	9	0	0	0	9
Delaware	9	9	9	0	4	13
Maine	6	4	2	0	0	8
Maryland	16	32	22	0	35	60
Massachusetts	2	2	0	0	4	4
New Hampshire	2	1	0	0	0	2
New Jersey	12	0	0	0	0	12
New York	82	151	3	3	66	201
Pennsylvania	97	224	45	6	156	273
Vermont	11	12	0	0	2	14
Total	241	443	81	10	267	596
Lake States:						
Michigan	44	144	39	17	139	233
Minnesota	100	270	35	15	201	382
Wisconsin	117	396	39	12	319	544
Total	261	811	112	44	658	1,159
Corn Belt:						
Illinois	120	272	63	0	173	382
Indiana	117	278	59	7	205	395
Iowa	185	407	42	12	218	583
Missouri	99	181	68	23	158	307
Ohio	81	235	20	13	229	316
Total	603	1,373	251	55	982	1,983
Northern Plains:						
Kansas	63	238	50	33	209	410
Nebraska	100	196	61	17	87	296
North Dakota	22	36	0	0	36	49
South Dakota	30	74	7	7	97	151
Total	215	543	118	58	429	905
Appalachian:						
Kentucky	66	120	15	0	97	147
North Carolina	44	93	93	0	60	177
Tennessee	39	39	35	4	35	81
Virginia	44	75	12	4	63	111
West Virginia	11	17	6	0	22	22
Total	203	343	160	8	277	538
Southeast:						
Alabama	24	30	48	0	12	84
Florida	20	32	32	4	4	65
Georgia	62	59	73	3	31	126
South Carolina	28	28	28	0	9	46
Total	134	149	181	7	56	321
Delta:						
Arkansas	18	27	27	0	15	60
Louisiana	28	28	9	0	0	44
Mississippi	14	32	27	2	30	78
Total	60	87	64	2	45	182
Southern Plains:						
Oklahoma	57	70	17	9	48	131
Texas	99	231	124	82	107	384
Total	156	301	141	91	155	515
Mountain:						
Arizona	0	7	14	14	0	21
Colorado	40	74	10	10	20	94
Idaho	25	38	19	13	25	57
Montana	25	38	4	4	17	46
Nevada	4	4	0	4	0	4
New Mexico	12	12	6	6	3	23
Utah	15	38	8	8	8	30
Wyoming	5	9	5	0	9	14
Total	125	219	65	58	82	289
Pacific:						
California	40	64	24	10	20	91
Hawaii	3	3	0	0	0	3
Oregon	14	36	14	0	7	43
Washington	13	26	4	4	9	35
Total	71	129	42	14	36	172
48-State total	2,068	4,399	1,216	347	2,987	6,660

Table 37--Dry formula feed: Production by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Own livestock	Custom feeding	Custom grind and mix	Total
Tons						
Northeast:						
Connecticut	49,946	299,258	0	0	0	349,204
Delaware	2,004	149,560	381,737	0	240,214	773,515
Maine	90,929	122,794	2,791	0	0	216,514
Maryland	115,277	92,338	1,301,522	0	39,621	1,548,758
Massachusetts	105,000	1,872	0	0	9,418	116,291
New Hampshire	98,248	30,000	0	0	0	128,248
New Jersey	188,871	0	0	0	0	188,871
New York	1,199,151	1,012,309	113,266	14,158	94,689	2,433,574
Pennsylvania	1,119,867	1,156,063	514,653	2,018	206,793	2,999,393
Vermont	297,785	171,511	0	0	6,199	475,496
Total	3,267,079	3,035,705	2,313,969	16,176	596,935	9,229,864
Lake States:						
Michigan	653,364	848,173	322,476	15,889	496,206	2,336,108
Minnesota	1,432,641	1,410,609	594,929	54,699	1,075,376	4,568,254
Wisconsin	2,109,244	1,593,919	60,917	642,299	1,972,591	6,378,969
Total	4,195,249	3,852,701	978,322	712,887	3,544,172	13,283,331
Corn Belt:						
Illinois	1,959,953	926,204	60,349	0	456,747	3,403,253
Indiana	2,052,372	615,212	409,315	3,912	716,695	3,797,506
Iowa	3,714,510	1,940,554	169,313	10,072	666,370	6,500,818
Missouri	2,094,473	468,131	1,203,623	13,960	310,576	4,090,763
Ohio	1,146,437	638,537	108,918	10,143	537,724	2,441,758
Total	10,967,744	4,588,638	1,951,518	38,087	2,688,112	20,234,099
Northern Plains:						
Kansas	1,392,255	850,589	922,035	1,727,580	293,320	5,185,778
Nebraska	1,334,488	1,136,328	967,822	247,263	105,325	3,791,226
North Dakota	140,423	139,949	0	0	152,316	432,687
South Dakota	738,989	201,306	23,487	3,764	332,136	1,299,681
Total	3,606,155	2,328,172	1,913,344	1,978,606	883,096	10,709,372
Appalachian:						
Kentucky	580,831	300,497	97,637	0	80,705	1,059,670
North Carolina	522,605	333,291	2,083,429	0	170,705	3,110,031
Tennessee	866,505	32,150	445,196	3,013	297,501	1,644,365
Virginia	365,788	363,033	448,575	161	38,580	1,216,137
West Virginia	41,965	89,296	105	0	32,809	164,175
Total	2,377,694	1,118,268	3,074,942	3,175	620,299	7,194,378
Southeast:						
Alabama	334,227	81,740	2,033,274	0	3,843	2,453,083
Florida	208,715	614,527	1,491,925	2,818	23,210	2,341,194
Georgia	588,994	957,032	2,812,646	225	73,642	4,432,538
South Carolina	75,349	112,583	322,406	0	723	511,061
Total	1,207,285	1,765,882	6,660,250	3,043	101,417	9,737,876
Delta:						
Arkansas	298,452	212,267	2,120,743	0	14,320	2,645,782
Louisiana	475,362	97,043	728,507	0	0	1,300,912
Mississippi	260,379	198,363	1,659,741	2,012	19,056	2,139,550
Total	1,034,193	507,673	4,508,991	2,012	33,376	6,086,245
Southern Plains:						
Oklahoma	742,531	381,784	660,015	918,269	50,675	2,753,274
Texas	1,814,848	1,994,703	3,796,033	2,752,273	1,010,537	11,368,394
Total	2,557,379	2,376,487	4,456,048	3,670,542	1,061,212	14,121,668
Mountain:						
Arizona	0	67,250	263,283	512,515	0	843,048
Colorado	609,889	999,411	94,933	354,110	31,127	2,089,470
Idaho	29,591	309,854	279,079	160,079	135,541	914,145
Montana	139,058	490,460	55,457	67,231	29,954	782,160
Nevada	56,381	10,080	0	5,594	0	72,056
New Mexico	86,062	106,804	89,137	119,778	40,057	441,838
Utah	34,503	203,159	15,856	15,856	7,928	277,303
Wyoming	0	138,037	219	0	460	138,716
Total	955,486	2,325,055	797,964	1,235,165	245,068	5,558,737
Pacific:						
California	309,710	3,269,096	6,466,099	513,003	65,648	10,623,557
Hawaii	63,817	19,783	0	0	0	83,600
Oregon	360,272	412,282	25,357	0	342	798,253
Washington	9,325	613,686	97,741	109,506	3,192	833,450
Total	743,124	4,314,847	6,589,197	622,509	69,183	12,338,860
48-State total	30,911,387	26,213,428	33,244,545	8,282,201	9,842,869	108,494,431

Table 38--Liquid formula feed: Production by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Own livestock	Custom feeding	Custom grind and mix	Total
Tons						
Northeast:						
Connecticut	0	0	0	0	0	0
Delaware	0	0	0	0	0	0
Maine	0	0	0	0	0	0
Maryland	0	350	0	0	0	350
Massachusetts	0	0	0	0	0	0
New Hampshire	0	0	0	0	0	0
New Jersey	0	0	0	0	0	0
New York	11,440	2,565	0	0	0	14,005
Pennsylvania	1,630	62	2	0	0	1,693
Vermont	0	0	0	0	0	0
Total	13,070	2,977	2	0	0	16,048
Lake States:						
Michigan	0	853	0	0	0	853
Minnesota	83,251	21,167	0	1,286	6,431	112,135
Wisconsin	12,816	36,560	0	738	5,977	56,091
Total	96,068	58,580	0	2,024	12,407	169,079
Corn Belt:						
Illinois	515	556	0	0	2,526	3,597
Indiana	2,153	783	0	0	0	2,937
Iowa	56,613	23,714	239	0	0	80,566
Missouri	38,620	936	0	0	959	40,515
Ohio	802	0	0	0	332	1,134
Total	98,703	25,988	239	0	3,817	128,748
Northern Plains:						
Kansas	97,166	4,183	0	0	23	101,372
Nebraska	65,843	10,869	0	0	0	76,712
North Dakota	0	351	0	0	0	351
South Dakota	13,472	2,313	0	0	3,914	19,699
Total	176,481	17,716	0	0	3,937	198,134
Appalachian:						
Kentucky	3,389	251	0	0	0	3,641
North Carolina	0	401	0	0	0	401
Tennessee	10,138	29	0	0	0	10,167
Virginia	0	1,348	0	0	0	1,348
West Virginia	0	0	0	0	0	0
Total	13,527	2,030	0	0	0	15,557
Southeast:						
Alabama	6,927	0	0	0	0	6,927
Florida	37,400	0	0	0	0	37,400
Georgia	16,779	2,373	2,801	0	0	21,953
South Carolina	0	0	0	0	0	0
Total	61,106	2,373	2,801	0	0	66,280
Delta:						
Arkansas	0	0	0	0	0	0
Louisiana	2,724	1,816	0	0	0	4,541
Mississippi	24,512	258	0	0	0	24,770
Total	27,236	2,074	0	0	0	29,310
Southern Plains:						
Oklahoma	0	0	0	0	0	0
Texas	77,633	33,913	81,293	27,009	0	219,847
Total	77,633	33,913	81,293	27,009	0	219,847
Mountain:						
Arizona	0	0	0	0	0	0
Colorado	2,697	234	0	0	0	2,931
Idaho	0	171,593	14,277	0	2,694	188,564
Montana	2,573	0	0	0	0	2,573
Nevada	0	0	0	0	0	0
New Mexico	0	0	0	0	0	0
Utah	0	0	0	0	31,713	31,713
Wyoming	0	0	0	0	0	0
Total	5,270	171,827	14,277	0	34,407	225,780
Pacific:						
California	0	20,787	0	0	0	20,787
Hawaii	0	0	0	0	0	0
Oregon	0	0	0	0	0	0
Washington	0	6,217	0	0	0	6,217
Total	0	27,004	0	0	0	27,004
48-State total	569,093	344,482	98,611	29,033	54,568	1,095,786

Table 39--Northeast region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	9	305	0	0	0	0	13	1,511	10	1,816
1,000-9,999 tons	13	3,399	66	94,977	7	5,936	3	551	52	50,135	76	154,998
10,000-24,999 tons	22	69,365	63	251,880	10	18,148	3	13,786	33	56,520	67	409,699
25,000-49,999 tons	38	249,536	53	467,768	7	13,934	0	0	10	23,704	57	754,942
50,000-74,999 tons	16	115,550	16	266,162	7	59,326	0	0	3	6,086	19	447,123
75,000-99,999 tons	19	244,697	13	207,083	3	279	0	0	0	0	19	452,059
100,000 tons and more	19	702,842	19	731,935	33	2,180,716	0	0	3	256,567	38	3,872,060
Total	126	1,385,389	239	2,020,109	65	2,278,338	7	14,338	114	394,522	285	6,092,696
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	9	1,466	22	18,866	3	70	0	0	23	9,585	29	29,987
10,000-24,999 tons	0	0	3	7,512	0	0	0	0	0	0	3	7,512
25,000-49,999 tons	3	1,543	3	7,485	0	0	3	1,838	3	16,736	3	27,602
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	3,009	28	33,863	3	70	3	1,838	26	26,321	36	65,100
Single owner:												
Less than 1,000 tons	0	0	3	490	0	0	0	0	3	730	7	1,220
1,000-9,999 tons	6	2,807	28	19,435	10	3,863	0	0	29	27,371	33	53,475
10,000-24,999 tons	6	5,169	19	64,230	0	0	0	0	13	5,080	20	74,479
25,000-49,999 tons	3	39,203	0	0	0	0	0	0	0	0	3	39,203
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	3	31,352	0	0	0	0	3	31,352
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	16	47,178	50	84,155	13	35,214	0	0	46	33,161	66	199,728
Farmer cooperative:												
Less than 1,000 tons	0	0	6	1,021	0	0	0	0	7	1,674	10	2,695
1,000-9,999 tons	9	7,715	47	52,934	3	348	0	0	39	28,880	59	89,877
10,000-24,999 tons	16	6,141	38	140,504	0	0	0	0	26	68,921	52	215,566
25,000-49,999 tons	13	119,327	19	107,292	0	0	0	0	7	33,791	23	260,410
50,000-74,999 tons	25	601,350	3	16,488	0	0	0	0	0	0	26	617,838
75,000-99,999 tons	9	299,540	3	52,448	0	0	0	0	0	0	13	351,988
100,000 tons and more	22	810,500	13	529,869	0	0	0	0	3	9,644	29	1,350,014
Total	94	1,844,572	129	900,556	3	348	0	0	82	142,911	212	2,888,387
All forms of ownership:												
Less than 1,000 tons	0	0	19	1,816	0	0	0	0	23	3,915	26	5,730
1,000-9,999 tons	38	15,386	163	186,212	23	10,216	3	551	144	115,970	197	328,337
10,000-24,999 tons	44	80,675	122	464,126	10	18,148	3	13,786	72	130,522	142	707,256
25,000-49,999 tons	57	409,608	75	582,545	7	13,934	3	1,838	20	74,231	86	1,082,156
50,000-74,999 tons	41	716,900	19	282,650	7	59,326	0	0	3	6,086	45	1,064,961
75,000-99,999 tons	28	544,237	16	259,531	7	31,630	0	0	0	0	35	835,398
100,000 tons and more	41	1,513,342	31	1,261,804	33	2,180,716	0	0	7	266,211	67	5,222,073
Total	248	3,280,148	446	3,038,683	85	2,313,970	10	16,176	268	596,935	599	9,245,912

Table 40--Lake States region: Distribution of formula feed by method, form of ownership, and capacity size, 1964

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	4	716	33	9,248	0	0	0	0	17	3,163	38	13,126
1,000-9,999 tons	37	36,445	153	312,213	17	33,937	0	0	137	248,873	219	631,468
10,000-24,999 tons	37	193,451	132	572,047	26	189,764	4	3,525	95	464,458	185	1,343,246
25,000-49,999 tons	37	517,055	41	217,758	4	21,909	4	58,752	21	79,575	51	936,048
50,000-74,999 tons	33	983,090	21	145,486	9	50,577	4	995	4	25,283	38	1,245,431
75,000-99,999 tons	16	939,265	8	37,972	4	74,669	0	0	4	220,939	21	1,272,845
100,000 tons and more	4	292,018	4	462,755	4	477,318	4	631,583	4	141,872	17	2,005,546
Total	167	2,962,040	393	1,757,478	55	849,174	17	694,855	281	1,184,163	569	7,447,710
Partnerships:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	8	13,093	9	7,564	4	1,469	33	71,363	38	93,489
10,000-24,999 tons	0	0	4	9,406	4	87,725	0	0	4	9,574	8	106,716
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	12	22,498	13	95,300	4	1,469	37	80,937	46	200,204
Single owner:												
Less than 1,000 tons	0	0	8	1,520	0	0	0	0	4	1,326	8	2,846
1,000-9,999 tons	8	1,835	46	49,067	9	20,534	0	0	54	125,438	69	196,874
10,000-24,999 tons	8	110,509	21	26,336	4	3,883	4	367	41	243,456	52	386,551
25,000-49,999 tons	0	0	4	2,310	4	261	0	0	4	11,047	4	13,618
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	4	363,348	4	11,287	0	0	0	0	0	0	4	374,634
Total	20	475,692	83	90,519	17	24,678	4	367	103	381,267	137	972,524
Farmer cooperative:												
Less than 1,000 tons	4	4	4	357	0	0	0	0	4	144	8	505
1,000-9,999 tons	24	13,826	178	451,878	4	1,680	13	18,029	112	726,985	197	1,212,398
10,000-24,999 tons	20	114,058	112	975,901	9	5,608	9	191	91	441,392	140	1,537,149
25,000-49,999 tons	20	521,070	21	241,174	0	0	0	0	21	406,601	45	1,168,845
50,000-74,999 tons	8	204,627	8	115,644	4	1,882	0	0	4	99,423	12	421,575
75,000-99,999 tons	0	0	8	255,832	0	0	0	0	8	235,668	8	491,500
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	77	853,584	331	2,040,785	17	9,169	22	18,220	240	1,910,213	411	4,831,972
All forms of ownership:												
Less than 1,000 tons	8	719	46	11,125	0	0	0	0	25	4,632	54	16,477
1,000-9,999 tons	69	52,106	385	826,250	39	63,715	17	19,498	335	1,172,659	523	2,134,229
10,000-24,999 tons	65	418,019	269	1,583,689	43	206,990	17	4,083	232	1,158,880	386	3,371,662
25,000-49,999 tons	57	1,038,125	66	461,242	9	63,170	4	58,752	46	497,223	100	2,118,512
50,000-74,999 tons	41	1,187,718	29	261,129	13	92,459	4	995	8	124,705	50	1,667,006
75,000-99,999 tons	16	939,265	17	293,804	4	74,669	0	0	12	456,607	29	1,764,345
100,000 tons and more	8	655,365	8	474,041	4	477,318	4	631,583	4	141,872	21	2,380,180
Total	265	4,291,316	819	3,911,281	112	978,322	48	714,911	662	3,556,580	1,163	13,452,410

Table 41--Corn Belt region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporations:												
Less than 1,000 tons	5	90	23	6,667	5	265	0	0	45	7,677	47	14,699
1,000-9,999 tons	72	148,612	323	462,138	77	62,368	18	3,015	210	228,096	411	904,228
10,000-24,999 tons	90	466,644	243	786,124	58	99,815	23	23,206	170	808,993	332	2,175,783
25,000-49,999 tons	113	1,522,156	122	887,584	48	476,443	0	0	50	157,520	196	3,043,702
50,000-74,999 tons	68	1,498,006	28	245,734	5	28,110	0	0	10	6,789	75	1,778,639
75,000-99,999 tons	72	2,406,749	28	473,697	14	48,588	0	0	10	126,919	75	3,055,953
100,000 tons and more	45	2,567,744	23	81,589	19	1,189,332	0	0	0	0	56	3,838,665
Total	464	8,610,000	791	2,943,533	227	1,895,921	41	26,221	495	1,335,994	1,191	14,811,669
Partnership:												
Less than 1,000 tons	0	0	9	3,296	0	0	0	0	5	1,335	11	4,631
1,000-9,999 tons	5	30	14	9,542	0	0	0	0	10	12,016	16	21,588
10,000-24,999 tons	0	0	5	17,721	0	0	0	0	5	15,621	5	33,342
25,000-49,999 tons	0	0	5	341	0	0	0	0	5	9,947	5	10,288
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	30	33	30,899	0	0	0	0	25	38,919	38	69,849
Single owner:												
Less than 1,000 tons	0	0	14	1,298	0	0	0	0	15	1,208	14	2,506
1,000-9,999 tons	9	2,468	66	43,384	10	14,469	5	5,650	60	76,217	97	142,189
10,000-24,999 tons	9	3,795	42	129,884	5	16,972	5	3,390	40	43,309	53	197,350
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	109,162	0	0	0	0	0	0	0	0	5	109,162
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	23	115,425	122	174,566	14	31,441	9	9,041	115	120,734	169	451,207
Farmer cooperative:												
Less than 1,000 tons	0	0	14	4,693	0	0	0	0	15	2,787	18	7,481
1,000-9,999 tons	23	1,703	225	425,201	0	0	0	0	195	492,017	272	918,921
10,000-24,999 tons	27	80,936	140	539,418	5	5,304	5	2,825	100	284,312	168	912,796
25,000-49,999 tons	32	762,887	37	306,315	5	19,091	0	0	30	314,994	73	1,403,287
50,000-74,999 tons	9	211,437	19	126,801	0	0	0	0	10	98,834	27	437,072
75,000-99,999 tons	9	227,098	0	0	0	0	0	0	5	3,338	9	230,436
100,000 tons and more	14	1,056,931	5	63,199	0	0	0	0	0	0	18	1,120,130
Total	113	2,340,993	440	1,465,628	10	24,395	5	2,825	355	1,196,282	585	5,030,122
All forms of ownership:												
Less than 1,000 tons	5	90	61	15,955	5	265	0	0	80	13,008	90	29,317
1,000-9,999 tons	108	152,813	627	940,265	87	76,837	23	8,665	475	808,346	796	1,986,925
10,000-24,999 tons	126	551,375	430	1,473,146	68	113,091	32	29,422	315	1,152,235	558	3,319,270
25,000-49,999 tons	144	2,285,043	164	1,194,240	53	495,534	0	0	85	482,461	274	4,457,277
50,000-74,999 tons	81	1,818,605	47	372,535	5	28,110	0	0	20	105,623	107	2,324,873
75,000-99,999 tons	81	2,633,847	28	473,697	14	48,588	0	0	15	130,257	84	3,286,389
100,000 tons and more	59	3,624,675	28	144,788	19	1,189,332	0	0	0	0	74	4,958,795
Total	603	11,066,448	1,385	4,614,626	251	1,951,757	55	38,087	989	2,691,929	1,983	20,362,847

Table 42--Northern Plains region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	13	2,720	0	0	0	0	13	1,590	26	4,310
1,000-9,999 tons	21	59,358	110	144,950	27	40,495	9	215,448	103	113,593	170	573,844
10,000-24,999 tons	37	165,974	92	253,729	27	91,961	4	1,163	56	159,990	128	672,817
25,000-49,999 tons	37	443,615	31	275,848	18	280,464	0	0	13	19,820	68	1,019,748
50,000-74,999 tons	25	619,648	9	198,338	5	59,874	18	570,505	0	0	47	1,448,365
75,000-99,999 tons	12	499,825	0	0	5	227,443	9	237,102	0	0	26	964,370
100,000 tons and more	29	1,362,420	13	619,833	14	883,436	9	941,819	0	0	47	3,807,507
Total	162	3,150,842	267	1,495,417	95	1,583,673	49	1,966,036	184	294,994	510	8,490,961
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	9	3,762	0	0	0	0	4	200	10	3,962
10,000-24,999 tons	4	2,670	4	49,575	5	4,860	0	0	4	1,431	5	58,537
25,000-49,999 tons	4	5,086	4	3,399	0	0	0	0	4	636	5	9,122
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	4	53,258	5	318,323	0	0	0	0	0	0
Total	8	7,757	22	109,995	9	323,183	0	0	13	2,268	26	443,202
Single owner:												
Less than 1,000 tons	0	0	4	1,416	0	0	0	0	4	318	5	1,735
1,000-9,999 tons	0	0	13	10,425	0	0	0	0	13	23,691	24	34,116
10,000-24,999 tons	4	636	9	11,756	0	0	4	1,744	4	6,998	10	21,134
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	636	26	23,598	0	0	4	1,744	21	31,007	38	56,985
Farmer cooperative:												
Less than 1,000 tons	0	0	9	1,785	0	0	0	0	9	5,312	17	7,097
1,000-9,999 tons	4	381	101	106,593	5	413	4	10,826	116	195,167	151	313,381
10,000-24,999 tons	12	17,039	92	393,863	0	0	0	0	64	211,460	112	622,362
25,000-49,999 tons	12	98,028	26	199,885	5	2,430	0	0	21	146,824	43	447,166
50,000-74,999 tons	12	276,779	0	0	0	0	0	0	0	0	13	276,779
75,000-99,999 tons	4	85,037	0	0	0	0	0	0	0	0	4	85,037
100,000 tons and more	4	146,137	4	14,754	5	3,645	0	0	0	0	4	164,536
Total	50	623,402	232	716,878	14	6,488	4	10,826	210	558,764	344	1,916,358
All forms of ownership:												
Less than 1,000 tons	0	0	26	5,921	0	0	0	0	26	7,221	47	13,141
1,000-9,999 tons	25	59,740	232	265,729	32	40,908	13	226,274	236	332,652	355	925,303
10,000-24,999 tons	58	186,320	197	708,924	32	96,821	9	2,907	129	379,879	254	1,374,851
25,000-49,999 tons	54	546,729	61	479,132	23	282,894	0	0	39	167,281	116	1,476,037
50,000-74,999 tons	37	896,427	9	198,338	5	59,874	18	570,505	0	0	60	1,725,144
75,000-99,999 tons	17	584,862	0	0	5	227,443	9	237,102	0	0	30	1,049,407
100,000 tons and more	33	1,508,558	22	687,844	23	1,205,404	9	941,819	0	0	56	4,343,624
Total	224	3,782,636	548	2,345,888	118	1,913,344	58	1,978,606	429	887,033	918	10,907,507

Table 43--Appalachian region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	12	1,681	0	0	0	0	12	821	12	2,502
1,000-9,999 tons	44	25,875	72	87,882	24	37,624	8	3,175	61	34,478	100	189,033
10,000-24,999 tons	20	20,809	48	78,106	12	39,711	0	0	20	22,696	56	161,322
25,000-49,999 tons	32	141,929	32	117,772	12	85,810	0	0	20	10,468	44	355,978
50,000-74,999 tons	20	163,287	28	240,909	16	248,530	0	0	12	20,149	40	672,875
75,000-99,999 tons	8	247,808	0	0	8	208,746	0	0	0	0	16	456,555
100,000 tons and more	24	647,134	8	234,603	36	1,817,415	0	0	8	480,173	56	3,179,325
Total	147	1,246,841	199	760,953	108	2,437,835	8	3,175	134	568,786	325	5,017,590
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	4	124	4	124
1,000-9,999 tons	4	16	12	7,128	8	1,792	0	0	16	6,330	16	15,267
10,000-24,999 tons	0	0	12	16,102	8	32,836	0	0	8	4,323	16	53,260
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	16	24	23,230	16	34,628	0	0	29	10,777	37	68,651
Single owner:												
Less than 1,000 tons	4	13	8	54	0	0	0	0	4	253	8	320
1,000-9,999 tons	4	4,732	32	12,257	16	11,948	0	0	45	15,711	47	44,649
10,000-24,999 tons	0	0	8	7,346	0	0	0	0	0	0	8	7,346
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	4	1,845	0	0	0	0	4	1,544	4	3,389
Total	8	4,744	52	21,502	16	11,948	0	0	53	17,509	67	55,704
Farmer cooperative:												
Less than 1,000 tons	0	0	12	1,899	0	0	0	0	24	2,782	24	4,681
1,000-9,999 tons	8	7,405	16	8,537	0	0	0	0	16	2,886	24	18,828
10,000-24,999 tons	0	0	4	3,355	0	0	0	0	4	2,779	4	6,134
25,000-49,999 tons	8	17,700	16	141,549	4	2,601	0	0	12	14,668	20	176,517
50,000-74,999 tons	4	91,559	4	5,124	0	0	0	0	0	0	4	96,683
75,000-99,999 tons	8	123,379	4	22,113	0	0	0	0	0	0	8	145,492
100,000 tons and more	16	899,576	12	132,037	16	587,930	0	0	4	113	28	1,619,655
Total	44	1,139,620	68	314,613	20	590,530	0	0	61	23,227	113	2,067,990
All forms of ownership:												
Less than 1,000 tons	4	13	32	3,633	0	0	0	0	45	3,980	48	7,626
1,000-9,999 tons	60	38,028	132	115,804	48	51,364	8	3,175	139	59,406	188	267,777
10,000-24,999 tons	20	20,809	72	104,909	20	72,547	0	0	33	29,799	85	228,063
25,000-49,999 tons	40	159,629	48	259,321	16	88,410	0	0	33	25,136	64	532,495
50,000-74,999 tons	24	254,846	32	246,033	16	248,530	0	0	12	20,149	44	769,559
75,000-99,999 tons	16	371,187	4	22,113	8	208,746	0	0	0	0	24	602,047
100,000 tons and more	40	1,546,710	24	368,485	52	2,405,344	0	0	16	481,830	88	4,802,369
Total	203	2,391,221	343	1,120,298	160	3,074,942	8	3,175	277	620,299	542	7,209,935

Table 44--Southeast region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	4	408	4	555	0	0	0	0	0	0	8	963
1,000-9,999 tons	20	7,151	36	27,118	8	2,935	4	531	30	9,614	34	47,348
10,000-24,999 tons	24	45,446	16	42,592	4	7,045	0	0	4	333	30	95,416
25,000-49,999 tons	16	35,114	24	160,546	24	187,567	0	0	4	1,733	38	384,959
50,000-74,999 tons	12	84,454	20	117,827	8	51,474	0	0	4	1,710	19	255,465
75,000-99,999 tons	12	192,532	12	147,105	20	282,366	0	0	4	10,396	27	632,400
100,000 tons and more	24	543,800	8	220,006	48	3,466,544	0	0	0	0	61	4,230,351
Total	110	908,905	121	715,750	113	3,997,931	4	531	45	23,785	216	5,646,902
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	4	7,121	0	0	0	0	8	7,121
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	4	127,593	0	0	0	0	8	127,593
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	8	134,715	0	0	0	0	15	134,715
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	5,730	0	0	4	3,669	0	0	0	0	8	9,399
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	4	30,642	4	61,058	0	0	0	0	4	61,058
100,000 tons and more	0	0	0	0	4	114,484	0	0	0	0	4	30,642
Total	4	5,730	4	30,642	12	179,211	0	0	0	0	20	215,582
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	4	383	0	0	0	0	4	666	4	1,049
10,000-24,999 tons	0	0	4	7,902	0	0	0	0	4	2,932	4	10,835
25,000-49,999 tons	4	12,086	0	0	0	0	0	0	0	0	4	12,086
50,000-74,999 tons	4	24,409	8	934,423	8	109,370	0	0	4	74,033	17	1,142,235
75,000-99,999 tons	4	47,794	4	76,673	0	0	0	0	0	0	4	124,467
100,000 tons and more	20	269,466	4	2,482	40	2,241,823	4	2,512	0	0	43	2,516,284
Total	32	353,755	24	1,021,864	48	2,351,193	4	2,512	11	77,632	77	3,806,956
All forms of ownership:												
Less than 1,000 tons	4	408	4	555	0	0	0	0	0	0	8	963
1,000-9,999 tons	24	12,881	40	27,501	16	13,726	4	531	34	10,280	54	64,919
10,000-24,999 tons	24	45,446	20	50,494	4	7,045	0	0	7	3,265	35	106,251
25,000-49,999 tons	20	47,200	24	160,546	24	187,567	0	0	4	1,733	42	397,045
50,000-74,999 tons	16	108,862	28	1,052,251	20	221,901	0	0	7	75,743	40	1,458,757
75,000-99,999 tons	16	240,326	20	254,420	24	409,960	0	0	4	10,396	42	915,101
100,000 tons and more	43	813,266	12	222,488	93	5,822,851	4	2,512	0	0	107	6,861,118
Total	146	1,268,390	149	1,768,255	181	6,663,050	7	3,043	56	101,417	328	9,804,155

Table 45--Delta region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	3	507	0	0	0	0	0	0	3	507
1,000-9,999 tons	11	5,771	25	53,112	8	7,157	2	2,012	15	5,422	35	73,475
10,000-24,999 tons	8	21,509	8	33,764	0	0	0	0	0	0	8	55,274
25,000-49,999 tons	14	159,494	11	28,518	11	255,047	0	0	0	0	25	443,058
50,000-74,999 tons	8	162,475	14	150,706	11	295,115	0	0	3	9,157	22	617,452
75,000-99,999 tons	0	0	0	0	3	157,819	0	0	0	0	3	157,819
100,000 tons and more	8	439,178	3	194,156	24	3,016,548	0	0	0	0	35	3,649,882
Total	51	788,427	65	460,753	56	3,731,686	2	2,012	18	14,579	131	4,997,466
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	3	2,982	0	0	0	0	3	568	4	3,549
10,000-24,999 tons	0	0	3	6,761	0	0	0	0	3	5,341	4	12,103
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	6	9,743	0	0	0	0	5	5,909	8	15,652
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	3	305	2	305
1,000-9,999 tons	0	0	3	1,014	0	0	0	0	8	4,018	7	5,032
10,000-24,999 tons	0	0	0	0	0	0	0	0	3	1,316	2	1,316
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	3	122,116	0	0	0	0	2	122,116
100,000 tons and more	0	0	0	0	3	408,242	0	0	0	0	2	408,242
Total	0	0	3	1,014	5	530,359	0	0	13	5,639	17	537,012
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	3	86,710	11	26,489	0	0	0	0	5	2,671	13	115,870
10,000-24,999 tons	0	0	0	0	0	0	0	0	5	4,578	5	4,578
25,000-49,999 tons	6	100,213	3	11,738	0	0	0	0	0	0	5	111,950
50,000-74,999 tons	3	86,080	0	0	0	0	0	0	0	0	3	86,080
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	3	246,947	0	0	0	0	3	246,947
Total	11	273,002	14	38,227	3	246,947	0	0	10	7,249	28	565,425
All forms of ownership:												
Less than 1,000 tons	0	0	3	507	0	0	0	0	3	305	5	812
1,000-9,999 tons	14	92,481	42	83,597	8	7,157	2	2,012	30	12,679	59	197,926
10,000-24,999 tons	8	21,509	11	40,526	0	0	0	0	10	11,235	20	73,270
25,000-49,999 tons	20	259,706	14	40,255	11	255,047	0	0	0	0	30	555,009
50,000-74,999 tons	11	248,554	14	150,706	11	295,115	0	0	3	9,157	24	703,532
75,000-99,999 tons	0	0	0	0	5	279,935	0	0	0	0	5	279,935
100,000 tons and more	8	439,178	3	194,156	29	3,671,737	0	0	0	0	40	4,305,071
Total	62	1,061,429	87	509,747	64	4,508,991	2	2,012	45	33,376	184	6,115,555

Table 46--Southern Plains: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	8	132	9	1,210	0	0	0	0	4	2,336	13	3,678
1,000-9,999 tons	21	5,044	81	111,516	9	108,861	12	6,583	47	23,774	97	255,777
10,000-24,999 tons	21	18,521	43	218,215	17	80,117	8	54,921	22	11,608	50	383,381
25,000-49,999 tons	25	430,542	43	389,439	17	151,835	8	99,009	0	0	59	1,070,825
50,000-74,999 tons	13	149,145	9	67,319	9	154,118	17	408,344	0	0	29	778,926
75,000-99,999 tons	17	223,182	17	331,661	9	110,363	8	487,044	4	62,680	29	1,214,929
100,000 tons and more	34	1,425,471	26	1,147,531	47	3,223,100	25	2,180,118	4	35,513	97	8,011,733
Total	138	2,252,037	227	2,266,890	107	3,828,393	79	3,236,019	82	135,910	374	11,719,250
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	9	10,370	0	0	0	0	9	2,309	10	12,680
10,000-24,999 tons	4	5,628	9	62,359	9	42,223	0	0	0	0	10	110,211
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	4	139,929	0	0	0	0	5	139,929
75,000-99,999 tons	0	0	0	0	4	64,583	4	254,928	0	0	5	319,511
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	5,628	17	72,729	17	246,735	4	254,928	9	2,309	30	582,330
Single owner:												
Less than 1,000 tons	0	0	4	611	0	0	0	0	0	0	4	611
1,000-9,999 tons	8	818	26	13,953	9	27,154	0	0	30	19,649	45	61,974
10,000-24,999 tons	0	0	9	16,996	0	0	0	0	4	469	9	17,459
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	4	101,722	4	100,383	0	0	4	202,105
100,000 tons and more	0	0	0	0	4	333,337	0	0	0	0	4	333,337
Total	8	818	39	31,553	17	462,213	4	100,383	34	20,119	67	615,086
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	13	7,966	0	0	0	0	13	21,820	17	29,786
10,000-24,999 tons	4	1,443	13	15,377	0	0	0	0	9	15,406	13	32,227
25,000-49,999 tons	8	167,108	4	15,883	0	0	4	106,220	4	1,235	17	290,446
50,000-74,999 tons	4	100,440	0	0	0	0	0	0	0	0	4	100,440
75,000-99,999 tons	4	107,538	0	0	0	0	0	0	0	0	4	107,538
100,000 tons and more	0	0	0	0	0	0	0	0	4	864,412	4	864,412
Total	21	376,529	30	39,226	0	0	4	106,220	30	902,874	60	1,424,849
All forms of ownership:												
Less than 1,000 tons	8	132	13	1,820	0	0	0	0	4	2,336	17	4,289
1,000-9,999 tons	29	5,862	129	143,805	17	136,015	12	6,583	99	67,553	168	359,817
10,000-24,999 tons	29	25,592	73	312,941	26	122,340	8	54,921	34	27,483	82	543,277
25,000-49,999 tons	34	597,650	47	405,321	17	151,835	12	205,229	4	1,235	76	1,361,271
50,000-74,999 tons	17	249,585	9	67,319	13	294,047	17	408,344	0	0	39	1,019,295
75,000-99,999 tons	21	330,720	17	331,661	17	276,668	17	842,355	4	62,680	43	1,844,084
100,000 tons and more	34	1,425,471	26	1,147,531	51	3,556,437	25	2,180,118	9	899,925	105	9,209,482
Total	172	2,635,012	313	2,410,399	141	4,537,341	91	5,697,551	155	1,061,212	531	14,341,515

Table 47--Mountain region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	5	2,677	5	69	0	0	0	0	0	0	10	2,746
1,000-9,999 tons	15	12,732	63	223,030	5	25,929	5	28,000	22	40,526	69	330,217
10,000-24,999 tons	25	20,071	32	357,254	5	52,122	0	0	6	947	39	430,394
25,000-49,999 tons	20	299,139	32	502,951	16	262,964	5	23,779	6	27,854	44	1,116,687
50,000-74,999 tons	25	472,518	26	342,058	0	0	16	151,951	11	79,861	30	1,046,388
75,000-99,999 tons	0	0	5	234,978	11	60,141	11	196,430	6	77,913	15	569,462
100,000 tons and more	0	0	0	0	11	345,610	16	792,148	0	0	15	1,137,758
Total	90	807,137	163	1,660,340	49	746,767	53	1,192,308	50	227,101	222	4,633,651
Partnership:												
Less than 1,000 tons	0	0	0	0	5	401	0	0	0	0	0	401
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0	6	0
10,000-24,999 tons	0	0	0	0	5	64,632	0	0	0	0	6	64,632
25,000-49,999 tons	5	26,812	5	36,651	0	0	0	0	0	0	6	63,463
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	17	128,495
Total	5	26,812	5	36,651	11	65,032	0	0	0	0	17	128,495
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	5	2,291	0	0	0	0	6	818	7	3,109
10,000-24,999 tons	5	383	5	2,176	5	441	0	0	6	2,431	7	5,431
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	11	3,249	13	8,540
Total	5	383	11	4,467	5	441	0	0	11	3,249	13	8,540
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	5	3,447	5	21,074	0	0	0	0	6	1,948	5	26,469
10,000-24,999 tons	20	106,888	32	170,504	0	0	5	42,857	11	4,324	36	324,574
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	16,087	5	191,501	0	0	0	0	6	23,374	5	230,962
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	5	412,345	0	0	0	0	6	19,478	5	431,823
Total	30	126,423	47	795,425	0	0	5	42,857	28	49,124	51	1,013,829
All forms of ownership:												
Less than 1,000 tons	5	2,677	5	69	5	401	0	0	0	0	16	3,147
1,000-9,999 tons	20	16,179	74	246,395	5	25,929	5	28,000	33	43,292	81	359,795
10,000-24,999 tons	50	127,342	68	529,935	16	117,195	5	42,857	22	7,702	87	825,031
25,000-49,999 tons	25	325,951	37	539,602	16	262,964	5	23,779	6	27,854	50	1,180,150
50,000-74,999 tons	30	488,605	32	533,559	0	0	16	151,951	17	103,235	35	1,277,350
75,000-99,999 tons	0	0	5	234,978	11	60,141	11	196,430	6	77,913	15	569,462
100,000 tons and more	0	0	5	412,345	11	345,610	16	792,148	6	19,478	20	1,569,582
Total	130	960,755	226	2,496,882	65	812,240	58	1,235,165	89	279,474	303	5,784,516

Table 48--Pacific region: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	6,442	13	41,713	0	0	0	0	8	9,828	12	57,982
10,000-24,999 tons	16	352,069	17	321,828	5	66,554	0	0	4	590	21	741,041
25,000-49,999 tons	12	7,730	13	235,304	5	184,216	5	138,534	4	3,279	21	569,062
50,000-74,999 tons	4	83,709	4	114,087	0	0	5	159,563	0	0	8	357,359
75,000-99,999 tons	4	128,831	13	458,843	0	0	0	0	4	1,179	12	588,853
100,000 tons and more	16	154,038	34	2,664,050	16	3,586,887	5	324,412	4	46,340	41	6,775,726
Total	59	732,818	95	3,835,826	26	3,837,657	14	622,509	24	61,215	115	9,090,024
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	4	10,696	0	0	0	0	0	0	6	10,696
10,000-24,999 tons	4	7,730	4	10,696	0	0	0	0	4	3,931	6	22,357
25,000-49,999 tons	0	0	0	0	5	125,769	0	0	0	0	6	125,769
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	7,730	9	21,391	5	125,769	0	0	4	3,931	19	158,821
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	0	0	0	0	5	51,995	0	0	0	0	4	51,995
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	5	2,573,775	0	0	0	0	4	2,573,775
Total	0	0	0	0	11	2,625,771	0	0	0	0	7	2,625,771
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	4	28,522	0	0	0	0	0	0	5	28,522
10,000-24,999 tons	4	1,288	4	81,109	0	0	0	0	0	0	5	82,397
25,000-49,999 tons	4	1,288	13	243,091	0	0	0	0	8	4,037	16	248,416
50,000-74,999 tons	0	0	4	131,913	0	0	0	0	0	0	5	131,913
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	2,577	26	484,634	0	0	0	0	8	4,037	32	491,248
All forms of ownership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	6,442	22	80,930	0	0	0	0	8	9,828	24	97,200
10,000-24,999 tons	24	361,087	26	413,633	11	118,550	0	0	8	4,521	36	897,790
25,000-49,999 tons	16	9,018	26	478,395	11	309,985	5	138,534	12	7,316	43	943,247
50,000-74,999 tons	4	83,709	9	246,000	0	0	5	159,563	0	0	14	489,272
75,000-99,999 tons	4	128,831	13	458,843	0	0	0	0	4	1,179	12	588,853
100,000 tons and more	16	154,038	34	2,664,050	21	6,160,662	5	324,412	4	46,340	45	9,349,502
Total	71	743,124	129	4,341,851	42	6,589,197	14	622,509	36	69,183	173	12,365,864

Table 49--United States: Distribution of formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	26	4,023	112	22,960	5	265	0	0	104	17,099	164	44,348
1,000-9,999 tons	261	310,828	942	1,558,647	182	325,242	62	259,315	685	764,339	1,224	3,218,370
10,000-24,999 tons	300	1,373,860	695	2,915,541	165	556,237	43	96,601	409	1,526,135	916	6,468,373
25,000-49,999 tons	343	3,806,309	402	3,283,487	163	1,961,188	23	320,074	127	323,952	602	9,695,010
50,000-74,999 tons	222	4,331,880	174	1,888,627	68	987,123	59	1,291,359	47	149,034	327	8,648,023
75,000-99,999 tons	160	4,882,890	96	1,891,340	77	1,170,414	28	920,575	32	500,026	242	9,365,244
100,000 tons and more	202	8,134,645	138	6,356,457	252	20,186,906	59	4,870,079	24	960,465	462	40,508,552
Total	1,514	22,844,434	2,559	17,917,058	911	25,187,375	273	7,758,003	1,427	4,241,050	3,938	77,947,920
Partnership:												
Less than 1,000 tons	0	0	9	3,296	5	401	0	0	9	1,459	21	5,156
1,000-9,999 tons	18	1,511	81	76,439	24	16,547	4	1,469	98	102,372	138	198,339
10,000-24,999 tons	12	16,029	44	180,131	31	232,287	0	0	28	40,222	65	468,668
25,000-49,999 tons	12	33,441	17	47,876	5	125,769	3	1,838	13	27,319	26	236,243
50,000-74,999 tons	0	0	0	0	4	139,929	0	0	0	0	5	139,929
75,000-99,999 tons	0	0	0	0	8	192,176	4	254,928	0	0	13	447,104
100,000 tons and more	0	0	4	53,258	5	318,323	0	0	0	0	5	371,581
Total	42	50,981	156	361,000	82	1,025,432	12	258,235	147	171,372	272	1,867,020
Single owner:												
Less than 1,000 tons	4	13	42	5,389	0	0	0	0	33	4,141	49	9,542
1,000-9,999 tons	40	18,389	218	151,826	57	81,637	5	5,650	244	292,914	336	550,417
10,000-24,999 tons	33	120,492	112	258,719	20	73,292	13	5,502	111	303,059	164	761,062
25,000-49,999 tons	3	39,203	4	2,310	4	261	0	0	4	11,047	7	52,821
50,000-74,999 tons	5	109,162	0	0	4	61,058	0	0	0	0	9	170,220
75,000-99,999 tons	0	0	4	30,642	10	255,191	4	100,383	0	0	14	386,215
100,000 tons and more	4	363,348	8	13,132	16	3,429,838	0	0	4	1,544	22	3,807,861
Total	88	650,606	389	462,017	111	3,901,276	22	111,535	397	612,704	601	5,738,139
Farmer cooperative:												
Less than 1,000 tons	4	4	45	9,755	0	0	0	0	59	12,699	78	22,457
1,000-9,999 tons	76	121,187	604	1,129,577	12	2,441	18	28,855	505	1,473,040	748	2,755,101
10,000-24,999 tons	104	327,795	439	2,327,932	13	10,911	19	45,874	314	1,036,105	543	3,748,618
25,000-49,999 tons	107	1,799,706	139	1,266,926	13	24,122	4	106,220	103	922,150	244	4,119,124
50,000-74,999 tons	75	1,612,768	52	1,521,893	12	111,252	0	0	23	295,664	118	3,541,577
75,000-99,999 tons	39	890,386	19	407,065	0	0	0	0	13	239,006	51	1,536,458
100,000 tons and more	75	3,182,611	43	1,154,686	63	3,080,344	4	2,512	17	893,648	130	8,313,802
Total	479	7,934,457	1,341	7,817,835	115	3,229,071	44	183,462	1,035	4,872,312	1,913	24,037,137
All forms of ownership:												
Less than 1,000 tons	34	4,040	208	41,400	10	666	0	0	205	35,397	311	81,503
1,000-9,999 tons	395	451,916	1,845	2,916,489	275	425,868	88	295,289	1,532	2,632,665	2,446	6,722,227
10,000-24,999 tons	448	1,838,175	1,289	5,682,323	229	872,726	75	147,977	862	2,905,521	1,688	11,446,722
25,000-49,999 tons	465	5,678,659	563	4,600,599	186	2,111,340	30	428,132	247	1,284,468	882	14,103,199
50,000-74,999 tons	302	6,053,811	226	3,410,520	88	1,299,362	59	1,291,359	70	444,698	458	12,499,749
75,000-99,999 tons	199	5,773,276	120	2,329,047	95	1,617,781	36	1,275,887	45	739,032	320	11,735,021
100,000 tons and more	282	11,680,603	194	7,577,533	336	27,015,411	62	4,872,592	45	1,855,656	620	53,001,795
Total	2,124	31,480,479	4,445	26,557,910	1,219	33,343,154	351	8,311,235	3,006	9,897,438	6,724	109,590,216

Table 50--United States: Distribution of formula feed by method and capacity size, 1984

Capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Less than 1,000 tons	34	4,040	208	41,400	10	666	0	0	205	35,397	311	81,503
1,000-9,999 tons	395	451,916	1,845	2,916,489	275	425,868	88	295,289	1,532	2,632,665	2,446	6,722,227
10,000-24,999 tons	448	1,838,175	1,289	5,682,323	229	872,726	75	147,977	862	2,905,521	1,688	11,446,722
25,000-49,999 tons	465	5,678,659	563	4,600,599	186	2,111,340	30	428,132	247	1,284,468	882	14,103,199
50,000-74,999 tons	302	6,053,811	226	3,410,520	88	1,299,362	59	1,291,359	70	444,698	458	12,499,749
75,000-99,999 tons	199	5,773,276	120	2,329,047	95	1,617,781	36	1,275,887	45	739,032	320	11,735,021
100,000 tons and more	282	11,680,603	194	7,577,533	336	27,015,411	62	4,872,592	45	1,855,656	620	53,001,795
Total	2,124	31,480,479	4,445	26,557,910	1,219	33,343,154	351	8,311,235	3,006	9,897,438	6,724	189,590,216
Percent distribution (column)												
Less than 1,000 tons	1.6	2/	4.7	0.2	0.8	2/	0	0	6.8	0.4	4.6	0.1
1,000-9,999 tons	18.6	1.4	41.5	11.0	22.6	1.3	25.1	3.6	51.0	26.6	36.4	6.1
10,000-24,999 tons	21.1	5.8	29.0	21.4	18.8	2.6	21.5	1.8	28.7	29.4	25.1	10.4
25,000-49,999 tons	21.9	18.0	12.7	17.3	15.2	6.3	8.6	5.2	8.2	13.0	13.1	12.9
50,000-74,999 tons	14.2	19.2	5.1	12.8	7.3	3.9	16.9	15.5	2.3	4.5	6.8	11.4
75,000-99,999 tons	9.4	18.3	2.7	8.8	7.8	4.9	10.3	15.4	1.5	7.5	4.8	10.7
100,000 tons and more	13.3	37.1	4.4	28.5	27.6	81.0	17.7	58.6	1.5	18.7	9.2	48.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)												
Less than 1,000 tons	10.9	5.0	66.9	50.8	3.3	0.8	0	0	65.8	43.4	100.0	100.0
1,000-9,999 tons	16.1	6.7	75.4	43.4	11.2	6.3	3.6	4.4	62.6	39.2	100.0	100.0
10,000-24,999 tons	26.6	16.1	76.4	49.6	13.5	7.6	4.5	1.3	51.1	25.4	100.0	100.0
25,000-49,999 tons	52.8	40.3	63.8	32.6	21.1	15.0	3.4	3.0	28.0	9.1	100.0	100.0
50,000-74,999 tons	65.9	48.4	49.4	27.3	19.3	10.4	12.9	10.3	15.4	3.6	100.0	100.0
75,000-99,999 tons	62.1	49.2	37.4	19.8	29.8	13.8	11.3	10.9	14.1	6.3	100.0	100.0
100,000 tons and more	45.5	22.0	31.3	14.3	54.2	51.0	10.0	9.2	7.3	3.5	100.0	100.0
Total	31.6	28.7	66.1	24.2	18.1	30.4	5.2	7.6	44.7	9.0	100.0	100.0

2/ Less than .1 percent.

Table 51--United States: Distribution of formula feed, by method and form of ownership, 1984

Form of ownership	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation	1,514	22,844,434	2,559	17,917,058	911	25,187,375	273	7,758,003	1,427	4,241,050	3,938	77,947,920
Partnership	42	50,981	156	361,000	82	1,025,432	12	258,235	147	171,372	272	1,867,020
Single owner	88	650,606	389	462,017	111	3,901,276	22	111,535	397	612,704	601	5,738,139
Farmer cooperative	479	7,934,457	1,341	7,817,835	115	3,229,071	44	183,462	1,035	4,872,312	1,913	24,037,137
Total	2,124	31,480,479	4,445	26,557,910	1,219	33,343,154	351	8,311,235	3,006	9,897,438	6,724	109,590,216
Percent distribution (column)												
Corporation	71.3	72.6	57.6	67.5	74.7	75.5	77.9	93.3	47.5	42.8	58.6	71.1
Partnership	2.0	0.2	3.5	1.4	6.8	3.1	3.4	3.1	4.9	1.7	4.0	1.7
Single owner	4.1	2.1	8.7	1.7	9.1	11.7	6.3	1.3	13.2	6.2	8.9	5.2
Farmer cooperative	22.6	25.2	30.2	29.4	9.4	9.7	12.5	2.2	34.4	49.2	28.5	21.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)												
Corporation	38.4	29.3	65.0	23.0	23.1	32.3	6.9	10.0	36.2	5.4	100.0	100.0
Partnership	15.6	2.7	57.3	19.3	30.3	54.9	4.4	13.8	54.2	9.2	100.0	100.0
Single owner	14.6	11.3	64.7	8.1	18.5	68.0	3.7	1.9	66.0	10.7	100.0	100.0
Farmer cooperative	25.1	33.0	70.1	32.5	6.0	13.4	2.3	0.8	54.1	20.3	100.0	100.0
Total	31.6	28.7	66.1	24.2	18.1	30.4	5.2	7.6	44.7	9.0	100.0	100.0

Table 52--Northeast region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	9	305	0	0	0	0	13	1,511	10	1,816
1,000-9,999 tons	13	3,399	66	94,842	7	5,936	3	551	52	50,135	77	154,863
10,000-24,999 tons	22	69,365	62	251,131	10	18,148	3	13,786	33	56,520	67	408,951
25,000-49,999 tons	38	249,073	53	467,768	7	13,934	0	0	10	23,704	58	754,479
50,000-74,999 tons	16	115,550	16	266,162	7	59,326	0	0	3	6,086	19	447,123
75,000-99,999 tons	19	244,697	12	206,680	3	279	0	0	0	0	19	451,656
100,000 tons and more	19	702,842	19	731,935	27	2,180,714	0	0	3	256,567	38	3,872,058
Total	125	1,384,926	237	2,018,823	61	2,278,336	7	14,338	114	394,522	288	6,090,946
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	6	309	22	18,866	3	70	0	0	0	0	0	0
10,000-24,999 tons	0	0	3	7,512	0	0	0	0	23	9,585	29	28,830
25,000-49,999 tons	3	1,543	3	7,485	0	0	0	0	0	0	3	7,512
50,000-74,999 tons	0	0	0	0	0	0	3	1,838	3	16,736	3	27,602
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	1,852	28	33,863	3	70	3	1,838	26	26,321	35	63,943
Single owner:												
Less than 1,000 tons	0	0	3	490	0	0	0	0	3	730	6	1,220
1,000-9,999 tons	6	2,807	28	19,435	10	3,863	0	0	29	27,371	32	53,475
10,000-24,999 tons	6	5,169	19	64,230	0	0	0	0	13	5,080	19	74,479
25,000-49,999 tons	3	39,203	0	0	0	0	0	0	0	0	3	39,203
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	3	31,352
100,000 tons and more	0	0	0	0	3	31,352	0	0	0	0	3	31,352
Total	16	47,178	50	84,155	14	35,214	0	0	46	33,181	64	199,728
Farmer cooperative:												
Less than 1,000 tons	0	0	6	1,021	0	0	0	0	7	1,674	10	2,695
1,000-9,999 tons	9	7,715	47	52,906	3	348	0	0	39	28,880	58	89,849
10,000-24,999 tons	13	2,654	37	140,504	0	0	0	0	26	68,921	51	212,079
25,000-49,999 tons	13	119,327	19	107,232	0	0	0	0	7	33,791	22	260,350
50,000-74,999 tons	25	600,887	3	16,488	0	0	0	0	0	0	26	617,375
75,000-99,999 tons	9	299,540	3	52,448	0	0	0	0	0	0	13	351,988
100,000 tons and more	22	777,327	12	528,747	0	0	0	0	3	9,644	29	1,315,718
Total	91	1,807,450	128	899,345	3	348	0	0	81	142,911	208	2,850,054
All forms of ownership:												
Less than 1,000 tons	0	0	19	1,816	0	0	0	0	23	3,915	26	5,730
1,000-9,999 tons	34	14,229	162	186,049	24	10,216	3	551	143	115,970	195	327,016
10,000-24,999 tons	41	77,188	122	463,377	10	18,148	3	13,786	72	130,522	141	703,021
25,000-49,999 tons	56	409,145	75	582,485	7	13,934	3	1,838	20	74,231	87	1,081,633
50,000-74,999 tons	41	716,437	19	282,650	7	59,326	0	0	3	6,086	45	1,064,498
75,000-99,999 tons	28	544,237	16	259,128	7	31,630	0	0	0	0	35	834,996
100,000 tons and more	41	1,480,169	31	1,260,681	27	2,180,714	0	0	7	266,211	67	5,187,776
Total	241	3,241,405	443	3,036,186	81	2,313,969	10	16,176	267	596,935	596	9,204,671

Table 53--Lake States region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	4	716	34	8,909	0	0	0	0	17	3,163	38	12,788
1,000-9,999 tons	38	36,445	157	306,957	17	33,937	0	0	140	247,768	221	625,107
10,000-24,999 tons	38	193,451	136	571,483	25	109,764	4	3,525	98	464,458	187	1,342,681
25,000-49,999 tons	34	490,420	38	206,377	4	62,909	4	58,752	17	72,210	47	890,668
50,000-74,999 tons	34	955,681	21	144,440	8	90,577	4	995	4	25,283	38	1,216,976
75,000-99,999 tons	17	938,222	8	37,972	4	74,669	0	0	4	220,939	21	1,271,803
100,000 tons and more	4	292,018	4	462,755	4	477,318	4	631,583	4	141,872	17	2,005,546
Total	170	2,906,954	399	1,738,893	64	849,174	17	694,855	285	1,175,694	569	7,365,569
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	8	13,093	8	7,564	0	0	33	71,363	38	92,020
10,000-24,999 tons	0	0	4	9,406	4	87,736	0	0	4	9,574	8	106,716
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	38	80,937	46	198,736
Total	0	0	13	22,498	13	95,300	0	0	38	80,937	46	198,736
Single owner:												
Less than 1,000 tons	0	0	8	1,520	0	0	0	0	4	1,326	8	2,846
1,000-9,999 tons	8	1,835	44	37,780	8	20,534	0	0	52	125,070	69	185,219
10,000-24,999 tons	8	110,589	16	14,748	4	3,883	4	367	40	243,456	52	372,963
25,000-49,999 tons	0	0	4	2,257	4	261	0	0	4	11,047	4	13,566
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	4	363,348	4	11,287	0	0	0	0	0	0	4	374,634
Total	20	475,692	77	67,592	44	24,678	4	367	101	380,899	137	949,228
Farmer cooperative:												
Less than 1,000 tons	4	4	4	357	0	0	0	0	4	144	8	505
1,000-9,999 tons	25	13,807	177	435,328	4	1,680	12	17,295	111	724,960	197	1,193,070
10,000-24,999 tons	21	61,384	111	971,311	8	5,608	8	191	90	438,925	140	1,477,418
25,000-49,999 tons	21	521,070	21	241,174	0	0	0	0	21	406,601	45	1,168,845
50,000-74,999 tons	8	204,627	8	115,644	4	1,882	0	0	4	99,423	12	421,575
75,000-99,999 tons	0	0	8	255,832	0	0	0	0	8	235,668	8	491,500
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	78	800,892	329	2,019,645	16	9,169	21	17,486	238	1,905,720	411	4,752,913
All forms of ownership:												
Less than 1,000 tons	8	719	46	10,786	0	0	0	0	25	4,632	54	16,138
1,000-9,999 tons	71	52,087	387	793,158	38	63,715	12	17,295	337	1,169,161	524	2,095,416
10,000-24,999 tons	67	365,344	267	1,566,947	42	206,990	16	4,083	233	1,156,413	387	3,299,778
25,000-49,999 tons	55	1,011,490	63	449,809	8	63,170	4	58,752	42	489,859	96	2,073,079
50,000-74,999 tons	42	1,160,309	29	260,083	13	92,459	4	995	8	124,705	51	1,638,551
75,000-99,999 tons	17	938,222	17	293,804	4	74,669	0	0	12	456,607	29	1,763,303
100,000 tons and more	8	655,365	8	474,041	4	477,318	4	631,583	4	141,872	21	2,380,180
Total	268	4,183,538	817	3,848,629	137	978,322	42	712,708	661	3,543,250	1,163	13,266,446

Table 54--Corn Belt region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	5	90	23	6,667	5	265	0	0	42	7,677	47	14,699
1,000-9,999 tons	75	147,195	322	461,116	75	62,368	0	0	196	227,261	411	900,955
10,000-24,999 tons	93	466,644	234	781,508	56	90,815	19	3,015	23	23,206	159	2,169,498
25,000-49,999 tons	117	1,502,864	121	882,091	47	476,443	0	0	47	307,324	332	3,018,918
50,000-74,999 tons	70	1,495,693	28	245,114	5	27,845	0	0	5	157,520	196	1,775,374
75,000-99,999 tons	75	2,376,387	28	473,697	14	48,588	0	0	9	6,722	75	3,025,591
100,000 tons and more	47	2,503,938	23	81,589	19	1,189,332	0	0	0	126,919	75	3,774,860
Total	481	8,492,812	780	2,931,782	220	1,895,656	42	26,221	458	1,333,424	1,191	14,679,895
Partnership:												
Less than 1,000 tons	0	0	11	3,296	0	0	0	0	5	1,335	11	4,631
1,000-9,999 tons	5	30	16	2,232	0	0	0	0	11	12,016	16	21,278
10,000-24,999 tons	0	0	5	17,721	0	0	0	0	5	15,621	5	33,342
25,000-49,999 tons	0	0	0	31	0	0	0	0	0	9,947	5	9,978
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	30	38	30,280	0	0	0	0	27	38,919	38	69,229
Single owner:												
Less than 1,000 tons	0	0	14	1,298	0	0	0	0	14	1,208	14	2,506
1,000-9,999 tons	10	2,468	68	43,322	10	14,469	5	5,650	58	76,217	97	142,127
10,000-24,999 tons	10	3,795	43	129,884	5	16,972	5	3,390	39	43,309	53	197,350
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	108,678	0	0	0	0	0	0	0	0	5	108,678
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	24	114,941	126	174,504	16	31,441	10	9,041	111	120,734	169	450,661
Farmer cooperative:												
Less than 1,000 tons	0	0	14	4,693	0	0	0	0	14	2,787	18	7,481
1,000-9,999 tons	23	1,703	213	405,401	0	0	0	0	177	491,309	272	898,414
10,000-24,999 tons	27	80,936	136	538,643	5	5,304	5	2,825	91	284,312	168	912,021
25,000-49,999 tons	32	762,887	36	306,315	5	19,091	0	0	27	314,994	73	1,403,287
50,000-74,999 tons	9	211,437	18	126,801	0	0	0	0	9	98,834	27	437,072
75,000-99,999 tons	9	222,012	0	0	0	0	0	0	5	3,338	9	225,356
100,000 tons and more	14	1,056,931	5	63,199	0	0	0	0	0	0	18	1,120,130
Total	113	2,335,913	422	1,445,054	9	24,395	5	2,825	322	1,195,574	585	5,003,761
All forms of ownership:												
Less than 1,000 tons	5	90	62	15,955	5	265	0	0	76	13,008	90	29,317
1,000-9,999 tons	112	151,397	619	919,072	84	76,837	24	8,665	442	806,804	796	1,962,774
10,000-24,999 tons	130	551,375	418	1,467,756	65	113,091	33	29,422	294	1,150,566	558	3,312,211
25,000-49,999 tons	149	2,265,752	163	1,188,437	51	495,534	0	0	79	482,461	274	4,432,183
50,000-74,999 tons	84	1,815,808	46	371,915	5	27,845	0	0	14	105,556	107	2,321,125
75,000-99,999 tons	84	2,598,405	28	473,697	14	48,588	0	0	14	130,257	84	3,250,947
100,000 tons and more	60	3,560,869	28	144,788	19	1,189,332	0	0	0	0	74	4,894,990
Total	624	10,943,696	1,365	4,581,620	245	1,951,492	56	38,087	918	2,688,651	1,983	20,203,546

Table 55--Northern Plains region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	13	2,663	0	0	0	0	13	1,590	26	4,253
1,000-9,999 tons	22	59,358	175	138,292	26	40,495	9	215,448	105	112,639	170	566,232
10,000-24,999 tons	39	165,974	92	253,219	26	91,961	4	1,163	57	159,990	131	672,308
25,000-49,999 tons	35	411,368	31	268,556	17	280,464	0	0	13	19,788	65	980,177
50,000-74,999 tons	26	613,694	9	195,902	4	59,874	17	570,505	0	0	48	1,439,975
75,000-99,999 tons	9	365,191	0	0	4	227,443	9	237,102	0	0	22	829,736
100,000 tons and more	31	1,356,937	13	619,833	13	883,436	9	941,819	0	0	48	3,802,024
Total	161	2,972,523	262	1,478,465	92	1,583,573	48	1,966,036	187	294,008	510	8,294,704
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	10	3,762	0	0	0	0	5	200	10	3,962
10,000-24,999 tons	5	2,670	5	49,575	5	4,860	0	0	5	1,431	5	58,537
25,000-49,999 tons	5	5,086	5	3,399	0	0	0	0	5	636	5	9,122
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	5	53,258	5	318,323	0	0	0	0	5	371,581
Total	10	7,757	26	109,995	10	323,183	0	0	16	2,268	26	443,202
Single owner:												
Less than 1,000 tons	0	0	5	1,416	0	0	0	0	5	318	5	1,735
1,000-9,999 tons	0	0	14	10,425	0	0	0	0	14	23,691	24	34,116
10,000-24,999 tons	5	636	10	11,331	0	0	5	1,744	5	6,998	10	20,710
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	636	29	23,173	0	0	5	1,744	24	31,007	38	56,560
Farmer cooperative:												
Less than 1,000 tons	0	0	9	1,785	0	0	0	0	9	5,312	17	7,097
1,000-9,999 tons	4	381	99	106,309	4	413	4	10,826	116	195,167	151	313,097
10,000-24,999 tons	13	17,039	90	392,843	0	0	0	0	65	208,279	112	618,162
25,000-49,999 tons	13	98,028	26	199,885	4	2,430	0	0	22	146,824	43	447,166
50,000-74,999 tons	13	276,525	0	0	0	0	0	0	0	0	13	276,525
75,000-99,999 tons	4	85,037	0	0	0	0	0	0	0	0	4	85,037
100,000 tons and more	4	138,762	4	13,881	4	3,645	0	0	0	0	4	156,288
Total	52	615,772	228	714,703	13	6,488	4	10,826	211	555,583	344	1,903,372
All forms of ownership:												
Less than 1,000 tons	0	0	26	5,864	0	0	0	0	26	7,221	48	13,085
1,000-9,999 tons	26	59,740	228	258,789	30	40,908	13	226,274	240	331,698	355	917,408
10,000-24,999 tons	62	186,320	197	706,969	31	96,821	9	2,907	131	376,698	257	1,369,716
25,000-49,999 tons	53	514,482	62	471,841	22	282,894	0	0	40	167,249	114	1,436,465
50,000-74,999 tons	39	890,219	9	195,902	4	59,874	17	570,505	0	0	61	1,716,500
75,000-99,999 tons	13	450,228	0	0	4	227,443	9	237,102	0	0	26	914,772
100,000 tons and more	35	1,495,699	23	686,972	23	1,205,404	9	941,819	0	0	57	4,329,893
Total	228	3,596,687	544	2,326,336	115	1,913,344	57	1,978,606	437	882,866	918	10,697,839

Table 56--Appalachian region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	12	1,681	0	0	0	0	12	821	12	2,502
1,000-9,999 tons	45	25,875	73	87,882	24	37,624	8	3,175	61	34,478	98	189,033
10,000-24,999 tons	20	20,809	49	78,106	12	39,711	0	0	20	22,696	57	161,322
25,000-49,999 tons	33	141,850	33	117,529	12	85,810	0	0	20	10,468	45	355,656
50,000-74,999 tons	20	163,287	28	240,909	16	248,530	0	0	12	20,149	41	672,875
75,000-99,999 tons	8	247,808	0	0	8	208,746	0	0	0	0	16	456,555
100,000 tons and more	24	639,003	8	234,100	37	1,817,415	0	0	8	480,173	57	3,170,691
Total	150	1,238,632	203	760,206	110	2,437,835	8	3,175	134	568,786	325	5,008,634
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	4	124	4	124
1,000-9,999 tons	4	16	12	7,128	8	1,792	0	0	16	6,330	16	15,267
10,000-24,999 tons	0	0	12	16,102	8	32,836	0	0	8	4,323	16	53,260
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	16	25	23,230	16	34,628	0	0	29	10,777	37	68,651
Single owner:												
Less than 1,000 tons	4	13	8	54	0	0	0	0	4	253	8	320
1,000-9,999 tons	4	4,732	32	12,257	16	11,948	0	0	43	15,711	47	44,649
10,000-24,999 tons	0	0	8	7,346	0	0	0	0	0	0	8	7,346
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	4	1,845	0	0	0	0	4	1,544	4	3,389
Total	8	4,744	51	21,502	16	11,948	0	0	51	17,509	67	55,704
Farmer cooperative:												
Less than 1,000 tons	0	0	12	1,899	0	0	0	0	24	2,782	24	4,681
1,000-9,999 tons	8	7,405	16	8,286	0	0	0	0	16	2,886	24	18,577
10,000-24,999 tons	0	0	4	3,355	0	0	0	0	4	2,779	4	6,134
25,000-49,999 tons	8	17,700	16	140,400	4	2,601	0	0	12	14,668	20	175,368
50,000-74,999 tons	4	91,559	4	5,124	0	0	0	0	0	0	4	96,683
75,000-99,999 tons	8	123,379	4	22,113	0	0	0	0	0	0	8	145,492
100,000 tons and more	16	894,213	12	132,037	16	587,930	0	0	4	113	28	1,614,293
Total	44	1,134,257	69	313,212	20	590,530	0	0	61	23,227	113	2,061,227
All forms of ownership:												
Less than 1,000 tons	4	13	32	3,633	0	0	0	0	44	3,980	48	7,626
1,000-9,999 tons	61	38,028	133	115,553	48	51,364	8	3,175	137	59,406	185	267,525
10,000-24,999 tons	20	20,809	73	104,909	20	72,547	0	0	33	29,799	85	228,063
25,000-49,999 tons	41	159,550	49	257,928	16	88,410	0	0	32	25,136	65	531,024
50,000-74,999 tons	24	254,846	32	246,033	16	248,530	0	0	12	20,149	45	769,559
75,000-99,999 tons	16	371,187	4	22,113	8	208,746	0	0	0	0	24	602,047
100,000 tons and more	41	1,533,217	24	367,982	53	2,405,344	0	0	16	481,830	89	4,788,372
Total	207	2,377,649	348	1,118,151	162	3,074,942	8	3,175	275	620,299	542	7,194,216

Table 57--Southeast region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	4	408	4	555	0	0	0	0	0	0	8	963
1,000-9,999 tons	19	7,151	35	27,118	8	2,935	4	531	31	9,614	35	47,348
10,000-24,999 tons	23	45,446	15	42,592	4	7,045	0	0	4	333	31	95,416
25,000-49,999 tons	12	17,108	23	160,546	23	187,567	0	0	4	1,733	35	366,954
50,000-74,999 tons	12	81,696	19	114,601	8	47,826	0	0	4	1,710	19	245,833
75,000-99,999 tons	12	192,532	12	147,105	19	282,366	0	0	0	10,396	27	632,400
100,000 tons and more	19	532,208	8	220,006	46	3,466,544	0	0	0	0	62	4,218,759
Total	100	876,550	116	712,523	108	3,994,284	4	531	46	23,785	216	5,607,673
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	8	7,121	0	0	0	0	8	7,121
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	8	127,593	0	0	0	0	8	127,593
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	15	134,715	0	0	0	0	15	134,715
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	5	3,669	0	0	0	0	5	3,669
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	5	61,058	0	0	0	0	5	61,058
75,000-99,999 tons	0	0	5	30,642	0	0	0	0	0	0	5	114,484
100,000 tons and more	0	0	0	0	5	114,484	0	0	0	0	5	114,484
Total	0	0	5	30,642	15	179,211	0	0	0	0	20	209,852
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	4	383	0	0	0	0	4	666	4	1,049
10,000-24,999 tons	0	0	4	7,902	0	0	0	0	4	2,932	4	10,835
25,000-49,999 tons	4	12,086	0	0	0	0	0	0	0	0	4	12,086
50,000-74,999 tons	4	24,409	9	934,423	9	109,370	0	0	4	74,033	17	1,142,235
75,000-99,999 tons	4	47,794	4	76,673	0	0	0	0	0	0	4	124,467
100,000 tons and more	21	262,020	4	2,482	43	2,241,823	4	2,512	0	0	43	2,508,838
Total	34	346,309	26	1,021,864	51	2,351,193	4	2,512	13	77,632	77	3,799,510
All forms of ownership:												
Less than 1,000 tons	4	408	4	555	0	0	0	0	0	0	8	963
1,000-9,999 tons	19	7,151	39	27,501	20	13,726	4	531	35	10,280	51	59,189
10,000-24,999 tons	23	45,446	20	50,494	4	7,045	0	0	8	3,265	35	106,251
25,000-49,999 tons	16	29,195	23	160,546	23	187,567	0	0	4	1,733	39	379,040
50,000-74,999 tons	16	106,104	28	1,049,024	21	218,254	0	0	8	75,743	41	1,449,126
75,000-99,999 tons	16	240,326	21	254,420	27	409,960	0	0	4	10,396	36	915,101
100,000 tons and more	41	794,228	12	222,488	94	5,822,851	4	2,512	0	0	117	6,842,080
Total	135	1,222,859	146	1,765,028	189	6,659,403	8	3,043	59	101,417	328	9,751,750

Table 58--Delta region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	3	507	0	0	0	0	0	0	3	507
1,000-9,999 tons	11	5,771	25	51,421	8	7,157	3	2,012	17	5,422	36	71,784
10,000-24,999 tons	8	21,509	8	33,764	0	0	0	0	0	0	8	55,274
25,000-49,999 tons	14	157,295	11	28,518	11	255,047	0	0	0	0	25	440,860
50,000-74,999 tons	8	162,475	14	150,706	11	295,115	0	0	3	9,157	22	617,452
75,000-99,999 tons	0	0	0	0	3	157,819	0	0	0	0	3	157,819
100,000 tons and more	6	404,358	3	194,156	25	3,016,548	0	0	0	0	33	3,615,062
Total	47	751,408	64	459,073	59	3,731,686	3	2,012	20	14,579	131	4,958,758
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	4	2,982	0	0	0	0	4	568	4	3,549
10,000-24,999 tons	0	0	4	6,761	0	0	0	0	4	5,341	4	12,103
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	8	9,743	0	0	0	0	8	5,909	8	15,652
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	2	305	2	305
1,000-9,999 tons	0	0	2	1,014	0	0	0	0	7	4,018	7	5,032
10,000-24,999 tons	0	0	0	0	0	0	0	0	2	1,316	2	1,316
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	2	122,116	0	0	0	0	2	122,116
100,000 tons and more	0	0	0	0	2	408,242	0	0	0	0	2	408,242
Total	0	0	2	1,014	5	530,359	0	0	12	5,639	17	537,012
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	3	86,710	10	26,489	0	0	0	0	5	2,671	13	115,870
10,000-24,999 tons	0	0	0	0	0	0	0	0	5	4,578	5	4,578
25,000-49,999 tons	5	100,213	3	11,738	0	0	0	0	0	0	5	111,950
50,000-74,999 tons	3	86,080	0	0	0	0	0	0	0	0	3	86,080
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	3	246,947	0	0	0	0	3	246,947
Total	10	273,002	13	38,227	3	246,947	0	0	10	7,249	28	565,425
All forms of ownership:												
Less than 1,000 tons	0	0	3	507	0	0	0	0	2	305	5	812
1,000-9,999 tons	14	92,481	42	81,907	8	7,157	3	2,012	33	12,679	60	196,236
10,000-24,999 tons	8	21,509	12	40,526	0	0	0	0	12	11,235	20	73,270
25,000-49,999 tons	19	257,508	14	40,255	11	255,047	0	0	0	0	30	552,810
50,000-74,999 tons	11	248,554	14	150,706	11	295,115	0	0	3	9,157	25	703,532
75,000-99,999 tons	0	0	0	0	5	279,935	0	0	0	0	5	279,935
100,000 tons and more	6	404,358	3	194,156	30	3,671,737	0	0	0	0	38	4,270,251
Total	58	1,024,411	87	508,057	66	4,508,991	3	2,012	50	33,376	184	6,076,846

Table 59--Southern Plains region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	4	60	4	550	0	0	0	0	4	2,336	9	2,946
1,000-9,999 tons	22	5,044	84	111,130	9	108,861	13	6,583	48	23,774	101	255,391
10,000-24,999 tons	18	8,900	40	212,106	18	80,117	9	54,921	22	11,608	48	367,651
25,000-49,999 tons	22	424,529	40	365,003	18	151,835	9	99,009	0	0	57	1,040,376
50,000-74,999 tons	13	149,145	9	67,319	9	78,282	18	408,344	0	0	31	703,090
75,000-99,999 tons	18	223,182	18	331,661	9	110,363	9	487,044	4	62,680	31	1,214,929
100,000 tons and more	31	1,367,376	26	1,146,094	48	3,223,100	26	2,158,090	4	35,513	97	7,930,172
Total	128	2,178,235	220	2,233,863	110	3,752,557	84	3,213,991	84	135,910	374	11,514,557
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	10	10,370	0	0	0	0	10	2,309	10	12,680
10,000-24,999 tons	5	5,628	10	62,359	10	42,223	0	0	0	0	10	110,211
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	5	139,929	0	0	0	0	5	139,929
75,000-99,999 tons	0	0	0	0	5	64,583	5	254,928	0	0	5	319,511
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	5,628	20	72,729	20	246,735	5	254,928	10	2,309	30	582,330
Single owner:												
Less than 1,000 tons	0	0	4	489	0	0	0	0	0	0	4	489
1,000-9,999 tons	9	818	27	13,708	9	27,154	0	0	31	19,649	45	61,329
10,000-24,999 tons	0	0	9	16,990	0	0	0	0	4	469	9	17,459
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	4	97,419	4	96,137	0	0	4	193,556
100,000 tons and more	0	0	0	0	4	333,337	0	0	0	0	4	333,337
Total	9	818	40	31,187	18	457,910	4	96,137	36	20,119	67	606,170
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	13	7,966	0	0	0	0	13	21,820	17	29,786
10,000-24,999 tons	4	1,443	13	15,377	0	0	0	0	9	15,406	13	32,227
25,000-49,999 tons	9	167,108	4	15,883	0	0	4	106,220	4	1,235	17	290,446
50,000-74,999 tons	4	100,440	0	0	0	0	0	0	0	0	4	100,440
75,000-99,999 tons	4	106,093	0	0	0	0	0	0	0	0	4	106,093
100,000 tons and more	0	0	0	0	0	0	0	0	4	864,412	4	864,412
Total	21	375,083	30	39,226	0	0	4	106,220	30	902,874	60	1,423,403
All forms of ownership:												
Less than 1,000 tons	4	60	9	1,039	0	0	0	0	4	2,336	13	3,435
1,000-9,999 tons	31	5,862	133	143,174	18	136,015	13	6,583	103	67,553	173	359,186
10,000-24,999 tons	27	15,971	71	306,832	28	122,340	9	54,921	35	27,483	80	527,547
25,000-49,999 tons	31	591,636	44	380,886	18	151,835	13	205,229	4	1,235	74	1,330,822
50,000-74,999 tons	17	249,585	9	67,319	14	218,211	18	408,344	0	0	40	943,459
75,000-99,999 tons	22	329,275	18	331,661	18	272,365	18	838,109	4	62,680	45	1,834,089
100,000 tons and more	31	1,367,376	26	1,146,094	53	3,556,437	26	2,158,090	9	899,925	106	9,127,921
Total	163	2,559,765	310	2,377,006	148	4,457,202	97	3,671,276	159	1,061,212	531	14,126,461

Table 60--Mountain region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	5	2,677	5	69	0	0	0	0	0	0	10	2,746
1,000-9,999 tons	15	12,732	62	222,791	5	25,929	0	0	0	0	72	329,979
10,000-24,999 tons	26	20,071	31	357,254	5	52,122	5	28,000	21	40,526	41	430,394
25,000-49,999 tons	21	299,139	26	411,324	15	256,293	0	0	5	947	41	1,018,388
50,000-74,999 tons	26	472,518	26	342,058	0	0	15	23,779	5	27,854	31	1,046,388
75,000-99,999 tons	0	0	5	234,978	10	60,141	10	151,951	10	79,861	10	491,549
100,000 tons and more	0	0	0	0	10	345,610	15	196,430	0	0	15	1,137,758
Total	93	807,137	155	1,568,474	46	740,095	52	1,192,308	41	149,188	222	4,457,201
Partnership:												
Less than 1,000 tons	0	0	0	0	6	401	0	0	0	0	6	401
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	0	0	0	0	6	64,632	0	0	0	0	6	64,632
25,000-49,999 tons	6	26,812	6	36,651	0	0	0	0	0	0	6	63,463
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	26,812	6	36,651	11	65,032	0	0	0	0	17	128,495
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	7	2,291	0	0	0	0	7	818	7	3,109
10,000-24,999 tons	7	383	7	2,176	7	441	0	0	7	1,208	7	4,208
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	383	13	4,467	7	441	0	0	13	2,026	13	7,317
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	6	3,447	6	21,074	0	0	0	0	6	1,948	6	26,469
10,000-24,999 tons	17	103,441	34	170,504	0	0	6	42,857	11	4,324	40	321,127
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	6	16,087	6	191,501	0	0	0	0	6	23,374	6	230,962
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	6	412,345	0	0	0	0	6	19,478	0	431,823
Total	28	122,976	51	795,425	0	0	6	42,857	28	49,124	51	1,010,382
All forms of ownership:												
Less than 1,000 tons	5	2,677	5	69	6	401	0	0	0	0	16	3,147
1,000-9,999 tons	21	16,179	74	246,156	5	25,929	5	28,000	33	43,292	84	359,557
10,000-24,999 tons	49	123,895	71	529,935	17	117,195	6	42,857	23	6,478	93	820,361
25,000-49,999 tons	26	325,951	31	447,974	15	256,293	5	23,779	5	27,854	47	1,081,851
50,000-74,999 tons	31	488,605	31	535,559	0	0	15	151,951	16	103,235	37	1,277,350
75,000-99,999 tons	0	0	5	234,978	10	60,141	10	196,430	0	0	10	491,549
100,000 tons and more	0	0	6	412,345	10	345,610	15	792,148	6	19,478	15	1,569,582
Total	133	957,308	225	2,405,017	64	805,568	57	1,235,165	83	200,338	303	5,603,395

Table 61--Pacific region: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	6,442	12	41,454	0	0	0	0	8	9,828	12	57,723
10,000-24,999 tons	16	352,069	16	315,575	4	66,554	0	0	4	590	21	734,788
25,000-49,999 tons	12	7,730	12	233,841	4	184,216	4	138,534	4	3,279	21	567,599
50,000-74,999 tons	4	83,709	4	113,377	0	0	4	159,563	0	0	8	356,650
75,000-99,999 tons	4	128,831	12	441,818	0	0	0	0	4	1,179	12	571,828
100,000 tons and more	16	154,038	33	2,640,397	12	3,586,887	4	324,412	4	46,340	41	6,752,074
Total	62	732,818	90	3,786,463	21	3,837,657	12	622,509	25	61,215	115	9,040,661
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	6	10,629	0	0	0	0	0	0	6	10,629
10,000-24,999 tons	6	7,730	6	10,629	0	0	0	0	6	3,931	6	22,290
25,000-49,999 tons	0	0	0	0	6	125,769	0	0	0	0	6	125,769
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	7,730	13	21,258	6	125,769	0	0	6	3,931	19	158,688
Single owner:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	0	0	0	0	4	51,995	0	0	0	0	4	51,995
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	4	2,573,775	0	0	0	0	4	2,573,775
Total	0	0	0	0	7	2,625,771	0	0	0	0	7	2,625,771
Farmer cooperative:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	5	28,344	0	0	0	0	0	0	5	28,344
10,000-24,999 tons	5	1,288	5	80,604	0	0	0	0	0	0	5	81,893
25,000-49,999 tons	5	1,288	16	241,579	0	0	0	0	11	4,037	16	246,904
50,000-74,999 tons	0	0	5	131,093	0	0	0	0	0	0	5	131,093
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	2,577	32	481,620	0	0	0	0	11	4,037	32	488,234
All forms of ownership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	6,442	24	80,427	0	0	0	0	8	9,828	24	96,696
10,000-24,999 tons	28	361,087	28	406,809	8	118,550	0	0	10	4,521	36	890,966
25,000-49,999 tons	18	9,018	28	475,420	10	309,985	4	138,534	15	7,316	43	940,272
50,000-74,999 tons	4	83,709	9	244,470	0	0	4	159,563	0	0	14	487,743
75,000-99,999 tons	4	128,831	12	441,818	0	0	0	0	4	1,179	12	571,828
100,000 tons and more	16	154,038	33	2,640,397	16	6,160,662	4	324,412	4	46,340	45	9,325,849
Total	79	743,124	135	4,289,341	34	6,589,197	12	622,509	42	69,183	173	12,313,354

Table 62--United States: Distribution of dry formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	22	3,951	108	21,905	5	265	0	0	102	17,099	163	43,220
1,000-9,999 tons	268	309,412	940	1,543,002	179	325,242	64	259,315	679	761,445	1,233	3,198,416
10,000-24,999 tons	304	1,364,238	683	2,896,740	161	556,237	44	98,601	401	1,524,466	923	6,438,283
25,000-49,999 tons	336	3,701,377	388	3,141,553	159	1,954,517	22	320,074	120	316,556	589	9,434,075
50,000-74,999 tons	229	4,293,447	174	1,880,589	68	907,375	59	1,291,359	41	148,967	332	8,521,737
75,000-99,999 tons	161	4,716,850	96	1,873,912	75	1,170,414	28	920,575	26	422,113	236	9,103,864
100,000 tons and more	197	7,952,718	137	6,330,864	242	20,186,905	59	4,848,051	24	960,465	465	40,279,003
Total	1,518	22,341,994	2,526	17,688,565	889	25,100,954	276	7,735,974	1,393	4,151,111	3,941	77,018,599
Partnerships:												
Less than 1,000 tons	0	0	11	3,296	6	401	0	0	10	1,459	21	5,156
1,000-9,999 tons	16	354	90	76,063	27	16,547	0	0	103	102,372	137	195,336
10,000-24,999 tons	17	16,029	51	180,064	33	232,287	0	0	33	40,222	65	468,602
25,000-49,999 tons	14	33,441	19	47,566	6	125,769	3	1,838	14	27,319	26	235,934
50,000-74,999 tons	0	0	0	0	5	139,929	0	0	0	0	5	139,929
75,000-99,999 tons	0	0	0	0	13	192,176	5	254,928	0	0	5	447,104
100,000 tons and more	0	0	5	53,258	5	318,323	0	0	0	0	13	371,581
Total	46	49,824	176	360,247	95	1,025,432	8	256,767	160	171,372	271	1,863,642
Single owner:												
Less than 1,000 tons	4	13	43	5,266	0	0	0	0	33	4,141	48	9,420
1,000-9,999 tons	37	12,659	222	140,233	58	81,637	5	5,650	242	292,546	332	532,726
10,000-24,999 tons	35	120,492	111	246,706	19	73,292	14	5,502	110	301,836	163	747,826
25,000-49,999 tons	3	39,203	4	2,257	4	261	0	0	4	11,047	7	52,768
50,000-74,999 tons	5	108,678	0	0	5	61,058	0	0	0	0	10	169,736
75,000-99,999 tons	0	0	5	30,642	10	250,888	4	96,137	0	0	15	377,666
100,000 tons and more	4	363,348	8	13,132	15	3,429,838	0	0	4	1,544	23	3,807,861
Total	88	644,392	392	438,236	141	3,896,973	23	107,289	393	611,113	599	5,698,003
Farmer cooperative:												
Less than 1,000 tons	4	4	45	9,755	0	0	0	0	57	12,699	77	22,457
1,000-9,999 tons	77	121,169	590	1,092,487	12	2,441	17	28,121	487	1,470,307	747	2,714,526
10,000-24,999 tons	100	268,186	435	2,321,044	13	10,911	18	45,874	305	1,030,457	542	3,676,472
25,000-49,999 tons	109	1,799,706	140	1,264,205	13	24,122	4	106,220	103	922,150	246	4,116,403
50,000-74,999 tons	76	1,612,051	53	1,521,073	13	111,252	0	0	23	295,664	117	3,540,039
75,000-99,999 tons	39	883,861	20	407,065	0	0	0	0	13	239,006	51	1,529,932
100,000 tons and more	77	3,129,254	43	1,152,691	66	3,080,344	4	2,512	17	893,648	129	8,258,449
Total	483	7,814,230	1,326	7,768,321	116	3,229,071	44	182,727	1,005	4,863,931	1,909	23,858,280
All forms of ownership:												
Less than 1,000 tons	30	3,967	206	40,223	10	666	0	0	201	35,397	309	80,254
1,000-9,999 tons	398	443,595	1,841	2,851,785	276	425,868	85	293,086	1,511	2,626,671	2,449	6,641,004
10,000-24,999 tons	456	1,768,945	1,280	5,644,554	226	872,726	76	147,977	850	2,896,981	1,693	11,331,183
25,000-49,999 tons	462	5,573,727	551	4,455,582	182	2,104,669	30	428,132	241	1,277,072	868	13,839,181
50,000-74,999 tons	310	6,014,176	227	3,401,662	91	1,219,614	59	1,291,359	64	444,631	464	12,371,442
75,000-99,999 tons	200	5,600,711	120	2,311,618	98	1,613,477	37	1,271,640	39	661,119	308	11,458,566
100,000 tons and more	278	11,445,320	194	7,549,945	328	27,015,410	63	4,850,563	45	1,855,656	630	52,716,894
Total	2,135	30,850,441	4,420	26,255,370	1,241	33,252,430	351	8,282,757	2,951	9,797,527	6,721	108,438,524

Table 63--United States: Percent distribution of dry formula feed by method and capacity size, 1984

Capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Less than 1,000 tons	30	3,967	206	40,223	10	666	0	0	201	35,397	309	80,254
1,000-9,999 tons	398	443,595	1,841	2,851,785	276	425,868	85	293,086	1,511	2,626,671	2,449	6,641,004
10,000-24,999 tons	456	1,768,945	1,280	5,644,554	226	872,726	76	147,977	850	2,896,981	1,693	11,331,183
25,000-49,999 tons	462	5,573,727	551	4,455,582	182	2,104,669	30	428,132	241	1,277,072	868	13,839,181
50,000-74,999 tons	310	6,014,176	227	3,401,662	91	1,219,614	59	1,291,359	64	444,631	464	12,371,442
75,000-99,999 tons	200	5,600,711	120	2,311,618	98	1,613,477	37	1,271,640	39	661,119	308	11,458,566
100,000 tons and more	278	11,445,320	194	7,549,945	328	27,015,410	63	4,850,563	45	1,855,656	630	52,716,894
Total	2,135	30,350,441	4,420	26,255,370	1,241	33,252,430	351	8,282,757	2,951	9,797,527	6,721	108,438,524
Percent distribution (column)												
Less than 1,000 tons	1.4	1/	4.7	0.2	0.8	1/	0	0	6.8	0.4	4.6	0.1
1,000-9,999 tons	18.6	1.4	41.7	10.9	22.2	1.3	24.3	3.5	51.2	26.8	36.4	6.1
10,000-24,999 tons	21.4	5.7	29.0	21.5	18.2	2.6	21.7	1.8	28.8	29.6	25.2	10.4
25,000-49,999 tons	21.7	18.1	12.5	17.0	14.7	6.3	8.5	5.2	8.2	13.0	12.9	12.8
50,000-74,999 tons	14.5	19.5	5.1	13.0	7.3	3.7	16.8	15.6	2.2	4.5	6.9	11.4
75,000-99,999 tons	9.4	18.2	2.7	8.8	7.9	4.9	10.6	15.4	1.3	6.7	4.6	10.6
100,000 tons and more	13.0	37.1	4.4	28.8	26.5	81.2	18.0	58.6	1.5	18.9	9.4	48.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)												
Less than 1,000 tons	9.8	4.9	66.8	50.1	3.3	0.8	0	0	65.1	44.1	100.0	100.0
1,000-9,999 tons	16.3	6.7	75.2	42.9	11.3	6.4	3.5	4.4	61.7	39.6	100.0	100.0
10,000-24,999 tons	26.9	15.6	75.6	49.8	13.3	7.7	4.5	1.3	50.2	25.6	100.0	100.0
25,000-49,999 tons	53.2	40.3	63.5	32.2	21.0	15.2	3.4	3.1	27.7	9.2	100.0	100.0
50,000-74,999 tons	66.8	48.6	48.9	27.5	19.6	9.9	12.7	10.4	13.9	3.6	100.0	100.0
75,000-99,999 tons	65.0	48.9	39.1	20.2	31.9	14.1	12.1	11.1	12.6	5.8	100.0	100.0
100,000 tons and more	44.1	21.7	30.8	14.3	52.1	51.2	10.0	9.2	7.2	3.5	100.0	100.0
Total	31.8	28.4	65.8	24.2	18.5	30.7	5.2	7.6	43.9	9.0	100.0	100.0

1/ Less than .1 percent.

Table 64--United States: Percent distribution of dry formula feed by method and form of ownership, 1984

Form of ownership	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation	1,518	22,341,994	2,526	17,688,565	889	25,100,954	276	7,735,974	1,393	4,151,111	3,941	77,018,599
Partnership	46	49,824	176	360,247	95	1,025,432	8	256,767	160	171,372	271	1,863,642
Single owner	88	644,392	392	438,236	141	3,896,973	23	107,289	393	611,113	599	5,698,003
Farmer cooperative	483	7,814,230	1,326	7,768,321	116	3,229,071	44	182,727	1,005	4,863,931	1,909	23,858,280
Total	2,135	30,850,441	4,420	26,255,370	1,241	33,252,430	351	8,282,757	2,951	9,797,527	6,721	108,438,524
Percent distribution (column)												
Corporation	71.1	72.4	57.1	67.4	71.6	75.5	78.7	93.4	47.2	42.4	58.6	71.0
Partnership	2.2	0.2	4.0	1.4	7.7	3.1	2.4	3.1	5.4	1.7	4.0	1.7
Single owner	4.1	2.1	8.9	1.7	11.3	11.7	6.5	1.3	13.3	6.2	8.9	5.3
Farmer cooperative	22.6	25.3	30.0	29.6	9.3	9.7	12.4	2.2	34.1	49.6	28.4	22.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)												
Corporation	38.5	29.0	64.1	23.0	22.5	32.6	7.0	10.0	35.3	5.4	100.0	100.0
Partnership	17.1	2.7	64.7	19.3	35.2	55.0	3.1	13.8	58.8	9.2	100.0	100.0
Single owner	14.7	11.3	65.5	7.7	23.5	68.4	3.8	1.9	65.6	10.7	100.0	100.0
Farmer cooperative	25.3	32.8	69.5	32.6	6.1	13.5	2.3	0.8	52.6	20.4	100.0	100.0
Total	31.8	28.4	65.8	24.2	18.5	30.7	5.2	7.6	43.9	9.0	100.0	100.0

Table 65--United States: Distribution of liquid formula feed by method, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation:												
Less than 1,000 tons	3	72	12	1,055	0	0	0	0	0	0	12	1,127
1,000-9,999 tons	3	1,416	59	15,644	0	0	0	0	12	2,893	71	19,954
10,000-24,999 tons	3	9,621	40	18,801	0	0	0	0	3	1,669	43	30,091
25,000-49,999 tons	43	104,932	37	141,934	3	6,672	0	0	6	7,396	68	260,935
50,000-74,999 tons	25	38,433	15	8,038	9	79,748	0	0	3	67	34	126,286
75,000-99,999 tons	22	166,039	6	17,428	0	0	0	0	3	77,913	31	261,380
100,000 tons and more	43	181,926	9	25,593	3	1	3	22,029	0	0	52	229,549
Total	142	502,440	179	228,493	15	86,421	3	22,029	28	89,939	312	929,321
Partnership:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	3	1,157	3	376	0	0	3	1,469	0	0	9	3,002
10,000-24,999 tons	0	0	0	67	0	0	0	0	0	0	0	67
25,000-49,999 tons	0	0	3	310	0	0	0	0	0	0	3	310
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	1,157	6	753	0	0	3	1,469	0	0	12	3,379
Single owner:												
Less than 1,000 tons	0	0	3	122	0	0	0	0	0	0	3	122
1,000-9,999 tons	3	5,730	9	11,593	0	0	0	0	3	368	15	17,691
10,000-24,999 tons	0	0	9	12,013	0	0	0	0	3	1,223	9	13,236
25,000-49,999 tons	0	0	3	53	0	0	0	0	0	0	3	53
50,000-74,999 tons	3	484	0	0	0	0	0	0	0	0	3	484
75,000-99,999 tons	0	0	0	0	3	4,303	3	4,246	0	0	3	8,549
100,000 tons and more	0	0	0	0	0	0	0	0	0	0	0	0
Total	6	6,214	25	23,780	3	4,303	3	4,246	6	1,591	37	40,135
Farmer cooperatives:												
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	3	18	43	37,090	0	0	3	734	15	2,733	49	40,576
10,000-24,999 tons	12	59,609	31	6,889	0	0	0	0	9	5,648	46	72,145
25,000-49,999 tons	0	0	6	2,720	0	0	0	0	0	0	6	2,720
50,000-74,999 tons	6	717	0	820	0	0	0	0	0	0	6	1,538
75,000-99,999 tons	6	6,525	0	0	0	0	0	0	0	0	6	6,525
100,000 tons and more	12	53,357	6	1,995	0	0	0	0	0	0	15	55,352
Total	40	120,227	90	49,515	0	0	3	734	25	8,381	133	178,857
All forms of ownership:												
Less than 1,000 tons	3	72	15	1,177	0	0	0	0	0	0	15	1,249
1,000-9,999 tons	12	8,322	114	64,704	0	0	6	2,203	31	5,995	145	81,223
10,000-24,999 tons	15	69,230	80	37,768	0	0	0	0	15	8,540	99	115,538
25,000-49,999 tons	43	104,932	49	145,017	3	6,672	0	0	6	7,396	80	264,018
50,000-74,999 tons	34	39,634	15	8,858	9	79,748	0	0	3	67	43	128,307
75,000-99,999 tons	28	172,565	6	17,428	3	4,303	3	4,246	3	77,913	40	276,455
100,000 tons and more	56	235,283	15	27,588	3	1	3	22,029	0	0	68	284,901
Total	191	630,038	299	302,540	19	90,724	12	28,478	59	99,911	494	1,151,692

Table 66--United States: Percent distribution of liquid formula feed, by method and capacity size, 1984

Capacity size	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Less than 1,000 tons	3	72	15	1,177	0	0	0	0	0	0	15	1,249
1,000-9,999 tons	12	8,322	114	64,704	0	0	6	2,203	31	5,995	145	81,223
10,000-24,999 tons	15	69,230	80	37,768	0	0	0	0	15	8,540	99	115,538
25,000-49,999 tons	43	104,932	49	145,017	3	6,672	0	0	6	7,396	80	264,018
50,000-74,999 tons	34	39,634	15	8,858	9	79,748	0	0	3	67	43	128,307
75,000-99,999 tons	20	172,565	6	17,428	3	4,303	3	4,246	3	77,913	40	276,455
100,000 tons and more	56	235,283	15	27,588	3	1	3	22,029	0	0	68	284,901
Total	191	630,038	299	302,540	19	90,724	12	28,478	59	99,911	494	1,151,692
Percent distribution (column)												
Less than 1,000 tons	1.6	1/	5.2	0.4	0	0	0	0	0	0	3.1	0.1
1,000-9,999 tons	6.5	1.3	38.1	21.4	0	0	50.0	7.7	52.6	6.0	29.4	7.1
10,000-24,999 tons	8.1	11.0	26.8	12.5	0	0	0	0	26.3	8.5	20.0	10.0
25,000-49,999 tons	22.6	16.7	16.5	47.9	16.7	7.4	0	0	10.5	7.4	16.3	22.9
50,000-74,999 tons	17.7	6.3	5.2	2.9	50.0	87.9	0	0	5.3	0.1	8.8	11.1
75,000-99,999 tons	14.5	27.4	2.1	5.8	16.7	4.7	25.0	14.9	5.3	78.0	8.1	24.0
100,000 tons and more	29.0	37.3	5.2	9.1	16.7	1/	25.0	77.4	0	0	13.8	24.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution (row)												
Less than 1,000 tons	20.0	5.8	100.0	94.2	0	0	0	0	0	0	100.0	100.0
1,000-9,999 tons	8.5	10.2	78.7	79.7	0	0	4.3	2.7	21.3	7.4	100.0	100.0
10,000-24,999 tons	15.6	59.9	81.3	32.7	0	0	0	0	15.6	7.4	100.0	100.0
25,000-49,999 tons	53.8	39.7	61.5	54.9	3.8	2.5	0	0	7.7	2.8	100.0	100.0
50,000-74,999 tons	78.6	30.9	35.7	6.9	21.4	62.2	0	0	7.1	0.1	100.0	100.0
75,000-99,999 tons	69.2	62.4	15.4	6.3	7.7	1.6	7.7	1.5	7.7	28.2	100.0	100.0
100,000 tons and more	81.8	82.6	22.7	9.7	4.5	1/	4.5	7.7	0	0	100.0	100.0
Total	38.8	54.7	60.6	26.3	3.8	7.9	2.5	2.5	11.9	8.7	100.0	100.0

1/ Less than .1 percent.

Table 67--United States: Percent distribution of liquid formula feed by method and form of ownership, 1984

Form of ownership	Wholesale		Retail		Own livestock		Custom feeding		Custom grind and mix		Total	
	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production	Manufacturers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Corporation	142	502,440	179	228,493	15	86,421	3	22,029	28	89,939	312	929,321
Partnership	3	1,157	6	753	0	0	3	1,469	0	0	12	3,379
Single owner	6	6,214	25	23,780	3	4,303	3	4,246	6	1,591	37	40,135
Farmer cooperative	40	120,227	90	49,515	0	0	3	734	25	8,381	133	178,857
Total	191	630,038	299	302,540	19	90,724	12	28,478	59	99,911	494	1,151,692
	Percent distribution (column)											
Corporation	74.2	79.7	59.8	75.5	83.3	95.3	25.0	77.4	47.4	90.0	63.1	80.7
Partnership	1.6	0.2	2.1	0.2	0	0	25.0	5.2	0	0	2.5	0.3
Single owner	3.2	1.0	8.2	7.9	16.7	4.7	25.0	14.9	10.5	1.6	7.5	3.5
Farmer cooperative	21.0	19.1	29.9	16.4	0	0	25.0	2.6	42.1	8.4	26.9	15.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Percent distribution (row)											
Corporation	45.5	54.1	57.4	24.6	5.0	9.3	1.0	2.4	8.9	9.7	100.0	100.0
Partnership	25.0	34.3	50.0	22.3	0	0	25.0	43.5	0	0	100.0	100.0
Single owner	16.7	15.5	66.7	59.3	8.3	10.7	8.3	10.6	16.7	4.0	100.0	100.0
Farmer cooperative	30.2	67.2	67.4	27.7	0	0	2.3	0.4	18.6	4.7	100.0	100.0
Total	38.8	54.7	60.6	26.3	3.8	7.9	2.5	2.5	11.9	8.7	100.0	100.0

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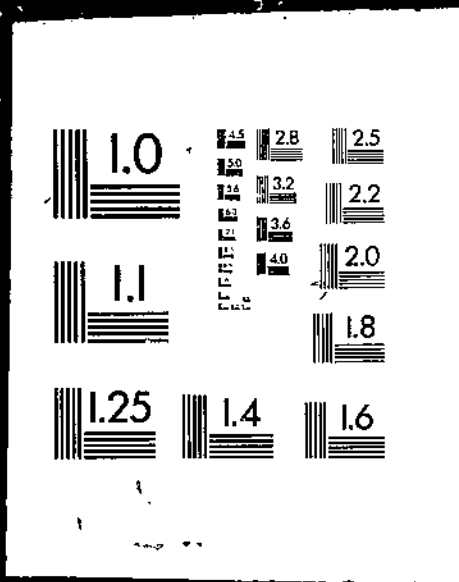


Table 68--Formula feed: Rated weekly capacity to produce specified forms of feed, by region and State, 1984

Region and State	Meal	Pellets	Blocks	Liquid	Total
Tons					
Northeast:					
Connecticut	2,549	1,328	0	0	3,877
Delaware	4,037	4,650	0	0	8,687
Maine	2,057	858	0	0	2,915
Maryland	11,167	9,315	0	1	20,483
Massachusetts	1,433	817	0	0	2,250
New Hampshire	694	409	0	0	1,103
New Jersey	644	272	0	0	916
New York	20,452	101,359	3	1,112	122,926
Pennsylvania	33,266	17,795	16	2	51,079
Vermont	4,432	3,102	0	0	7,533
Total	80,731	139,904	19	1,115	221,769
Lake States:					
Michigan	32,482	6,066	6	0	38,555
Minnesota	96,886	31,304	169	6,488	134,847
Wisconsin	116,075	40,515	94	627	157,310
Total	245,442	77,885	269	7,115	330,712
Corn Belt:					
Illinois	43,700	20,787	259	185	64,931
Indiana	37,222	17,685	0	114	55,021
Iowa	199,207	90,501	3,717	13,021	306,446
Missouri	83,742	72,001	1,485	4,037	161,266
Ohio	29,129	12,333	212	2,201	43,875
Total	393,000	213,308	5,673	19,558	631,538
Northern Plains:					
Kansas	59,854	33,077	3,090	10,115	106,135
Nebraska	148,780	104,289	741	5,152	258,962
North Dakota	3,194	4,733	0	0	7,927
South Dakota	18,577	11,363	1,150	3,560	34,649
Total	230,404	153,462	4,981	18,827	407,673
Appalachian:					
Kentucky	12,333	10,194	117	95	22,739
North Carolina	34,612	45,493	233	0	80,339
Tennessee	17,191	18,661	1,013	357	37,222
Virginia	11,740	17,404	2	48	29,194
West Virginia	778	556	0	0	1,334
Total	76,654	92,308	1,365	500	170,827
Southeast:					
Alabama	14,764	50,285	0	48	65,097
Florida	12,891	7,692	0	750	21,334
Georgia	40,475	69,813	115	1,778	112,182
South Carolina	2,620	4,594	0	0	7,214
Total	70,750	132,385	115	2,577	205,827
Delta:					
Arkansas	17,886	24,312	0	25	42,223
Louisiana	8,884	17,269	351	419	26,924
Mississippi	22,883	44,380	957	4,748	72,968
Total	49,654	85,962	1,308	5,192	142,115
Southern Plains:					
Oklahoma	30,310	24,735	194	0	55,239
Texas	143,632	90,727	7,844	6,904	249,107
Total	173,942	115,462	8,038	6,904	304,346
Mountain:					
Arizona	22,478	315	4,165	0	26,957
Colorado	28,791	14,376	500	771	44,438
Idaho	9,420	2,894	0	3,580	15,894
Montana	6,113	4,706	873	149	11,841
Nevada	2,078	1,887	0	0	3,965
New Mexico	20,306	7,896	952	0	29,154
Utah	21,300	2,831	1,587	0	25,718
Wyoming	571	0	0	0	571
Total	111,058	34,904	8,077	4,500	158,538
Pacific:					
California	102,466	129,009	135	506	232,116
Hawaii	3,191	4,539	0	0	7,730
Oregon	19,444	17,308	0	0	36,751
Washington	19,207	24,355	0	2,052	45,613
Total	144,308	175,212	135	2,558	322,212
48-State total	1,575,942	1,220,788	29,981	68,846	2,895,558

Table 69--Custom services associated with feed sales by form of ownership and capacity size, 1984

Form of ownership and capacity size	Least-cost formulation	Feed blending	Feed programs	Record keeping	Other services
Percent					
Corporation:					
Less than 1,000 tons	15.0	75.0	27.5	12.5	2.5
1,000-9,999 tons	37.5	79.9	43.0	16.0	7.2
10,000-24,999 tons	49.3	73.7	53.0	21.2	8.8
25,000-49,999 tons	53.4	58.2	51.4	15.8	4.8
50,000-74,999 tons	63.8	53.8	53.8	25.0	3.8
75,000-99,999 tons	69.0	46.6	48.3	22.4	3.4
100,000 tons and more	46.6	39.0	33.9	15.3	5.9
Total	47.0	65.6	46.0	18.0	6.4
Partnership:					
Less than 1,000 tons	25.0	25.0	0	0	0
1,000-9,999 tons	43.8	75.0	46.9	6.3	6.3
10,000-24,999 tons	13.3	60.0	26.7	13.3	0
25,000-49,999 tons	60.0	20.0	40.0	20.0	0
50,000-74,999 tons	100.0	100.0	100.0	100.0	0
75,000-99,999 tons	0	100.0	100.0	100.0	0
100,000 tons and more	0	0	0	0	0
Total	35.5	62.9	38.7	12.9	3.2
Single owner:					
Less than 1,000 tons	16.7	83.3	33.3	0	0
1,000-9,999 tons	24.7	80.2	33.3	9.9	7.4
10,000-24,999 tons	33.3	82.1	38.5	17.9	15.4
25,000-49,999 tons	0	50.0	50.0	50.0	0.0
50,000-74,999 tons	0	50.0	0	0	0
75,000-99,999 tons	25.0	75.0	25.0	25.0	0
100,000 tons and more	33.3	50.0	16.7	0	16.7
Total	26.2	77.9	33.6	12.1	8.7
Farmer cooperative:					
Less than 1,000 tons	36.8	84.2	42.1	5.3	21.1
1,000-9,999 tons	47.8	85.6	59.4	23.3	10.0
10,000-24,999 tons	57.8	89.8	66.4	32.8	7.8
25,000-49,999 tons	57.6	79.7	47.5	18.6	6.8
50,000-74,999 tons	69.0	69.0	34.5	17.2	0
75,000-99,999 tons	69.2	69.2	46.2	15.4	7.7
100,000 tons and more	55.9	44.1	32.4	20.6	11.8
Total	53.4	81.5	55.5	24.0	8.7
All forms of ownership:					
Less than 1,000 tons	21.3	76.0	30.7	8.0	6.7
1,000-9,999 tons	39.2	81.4	46.9	16.9	8.0
10,000-24,999 tons	49.1	79.2	54.9	24.3	8.8
25,000-49,999 tons	54.2	63.2	50.0	17.0	5.2
50,000-74,999 tons	64.3	58.0	48.2	23.2	2.7
75,000-99,999 tons	65.8	52.6	47.4	22.4	3.9
100,000 tons and more	47.5	40.0	32.5	15.6	7.5
Total	46.5	71.2	47.3	19.0	7.1

Table 70--Northeast region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity 1,000 tons
	Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons	Dry		Liquid			
					Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons		
Corporation:										
Less than 1,000 tons	12	1.5	0	0	0	0	0	0	12	1.5
1,000-9,999 tons	74	159.3	15	16.1	3	0.8	0	0	74	176.2
10,000-24,999 tons	64	336.1	30	124.9	0	0	3	1.5	67	462.5
25,000-49,999 tons	55	607.6	40	342.5	0	0	3	7.2	55	957.3
50,000-74,999 tons	18	202.4	18	326.2	0	0	0	0	18	528.6
75,000-99,999 tons	18	447.4	15	255.2	0	0	3	0.7	18	703.3
100,000 tons and more	20	1,166.0	37	3,144.9	0	0	0	0	40	4,310.9
Total	261	2,920.2	155	4,209.8	3	0.8	9	9.4	284	7,140.2
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	29	51.6	0	0	0	0	0	0	29	51.6
10,000-24,999 tons	3	15.2	0	0	0	0	0	0	3	15.2
25,000-49,999 tons	3	37.9	0	0	0	0	0	0	3	37.9
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	35	104.7	0	0	0	0	0	0	35	104.7
Single owner:										
Less than 1,000 tons	6	1.5	0	0	0	0	0	0	6	1.5
1,000-9,999 tons	32	62.7	16	1.5	0	0	0	0	35	64.2
10,000-24,999 tons	19	101.4	32	46.2	0	0	0	0	19	147.7
25,000-49,999 tons	0	0	39	46.2	0	0	0	0	3	46.2
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	3	111.9	0	0	0	0	0	0	3	111.9
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	60	277.5	87	94.0	0	0	0	0	66	371.5
Farmer cooperative:										
Less than 1,000 tons	10	3.1	0	0	0	0	0	0	10	3.1
1,000-9,999 tons	56	115.2	3	4.5	3	0.9	0	0	56	120.7
10,000-24,999 tons	43	276.8	3	36.7	0	0	3	13.3	53	326.8
25,000-49,999 tons	23	229.9	16	127.4	0	0	0	0	23	357.4
50,000-74,999 tons	27	317.6	27	376.7	0	0	3	0.6	27	694.9
75,000-99,999 tons	17	176.3	17	320.0	0	0	0	0	17	496.3
100,000 tons and more	27	375.1	27	1,515.5	0	0	9	26.0	27	1,916.7
Total	203	1,494.0	94	2,380.9	3	0.9	16	40.0	213	3,915.8
All forms of ownership:										
Less than 1,000 tons	28	6.0	0	0	0	0	0	0	28	6.0
1,000-9,999 tons	191	388.7	34	22.1	6	1.7	0	0	194	412.6
10,000-24,999 tons	129	729.5	65	207.9	0	0	6	14.8	142	952.2
25,000-49,999 tons	81	875.5	95	516.2	0	0	3	7.2	84	1,398.9
50,000-74,999 tons	45	520.0	45	702.9	0	0	3	0.6	45	1,223.5
75,000-99,999 tons	38	735.6	32	575.3	0	0	3	0.7	38	1,311.5
100,000 tons and more	47	1,541.0	64	4,660.4	0	0	9	26.0	67	6,227.5
Total	559	4,796.4	336	6,684.7	6	1.7	25	49.4	598	11,532.2

Table 71--Lake States region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
Corporation:										
Less than 1,000 tons	34	8.9	13	3.0	4	1.5	8	1.5	38	14.8
1,000-9,999 tons	215	828.8	38	60.8	8	1.9	21	15.2	219	906.7
10,000-24,999 tons	177	2,058.1	38	230.8	0	0	4	1.9	185	2,290.8
25,000-49,999 tons	47	825.3	34	433.0	0	0	4	92.5	51	1,350.8
50,000-74,999 tons	38	1,162.8	30	572.6	0	0	8	203.8	38	1,939.2
75,000-99,999 tons	21	805.0	21	778.9	0	0	0	0	21	1,583.9
100,000 tons and more	13	1,217.6	13	1,076.9	0	0	0	0	17	2,294.5
Total	544	6,906.5	186	3,156.1	13	3.3	46	314.8	569	10,380.8
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	38	117.1	4	1.8	0	0	0	0	38	118.9
10,000-24,999 tons	8	141.2	0	0	0	0	0	0	8	141.2
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	46	258.3	4	1.8	0	0	0	0	46	260.1
Single owner:										
Less than 1,000 tons	4	1.3	4	0.9	0	0	0	0	8	2.3
1,000-9,999 tons	65	259.3	16	26.3	0	0	4	1.8	69	287.4
10,000-24,999 tons	48	568.5	0	0	0	0	8	28.4	52	597.0
25,000-49,999 tons	4	92.1	0	0	0	0	0	0	4	92.1
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	4	375.9	0	0	0	0	0	0	4	375.9
Total	125	1,297.1	20	27.2	0	0	12	30.3	137	1,354.6
Farmer cooperative:										
Less than 1,000 tons	8	1.8	0	0	0	0	0	0	8	1.8
1,000-9,999 tons	187	710.9	53	108.8	8	1.5	28	18.1	199	839.3
10,000-24,999 tons	134	1,634.8	16	84.7	4	3.7	8	11.0	138	1,734.2
25,000-49,999 tons	45	993.5	20	316.0	8	1.4	0	0	45	1,310.9
50,000-74,999 tons	12	380.3	12	247.4	4	3.7	0	0	12	631.3
75,000-99,999 tons	8	683.3	0	0	0	0	0	0	8	683.3
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	394	4,404.5	101	756.8	24	10.2	37	29.2	410	5,200.7
All forms of ownership:										
Less than 1,000 tons	46	12.1	17	3.9	4	1.5	8	1.5	54	18.9
1,000-9,999 tons	505	1,916.0	111	197.7	17	3.3	54	35.2	525	2,152.3
10,000-24,999 tons	367	4,402.6	54	315.5	4	3.7	20	41.4	383	4,763.2
25,000-49,999 tons	96	1,910.9	54	749.0	8	1.4	4	92.5	100	2,753.8
50,000-74,999 tons	50	1,543.1	42	820.0	4	3.7	8	203.8	50	2,570.5
75,000-99,999 tons	29	1,488.3	21	778.9	0	0	0	0	29	2,267.2
100,000 tons and more	17	1,593.4	13	1,076.9	0	0	0	0	21	2,670.4
Total	1,108	12,866.5	312	3,941.9	37	13.5	95	374.3	1,162	17,196.2

Table 72--Corn Belt region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons		
Corporation:										
Less than 1,000 tons	47	13.6	5	1.3	0	0	0	0	47	14.9
1,000-9,999 tons	409	997.6	98	85.8	9	1.5	14	5.9	414	1,090.9
10,000-24,999 tons	325	2,340.4	130	715.6	28	44.0	23	44.0	330	3,144.0
25,000-49,999 tons	181	2,509.0	144	1,405.1	9	11.5	23	106.1	195	4,031.7
50,000-74,999 tons	74	1,490.7	69	1,024.7	9	14.0	14	154.4	74	2,683.8
75,000-99,999 tons	74	1,994.0	74	1,797.5	0	0	5	69.8	74	3,861.3
100,000 tons and more	47	2,096.6	56	2,994.0	19	139.6	23	451.2	56	5,681.4
Total	1,157	11,442.0	576	8,024.0	74	210.6	102	831.5	1,190	20,508.0
Partnership:										
Less than 1,000 tons	11	3.2	0	0	0	0	0	0	11	3.2
1,000-9,999 tons	16	35.5	5	3.2	0	0	0	0	16	38.7
10,000-24,999 tons	5	51.6	5	25.8	0	0	0	0	5	77.5
25,000-49,999 tons	5	80.7	0	0	0	0	5	16.1	5	96.8
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	37	171.0	10	29.0	0	0	5	16.1	37	216.2
Single owner:										
Less than 1,000 tons	14	3.1	0	0	0	0	0	0	14	3.1
1,000-9,999 tons	97	219.3	19	12.2	0	0	0	0	97	231.5
10,000-24,999 tons	53	453.7	5	6.1	0	0	0	0	53	459.8
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	77.2	5	77.2	0	0	0	0	5	154.3
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	169	753.2	29	95.5	0	0	0	0	169	848.7
Farmer cooperative:										
Less than 1,000 tons	26	6.3	9	3.0	0	0	0	0	17	9.3
1,000-9,999 tons	253	888.9	21	18.3	4	3.0	17	15.2	262	925.5
10,000-24,999 tons	163	1,778.1	48	272.7	13	17.4	4	8.7	176	2,076.9
25,000-49,999 tons	82	1,343.7	56	397.3	9	23.4	0	0	73	1,764.3
50,000-74,999 tons	39	1,134.1	29	457.3	5	2.6	0	0	39	1,594.0
75,000-99,999 tons	9	516.0	9	288.4	0	0	3	90.1	9	894.5
100,000 tons and more	9	2,586.2	9	1,379.8	3	36.1	0	0	9	4,002.1
Total	580	8,253.3	181	2,816.7	34	82.6	25	114.1	585	11,266.7
All forms of ownership:										
Less than 1,000 tons	98	26.2	13	4.4	0	0	0	0	89	30.5
1,000-9,999 tons	776	2,141.4	144	119.5	14	4.5	31	21.1	789	2,286.5
10,000-24,999 tons	546	4,623.9	188	1,020.2	41	61.4	28	52.7	564	5,758.2
25,000-49,999 tons	268	3,933.4	200	1,802.3	18	34.8	28	122.2	273	5,892.8
50,000-74,999 tons	118	2,702.0	104	1,559.1	14	16.6	14	154.4	118	4,432.1
75,000-99,999 tons	83	2,510.0	83	2,085.9	0	0	8	160.0	83	4,755.8
100,000 tons and more	56	4,682.8	65	4,373.8	22	175.7	23	451.2	65	9,683.5
Total	1,944	20,619.6	797	10,965.2	108	293.1	132	961.7	1,981	32,839.6

Table 73--Northern Plains region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity 1,000 tons
	Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons	Dry		Liquid			
					Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons		
Corporation:										
Less than 1,000 tons	25	0.1	4	4.9	0	0	4	0.0	25	5.1
1,000-9,999 tons	156	417.7	25	43.8	4	1.3	8	5.2	173	468.0
10,000-24,999 tons	109	729.4	63	402.8	0	0	4	23.8	126	1,156.0
25,000-49,999 tons	63	743.2	46	573.5	4	2.4	13	150.6	67	1,469.7
50,000-74,999 tons	46	1,095.5	25	406.6	8	95.7	4	71.8	46	1,669.5
75,000-99,999 tons	21	761.0	8	173.9	4	22.7	13	367.9	25	1,325.5
100,000 tons and more	42	12,057.1	25	12,678.6	4	148.0	4	296.0	46	25,179.6
Total	462	15,804.0	196	14,284.2	25	270.0	50	915.2	508	31,273.4
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	10	15.1	5	2.5	0	0	0	0	10	17.7
10,000-24,999 tons	5	43.3	5	7.2	0	0	0	0	5	50.5
25,000-49,999 tons	5	63.1	0	0	0	0	0	0	5	63.1
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	5	363.5	0	0	0	0	0	0	5	363.5
Total	25	485.0	10	9.7	0	0	0	0	25	494.7
Single owner:										
Less than 1,000 tons	5	1.5	0	0	0	0	0	0	5	1.5
1,000-9,999 tons	24	64.0	5	2.7	5	8.0	0	0	24	74.7
10,000-24,999 tons	10	68.7	5	29.9	0	0	0	0	10	98.6
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	39	134.2	10	32.5	5	8.0	0	0	39	174.7
Farmer cooperative:										
Less than 1,000 tons	20	4.5	7	1.1	0	0	0	0	17	5.6
1,000-9,999 tons	151	398.8	26	34.4	0	0	0	0	151	433.3
10,000-24,999 tons	99	862.5	30	127.5	0	0	9	5.9	112	995.9
25,000-49,999 tons	43	656.1	22	148.6	9	16.8	4	28.0	43	849.6
50,000-74,999 tons	13	160.4	13	261.6	0	0	4	56.3	13	478.3
75,000-99,999 tons	4	135.6	4	60.3	4	15.1	0	0	4	211.0
100,000 tons and more	4	187.1	4	15.0	4	37.4	4	168.4	4	407.9
Total	334	2,405.2	105	648.5	17	69.3	21	258.6	344	3,381.6
All forms of ownership:										
Less than 1,000 tons	50	6.1	10	6.0	0	0	4	0.0	47	12.1
1,000-9,999 tons	341	895.7	61	83.5	9	9.3	8	5.2	358	993.6
10,000-24,999 tons	223	1,703.9	103	567.4	0	0	13	29.8	253	2,301.0
25,000-49,999 tons	111	1,462.5	68	722.2	13	19.2	17	178.6	115	2,382.4
50,000-74,999 tons	59	1,255.8	38	668.3	8	95.7	9	128.0	59	2,147.8
75,000-99,999 tons	25	896.7	12	234.2	8	37.8	13	367.9	29	1,536.5
100,000 tons and more	51	12,607.7	29	12,693.6	8	185.4	8	464.4	55	25,951.0
Total	860	18,828.4	322	14,975.0	47	347.3	71	1,173.8	916	35,324.5

Table 74--Appalachian region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity 1,000 tons
	Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons	Dry		Liquid			
					Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons		
Corporation:										
Less than 1,000 tons	16	2.2	4	0.8	0	0	0	0	12	3.0
1,000-9,999 tons	92	113.3	16	33.5	0	0	0	0	100	146.8
10,000-24,999 tons	48	199.4	32	88.2	0	0	0	0	56	287.7
25,000-49,999 tons	44	377.6	24	106.4	4	22.5	8	1.5	44	507.9
50,000-74,999 tons	28	440.8	32	382.5	4	14.2	0	0	40	837.5
75,000-99,999 tons	12	301.9	12	213.4	0	0	0	0	16	515.4
100,000 tons and more	44	1,236.5	56	2,513.4	0	0	12	16.7	56	3,766.6
Total	284	2,671.7	176	3,338.2	8	36.7	20	18.2	324	6,064.8
Partnership:										
Less than 1,000 tons	4	0.7	0	0	0	0	0	0	4	0.7
1,000-9,999 tons	16	27.2	0	0	0	0	0	0	16	27.2
10,000-24,999 tons	16	75.5	4	16.6	0	0	0	0	16	92.1
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	36	103.4	4	16.6	0	0	0	0	36	120.0
Single owner:										
Less than 1,000 tons	8	1.6	0	0	0	0	0	0	8	1.6
1,000-9,999 tons	47	96.1	4	0.8	0	0	0	0	47	96.8
10,000-24,999 tons	8	46.9	0	0	0	0	0	0	8	46.9
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	4	164.0	0	0	0	0	0	0	4	164.0
Total	67	308.5	4	0.8	0	0	0	0	67	309.2
Farmer cooperative:										
Less than 1,000 tons	24	3.1	0	0	0	0	0	0	24	3.1
1,000-9,999 tons	24	14.6	4	4.4	4	0.3	4	0.7	24	20.0
10,000-24,999 tons	4	15.4	0	0	0	0	0	0	4	15.4
25,000-49,999 tons	20	150.7	12	76.9	0	0	4	1.5	20	229.1
50,000-74,999 tons	4	62.7	4	43.6	4	4.4	0	0	4	110.7
75,000-99,999 tons	8	143.0	8	89.1	0	0	0	0	8	232.1
100,000 tons and more	20	460.8	28	1,281.0	4	30.7	4	6.1	28	1,778.6
Total	104	850.2	56	1,494.9	12	35.4	12	8.4	112	2,388.9
All forms of ownership:										
Less than 1,000 tons	52	7.5	4	0.8	0	0	0	0	48	8.4
1,000-9,999 tons	179	251.2	24	38.6	4	0	4	0.7	187	290.8
10,000-24,999 tons	76	337.2	36	104.8	0	0	0	0	84	442.0
25,000-49,999 tons	64	528.2	36	183.2	4	22.5	12	3.0	64	737.0
50,000-74,999 tons	32	503.5	36	426.1	8	18.6	0	0	44	948.2
75,000-99,999 tons	20	445.0	20	302.5	0	0	0	0	24	747.5
100,000 tons and more	68	1,861.2	84	3,794.3	4	30.7	16	22.9	88	5,709.1
Total	491	3,933.8	240	4,850.5	20	72.1	32	26.6	539	8,883.0

Table 75--Southeast region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons
Corporation:										
Less than 1,000 tons	8	1.5	0	0	0	0	0	0	8	1.5
1,000-9,999 tons	34	77.9	0	0	0	0	0	0	34	77.9
10,000-24,999 tons	23	123.4	19	69.1	0	0	0	0	30	192.5
25,000-49,999 tons	34	422.0	8	37.3	0	0	4	37.3	38	496.6
50,000-74,999 tons	19	279.6	8	62.8	0	0	4	51.3	19	393.7
75,000-99,999 tons	27	645.0	12	171.9	0	0	0	0	27	816.9
100,000 tons and more	50	1,098.3	57	3,526.8	4	5.9	8	35.2	61	4,666.1
Total	194	2,647.5	103	3,867.9	4	5.9	15	123.7	217	6,645.1
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	8	7.3	0	0	0	0	0	0	8	7.3
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	8	29.4	8	117.4	0	0	0	0	8	146.8
Total	16	36.7	8	117.4	0	0	0	0	16	154.1
Single owner:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	4.4	0	0	0	0	1	5.9	8	10.3
10,000-24,999 tons	0	0	0	0	0	0	0	0	0	0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	4	73.8	0	0	0	0	0	0	4	73.8
75,000-99,999 tons	4	66.4	4	66.4	0	0	0	0	4	132.8
100,000 tons and more	4	14.8	4	206.6	0	0	0	0	4	221.3
Total	16	159.4	8	273.0	0	0	1	5.9	20	438.2
Farmer cooperative:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	4.4	0	0	0	0	0	0	4	4.4
10,000-24,999 tons	4	19.2	4	7.4	0	0	0	0	4	26.6
25,000-49,999 tons	4	51.7	0	0	0	0	0	0	4	51.7
50,000-74,999 tons	13	229.2	9	133.1	0	0	0	0	17	362.2
75,000-99,999 tons	4	47.3	4	71.0	0	0	0	0	4	118.3
100,000 tons and more	43	650.5	39	2,242.7	0	0	1	8.9	43	2,902.1
Total	72	1,002.4	55	2,454.2	0	0	1	8.9	76	3,465.4
All forms of ownership:										
Less than 1,000 tons	8	1.5	0	0	0	0	0	0	8	1.5
1,000-9,999 tons	50	94.1	0	0	0	0	1	5.9	54	100.0
10,000-24,999 tons	27	142.6	23	76.5	0	0	0	0	34	219.1
25,000-49,999 tons	38	473.8	8	37.3	0	0	4	37.3	42	548.3
50,000-74,999 tons	36	582.5	16	195.9	0	0	4	51.3	40	829.7
75,000-99,999 tons	35	758.7	20	309.3	0	0	0	0	35	1,067.9
100,000 tons and more	105	1,792.9	108	6,093.6	4	5.9	9	44.0	116	7,936.3
Total	298	3,846.0	174	6,712.5	4	5.9	18	138.5	329	10,702.8

Table 76--Delta region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
Corporation:										
Less than 1,000 tons	3	1.7	0	0	0	0	0	0	3	1.7
1,000-9,999 tons	30	71.7	5	20.7	0	0	3	1.9	35	94.3
10,000-24,999 tons	5	28.4	3	21.7	3	18.4	0	0	8	68.6
25,000-49,999 tons	22	255.5	19	282.7	0	0	3	19.2	25	557.3
50,000-74,999 tons	22	596.3	11	163.1	3	46.6	0	0	22	806.0
75,000-99,999 tons	0	0	3	137.2	0	0	0	0	3	137.2
100,000 tons and more	19	1,328.8	30	3,080.6	0	0	3	249.8	35	4,659.2
Total	101	2,282.5	71	3,706.0	5	65.0	8	270.8	131	6,324.3
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	4	14.6	0	0	0	0	0	0	4	14.6
10,000-24,999 tons	4	16.2	0	0	0	0	0	0	4	16.2
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	8	30.9	0	0	0	0	0	0	8	30.9
Single owner:										
Less than 1,000 tons	2	0.4	0	0	0	0	0	0	2	0.4
1,000-9,999 tons	7	8.5	0	0	0	0	0	0	7	8.5
10,000-24,999 tons	2	16.9	0	0	0	0	0	0	2	16.9
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	2	152.5	0	0	0	0	2	152.5
100,000 tons and more	2	33.9	2	220.2	0	0	0	0	2	254.1
Total	13	59.7	4	372.7	0	0	0	0	15	432.4
Farmer cooperative:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	13	14.4	2	1.6	0	0	2	1.6	13	17.6
10,000-24,999 tons	5	40.4	0	0	0	0	0	0	5	40.4
25,000-49,999 tons	5	66.3	4	56.6	0	0	0	0	5	122.9
50,000-74,999 tons	3	63.2	2	42.1	0	0	0	0	3	105.4
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	2	316.1	0	0	0	0	3	316.1
Total	26	184.3	9	416.5	0	0	2	1.6	29	602.4
All forms of ownership:										
Less than 1,000 tons	5	2.1	0	0	0	0	0	0	5	2.1
1,000-9,999 tons	54	109.1	7	22.3	0	0	4	3.5	59	135.0
10,000-24,999 tons	16	102.0	3	21.7	3	18.4	0	0	19	142.2
25,000-49,999 tons	27	321.8	23	339.3	0	0	3	19.2	30	680.3
50,000-74,999 tons	25	659.6	13	205.2	3	46.6	0	0	25	911.3
75,000-99,999 tons	0	0	5	289.7	0	0	0	0	5	289.7
100,000 tons and more	21	1,362.7	33	3,617.0	0	0	3	249.8	40	5,229.4
Total	148	2,557.4	84	4,495.2	5	65.0	10	272.4	183	7,390.0

Table 77--Southern Plains region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
Corporation:										
Less than 1,000 tons	9	2.4	0	0	0	0	4	0	13	2.4
1,000-9,999 tons	97	186.0	21	24.1	4	4.4	8	6.6	97	221.1
10,000-24,999 tons	46	318.2	21	106.9	0	0	4	24.3	50	449.4
25,000-49,999 tons	55	581.4	34	308.0	8	14.3	4	51.0	59	954.6
50,000-74,999 tons	29	791.9	12	204.0	4	7.3	0	0	29	1,003.2
75,000-99,999 tons	29	780.4	21	587.6	4	11.8	0	0	29	1,379.7
100,000 tons and more	80	3,936.8	59	4,439.5	21	352.8	13	253.8	97	8,982.9
Total	344	6,597.1	168	5,670.2	42	390.5	34	335.6	374	12,993.4
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	9	13.0	2	6.5	0	0	0	0	9	19.5
10,000-24,999 tons	13	107.0	0	0	0	0	0	0	13	107.0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	4	133.7	0	0	0	0	0	0	4	133.7
75,000-99,999 tons	4	182.4	0	0	0	0	0	0	4	182.4
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	30	436.0	2	6.5	0	0	0	0	30	442.5
Single owners:										
Less than 1,000 tons	4	0.5	0	0	0	0	2	0.3	4	0.8
1,000-9,999 tons	41	59.4	2	21.4	0	0	2	7.1	45	87.9
10,000-24,999 tons	9	68.4	0	0	0	0	0	0	9	68.4
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	4	195.3	0	0	0	0	2	9.8	4	205.1
100,000 tons and more	4	305.2	0	0	0	0	0	0	4	305.2
Total	62	628.8	2	21.4	0	0	7	17.2	66	667.4
Farmer cooperative:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	13	39.2	2	4.9	0	0	0	0	17	44.1
10,000-24,999 tons	13	73.4	2	12.2	0	0	0	0	13	85.7
25,000-49,999 tons	17	244.7	5	134.6	2	12.2	0	0	17	391.6
50,000-74,999 tons	4	96.8	2	50.0	0	0	0	0	4	146.8
75,000-99,999 tons	4	58.7	2	117.5	2	19.6	2	2.4	4	198.2
100,000 tons and more	4	856.6	0	0	0	0	0	0	4	856.6
Total	55	1,369.5	15	319.2	5	31.8	2	2.4	59	1,723.0
All forms of ownership:										
Less than 1,000 tons	13	2.9	0	0	0	0	7	0	17	3.2
1,000-9,999 tons	159	297.5	28	56.8	4	4.4	11	13.7	168	372.5
10,000-24,999 tons	81	567.0	23	119.1	0	0	4	24.3	85	710.4
25,000-49,999 tons	72	826.1	39	442.6	11	26.5	4	51.0	76	1,346.2
50,000-74,999 tons	37	1,022.5	15	254.1	4	7.3	0	0	37	1,283.8
75,000-99,999 tons	41	1,216.8	23	705.1	7	31.3	5	12.2	41	1,965.4
100,000 tons and more	88	5,098.6	59	4,439.5	21	352.8	13	253.8	105	10,144.7
Total	491	9,031.5	187	6,017.3	47	422.4	44	355.3	529	15,826.3

Table 78--Mountain region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity 1,000 tons
	Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons	Dry		Liquid			
					Manufacturers	Capacity 1,000 tons	Manufacturers	Capacity 1,000 tons		
Corporation:										
Less than 1,000 tons	10	4.0	0	0	0	0	0	0	10	4.0
1,000-9,999 tons	59	204.9	35	67.3	0	0	5	1.4	69	273.6
10,000-24,999 tons	24	239.5	24	215.6	10	51.9	0	0	39	507.0
25,000-49,999 tons	44	832.2	22	185.8	5	38.7	11	162.6	49	1,219.2
50,000-74,999 tons	35	732.4	29	563.3	12	72.4	0	0	35	1,368.1
75,000-99,999 tons	15	639.8	5	313.9	0	0	0	0	15	953.7
100,000 tons and more	3	1,729.5	0	0	2	302.5	0	0	5	2,032.1
Total	190	4,382.3	115	1,345.9	29	465.6	16	164.0	222	6,357.8
Partnership:										
Less than 1,000 tons	6	2.0	0	0	0	0	0	0	6	2.0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	6	70.0	0	0	0	0	0	0	6	70.0
25,000-49,999 tons	0	0	6	148.2	0	0	0	0	6	148.2
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	12	72.0	6	148.2	0	0	0	0	18	220.2
Single owner:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	7	33.8	0	0	0	0	0	0	7	33.8
10,000-24,999 tons	7	55.0	0	0	0	0	0	0	7	55.0
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	14	88.8	0	0	0	0	0	0	14	88.8
Farmer cooperative:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	5	26.3	0	0	0	0	0	0	5	26.3
10,000-24,999 tons	31	227.2	26	201.9	5	15.1	10	55.5	36	499.8
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	5	263.1	0	0	0	0	0	0	5	263.1
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	5	789.2	0	0	0	0	0	0	5	789.2
Total	46	1,305.7	26	201.9	5	15.1	10	55.5	51	1,578.4
All forms of ownership:										
Less than 1,000 tons	16	6.0	0	0	0	0	0	0	16	6.0
1,000-9,999 tons	71	265.0	35	67.3	0	0	5	1.4	81	333.8
10,000-24,999 tons	68	591.7	51	417.5	15	67.0	10	55.5	88	1,131.8
25,000-49,999 tons	44	832.2	28	334.0	5	38.7	11	162.6	55	1,367.4
50,000-74,999 tons	40	995.4	29	563.3	12	72.4	0	0	40	1,631.2
75,000-99,999 tons	15	639.8	5	313.9	0	0	0	0	15	953.7
100,000 tons and more	8	2,518.7	0	0	2	302.5	0	0	10	2,821.3
Total	262	5,848.9	147	1,696.0	34	480.7	26	219.5	305	8,245.1

Table 79--Pacific region: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
Corporation:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	12	13.8	8	46.2	4	1.8	0	0	12	61.8
10,000-24,999 tons	16	138.2	13	101.9	0	0	3	3.6	16	243.7
25,000-49,999 tons	21	538.4	8	109.1	0	0	0	0	21	647.6
50,000-74,999 tons	8	373.3	4	92.4	0	0	0	0	8	465.7
75,000-99,999 tons	12	593.0	8	276.5	0	0	4	18.2	12	887.7
100,000 tons and more	41	5,263.6	32	4,627.1	0	0	5	113.7	45	10,004.6
Total	110	6,920.6	73	5,253.2	4	1.8	12	135.5	114	12,311.2
Partnership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	6	20.7	0	0	0	0	6	20.7
10,000-24,999 tons	6	69.0	0	0	0	0	0	0	6	69.0
25,000-49,999 tons	6	331.1	0	0	0	0	0	0	6	331.1
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	12	400.1	6	20.7	0	0	0	0	18	420.8
Single owner:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	0	0	0	0	0	0	0	0	0	0
10,000-24,999 tons	4	79.3	0	0	0	0	0	0	4	79.3
25,000-49,999 tons	0	0	0	0	0	0	0	0	0	0
50,000-74,999 tons	0	0	0	0	0	0	0	0	0	0
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	4	3,569.1	0	0	0	0	4	3,569.1
Total	4	79.3	4	3,569.1	0	0	0	0	8	3,648.4
Farmer cooperative:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	5	4.6	5	4.6	0	0	0	0	5	9.2
10,000-24,999 tons	5	45.8	0	0	0	0	0	0	5	45.8
25,000-49,999 tons	11	45.8	16	160.2	0	0	0	0	16	206.0
50,000-74,999 tons	5	57.2	5	57.2	0	0	0	0	5	114.4
75,000-99,999 tons	0	0	0	0	0	0	0	0	0	0
100,000 tons and more	0	0	0	0	0	0	0	0	0	0
Total	26	153.3	26	222.0	0	0	0	0	31	375.3
All forms of ownership:										
Less than 1,000 tons	0	0	0	0	0	0	0	0	0	0
1,000-9,999 tons	17	18.4	19	71.4	4	1.8	0	0	23	91.7
10,000-24,999 tons	31	332.3	13	101.9	0	0	3	3.6	31	437.8
25,000-49,999 tons	38	915.3	24	269.3	0	0	0	0	43	1,184.6
50,000-74,999 tons	13	430.5	9	149.6	0	0	0	0	13	580.1
75,000-99,999 tons	12	593.0	8	276.5	0	0	4	18.2	12	887.7
100,000 tons and more	41	5,263.8	36	4,196.2	0	0	5	113.7	49	13,573.7
Total	151	7,553.3	109	9,065.0	4	1.8	12	135.5	171	16,755.6

Table 80--United States: Annual rated capacity by type of mill, form of ownership, and capacity size, 1984

Form of ownership and capacity size	Meal		Pellets		Blocks				Total manufacturers	Total capacity
	Manufacturers	Capacity	Manufacturers	Capacity	Dry		Liquid			
					Manufacturers	Capacity	Manufacturers	Capacity		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons
Corporation:										
Less than 1,000 tons	163	35.9	25	10.1	4	1.5	16	1.5	168	48.9
1,000-9,999 tons	1,178	3,071.1	261	398.4	33	11.6	60	36.2	1,227	3,517.3
10,000-24,999 tons	837	6,511.3	373	2,077.6	40	114.3	42	99.1	907	8,802.2
25,000-49,999 tons	565	7,692.2	379	3,783.4	31	89.3	73	627.8	604	12,192.7
50,000-74,999 tons	317	7,165.6	238	3,798.3	40	250.2	30	481.2	329	11,695.4
75,000-99,999 tons	229	6,967.5	179	4,706.0	8	34.4	24	455.7	240	12,164.6
100,000 tons and more	358	31,130.9	364	38,081.9	49	948.8	67	1,416.3	458	71,577.9
Total	3,647	62,574.5	1,818	52,855.6	207	1,450.2	312	3,118.8	3,933	119,999.1
Partnership:										
Less than 1,000 tons	21	6.0	0	0	0	0	0	0	21	6.0
1,000-9,999 tons	130	281.4	23	34.7	0	0	0	0	136	316.1
10,000-24,999 tons	66	588.9	14	49.6	0	0	0	0	66	638.5
25,000-49,999 tons	19	512.8	6	148.2	0	0	5	16.1	25	677.1
50,000-74,999 tons	4	133.7	0	0	0	0	0	0	4	133.7
75,000-99,999 tons	4	182.4	0	0	0	0	0	0	4	182.4
100,000 tons and more	13	392.8	8	117.4	0	0	0	0	13	510.2
Total	257	2,098.0	51	349.9	0	0	5	16.1	269	2,464.1
Single owner:										
Less than 1,000 tons	43	8.4	4	0.9	0	0	2	0.3	47	11.1
1,000-9,999 tons	323	807.4	63	64.8	5	8.0	8	14.9	339	895.1
10,000-24,999 tons	160	1,458.8	41	82.2	0	0	8	28.4	164	1,569.5
25,000-49,999 tons	4	92.1	39	46.2	0	0	0	0	7	138.4
50,000-74,999 tons	9	150.9	5	77.2	0	0	0	0	9	228.1
75,000-99,999 tons	11	373.6	6	218.9	0	0	2	9.8	13	602.3
100,000 tons and more	18	893.7	10	3,995.9	0	0	0	0	22	4,889.6
Total	568	3,785.0	168	4,486.1	5	8.0	21	53.4	601	8,334.0
Farmer cooperative:										
Less than 1,000 tons	88	18.7	15	4.1	0	0	0	0	76	22.9
1,000-9,999 tons	711	2,217.3	116	181.5	20	5.7	51	35.7	736	2,440.1
10,000-24,999 tons	501	4,973.6	131	743.1	22	36.2	35	94.6	546	5,847.5
25,000-49,999 tons	249	3,782.5	151	1,417.5	28	53.8	8	29.6	246	5,283.4
50,000-74,999 tons	125	2,764.5	103	1,669.0	13	10.7	8	56.9	129	4,501.1
75,000-99,999 tons	54	1,760.3	44	946.3	6	34.7	5	92.6	54	2,834
100,000 tons and more	112	5,905.5	108	6,750.1	11	104.3	18	209.5	123	12,969
Total	1,840	21,422.5	669	11,711.6	100	245.3	126	518.7	1,910	33,898.2
All forms of ownership:										
Less than 1,000 tons	315	69.0	44	15.1	4	1.5	19	1.8	312	88.9
1,000-9,999 tons	2,342	6,377.2	463	679.4	58	25.3	119	86.7	2,438	7,168.6
10,000-24,999 tons	1,564	13,532.6	559	2,952.5	63	150.5	85	222.1	1,683	16,857.8
25,000-49,999 tons	838	12,079.6	574	5,395.3	59	143.2	86	673.6	882	18,291.6
50,000-74,999 tons	455	10,214.8	346	5,544.5	53	260.9	38	538.1	471	16,558.3
75,000-99,999 tons	298	9,283.8	229	5,871.2	15	69.1	32	559.0	311	15,783.0
100,000 tons and more	501	38,322.9	490	48,945.3	60	1,053.1	85	1,625.8	616	89,947.1
Total	6,312	89,880.0	2,707	69,403.3	312	1,703.5	464	3,707.0	6,713	164,695.3

Table 81--Percent distribution of annual rated capacity by type of mill and capacity size, 1984

Capacity size	Meal		Pellets		Blocks				Total manufac- turers	Total capacity
	Manufac- turers	Capacity	Manufac- turers	Capacity	Dry		Liquid			
					Manufac- turers	Capacity	Manufac- turers	Capacity		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons		
Less than 1,000 tons	315	69.0	44	15.1	4	1.5	19	1.8	312	88.9
1,000-9,999 tons	2,342	6,377.2	463	679.4	58	25.3	119	86.7	2,438	7,168.6
10,000-24,999 tons	1,564	13,532.6	559	2,952.5	63	150.5	85	222.1	1,683	16,857.8
25,000-49,999 tons	838	12,079.6	574	5,395.3	59	143.2	86	673.6	882	18,291.6
50,000-74,999 tons	455	10,214.8	346	5,544.5	53	260.9	38	538.1	471	16,558.3
75,000-99,999 tons	298	9,283.8	229	5,871.2	15	69.1	32	559.0	311	15,783.0
100,000 tons and more	501	38,322.9	490	48,945.3	60	1,053.1	85	1,625.8	616	89,947.1
Total	6,312	89,880.0	2,707	69,403.3	312	1,703.5	464	3,707.0	6,713	164,695.3
Percent distribution (column)										
Less than 1,000 tons	5.0	0.1	1.6	1/	1.4	0.1	4.0	1/	4.6	0.1
1,000-9,999 tons	37.1	7.1	17.1	1.0	18.5	1.5	25.6	2.3	36.3	4.4
10,000-24,999 tons	24.8	15.1	20.7	4.3	20.1	8.8	18.3	6.0	25.1	10.2
25,000-49,999 tons	13.3	13.4	21.2	7.8	19.0	8.4	18.5	18.2	13.1	11.1
50,000-74,999 tons	7.2	11.4	12.8	8.0	17.0	15.3	8.2	14.5	7.0	10.1
75,000-99,999 tons	4.7	10.3	8.5	8.5	4.7	4.1	6.9	15.1	4.6	9.6
100,000 tons and more	7.9	42.6	18.1	70.5	19.4	61.8	18.4	43.9	9.2	54.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Less than .1 percent.

Table 82--Percent distribution of annual rated capacity by type of mill and form of ownership, 1984

Form of ownership	Meal		Pellets		Blocks				Total manufac- turers	Total capacity 1,000 tons
	Manufac- turers	Capacity	Manufac- turers	Capacity	Dry		Liquid			
					Manufac- turers	Capacity	Manufac- turers	Capacity		
	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons	Number	1,000 tons		
Corporation	3,647	62,574.5	1,818	52,855.6	207	1,450.2	312	3,118.8	3,933	119,999.1
Partnership	257	2,098.0	51	349.9	0	0	5	16.1	269	2,464.1
Single owner	568	3,785.0	168	4,486.1	5	8.0	21	53.4	601	8,334.0
Farmer cooperative	1,840	21,422.5	669	11,711.6	100	245.3	126	518.7	1,910	33,898.2
Total	6,312	89,880.0	2,707	69,403.3	312	1,703.5	464	3,707.0	6,713	164,695.3
Percent distribution (column)										
Corporation	57.8	69.6	67.2	76.2	66.4	85.1	67.3	84.1	58.6	72.9
Partnership	4.1	2.3	1.9	0.5	0.0	0.0	1.1	0.4	4.0	1.5
Single owner	9.0	4.2	6.2	6.5	1.5	0.5	4.5	1.4	9.0	5.1
Farmer cooperative	29.1	23.8	24.7	16.9	32.1	14.4	27.2	14.0	28.5	20.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 83--Dry formula feed: Utilization of annual rated capacity by form of ownership and capacity size, by region, 1984

Form of ownership and capacity size	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-States
	Percent										
Corporation:											
Less than 1,000 tons	123.7	86.4	98.4	2.1	83.5	65.5	29.6	151.4	68.2	0.0	17.2
1,000-9,999 tons	87.9	68.9	82.6	125.0	128.7	60.8	77.9	115.7	120.7	93.3	91.2
10,000-24,999 tons	88.4	58.6	69.0	54.8	56.1	49.6	80.6	85.3	84.9	301.5	72.6
25,000-49,999 tons	78.8	65.9	74.9	65.5	70.1	77.5	79.5	112.2	91.6	87.7	76.8
50,000-74,999 tons	84.6	62.8	66.2	82.0	80.3	64.9	76.6	77.6	76.5	76.6	72.3
75,000-99,999 tons	64.2	80.3	78.4	72.5	88.6	77.4	115.0	83.1	59.7	64.4	74.8
100,000 tons and more	89.8	87.4	66.4	35.4	84.4	90.7	78.3	89.2	56.0	67.5	70.5
Total	85.3	71.0	71.6	49.1	82.7	84.4	79.0	90.2	72.9	73.4	72.6
Partnership:											
Less than 1,000 tons	0.0	0.0	143.5	0.0	12.4	0.0	0.0	0.0	20.0	0.0	0.0
1,000-9,999 tons	55.9	77.4	54.9	22.4	56.2	97.0	23.7	65.2	0.0	51.4	61.8
10,000-24,999 tons	49.5	75.6	43.0	110.4	57.8	0.0	74.5	103.0	92.4	32.3	73.1
25,000-49,999 tons	72.8	0.0	10.3	14.5	0.0	0.0	0.0	0.0	42.8	38.0	34.8
50,000-74,999 tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0	104.6	0.0	0.0	101.4
75,000-99,999 tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0	175.2	0.0	0.0	196.1
100,000 tons and more	0.0	0.0	0.0	102.1	0.0	0.0	0.0	0.0	0.0	0.0	72.7
Total	61.1	76.4	32.0	89.2	57.2	87.4	50.5	131.6	58.4	37.7	75.5
Single owner:											
Less than 1,000 tons	81.8	142.3	81.2	173.5	20.5	0.0	76.3	61.1	0.0	0.0	85.6
1,000-9,999 tons	83.4	64.4	61.4	48.1	46.1	91.0	59.4	70.1	9.2	0.0	59.8
10,000-24,999 tons	50.4	62.5	42.9	25.5	15.7	0.0	7.8	25.5	9.9	65.6	48.1
25,000-49,999 tons	84.8	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.2
50,000-74,999 tons	0.0	0.0	70.4	0.0	0.0	82.8	0.0	0.0	0.0	0.0	74.4
75,000-99,999 tons	37.7	0.0	0.0	0.0	0.0	23.1	80.1	98.5	0.0	0.0	62.7
100,000 tons and more	0.0	99.7	0.0	0.0	2.1	51.7	160.7	109.2	0.0	72.1	0.0
Total	53.8	70.1	53.1	31.0	18.0	49.2	124.3	92.3	9.6	72.0	68.3
Farmer cooperative:											
Less than 1,000 tons	88.2	25.2	80.6	126.1	152.2	0.0	0.0	0.0	0.0	0.0	93.6
1,000-9,999 tons	74.5	142.2	97.1	82.0	94.2	23.7	659.8	67.6	100.6	309.7	113.6
10,000-24,999 tons	64.9	85.2	43.9	73.2	39.9	40.7	11.3	37.6	64.9	178.9	64.5
25,000-49,999 tons	72.9	89.2	79.5	58.4	77.1	23.4	91.1	74.2	0.0	119.9	79.2
50,000-74,999 tons	88.8	66.8	27.4	64.3	87.4	315.4	81.7	68.4	87.8	114.6	79.5
75,000-99,999 tons	70.9	71.9	25.2	48.0	62.7	105.2	0.0	54.2	0.0	0.0	54.6
100,000 tons and more	68.6	0.0	28.0	59.6	91.1	86.7	78.1	100.9	54.7	0.0	64.3
Total	72.8	91.4	44.4	59.7	86.6	109.9	93.9	82.7	64.0	130.1	70.7
All forms of ownership:											
Less than 1,000 tons	95.3	109.0	96.0	6.1	99.9	65.5	47.4	143.0	52.5	0.0	27.5
1,000-9,999 tons	79.3	97.4	85.8	99.5	92.1	64.9	146.6	96.6	107.8	105.5	93.5
10,000-24,999 tons	73.8	69.3	57.5	62.1	51.6	48.5	51.5	76.5	73.0	203.5	67.6
25,000-49,999 tons	77.3	75.3	75.2	61.9	72.3	72.4	81.6	101.1	86.3	79.4	75.6
50,000-74,999 tons	79.7	63.7	52.4	78.6	81.2	175.8	77.2	79.4	78.3	84.1	74.5
75,000-99,999 tons	69.6	77.8	68.4	69.6	80.5	85.7	96.6	93.8	59.7	64.4	72.7
100,000 tons and more	83.3	89.1	50.5	38.1	84.1	86.5	82.3	90.8	55.6	68.7	69.9
Total	79.8	77.1	61.5	51.5	81.2	91.6	82.8	90.6	70.2	73.5	72.0

Table 84--Computerized automation by form of ownership and share of manufacturers, 1984 and 1975

Computerized automation practices	Corporation		Partnership		Single owner		Farmer cooperative		Total	
	1984	1975	1984	1975	1984	1975	1984	1975	1984	1975
	Percent									
Pelleting	5.3	2.8	3.2	1.6	2.7	0.7	4.2	1.3	4.7	2.1
Mixing	17.5	8.2	4.8	3.2	9.4	6.0	15.9	7.0	15.8	7.4
Ingredient storage	6.6	2.5	6.5	3.2	3.4	0.7	7.0	5.3	6.4	3.2
Finished product storage	4.7	1.5	4.8	1.6	3.4	0.7	5.1	3.0	4.7	1.8
Shipping	6.9	2.2	6.5	3.2	2.0	0.7	5.3	2.8	6.0	2.3
Formulation	34.3	16.6	17.7	8.1	10.1	4.7	23.8	10.0	28.4	13.3
Purchasing	12.8	4.7	6.5	1.6	5.4	1.3	10.2	3.2	11.1	3.8
Energy management	4.0	0.8	3.2	1.6	1.3	0.0	4.5	0.8	3.8	0.8
Other	5.1	1.4	3.2	1.6	4.0	0.7	3.6	0.8	4.5	1.2

Table 85--Shifts operated by feed manufacturers, by region and State, 1984

Region and State	Total manufacturers	Shifts operated		
		One	Two	Three
		Number		
Northeast:				
Connecticut	9	0	5	5
Delaware	13	4	4	4
Maine	8	3	5	0
Maryland	60	44	16	0
Massachusetts	4	2	2	0
New Hampshire	2	0	1	1
New Jersey	12	0	0	12
New York	201	155	43	3
Pennsylvania	276	230	39	7
Vermont	14	2	9	4
Total	599	440	124	35
Lake States:				
Michigan	233	216	17	0
Minnesota	386	328	55	4
Wisconsin	544	498	39	8
Total	1,163	1,041	110	12
Corn Belt:				
Illinois	382	360	22	0
Indiana	395	322	66	7
Iowa	583	483	88	12
Missouri	307	247	47	14
Ohio	316	283	33	0
Total	1,983	1,695	254	33
Northern Plains:				
Kansas	418	372	29	17
Nebraska	300	251	44	4
North Dakota	49	45	4	0
South Dakota	151	129	22	0
Total	918	797	99	21
Appalachian:				
Kentucky	151	128	15	8
North Carolina	177	121	40	16
Tennessee	81	62	12	8
Virginia	111	79	28	4
West Virginia	22	17	6	0
Total	542	406	101	36
Southeast:				
Alabama	84	24	24	36
Florida	69	53	8	8
Georgia	129	81	34	14
South Carolina	46	28	18	0
Total	328	186	84	58
Delta:				
Arkansas	60	48	9	3
Louisiana	44	28	13	3
Mississippi	80	55	18	7
Total	184	131	40	13
Southern Plains:				
Oklahoma	131	92	26	13
Texas	400	313	79	8
Total	531	404	105	21
Mountain:				
Arizona	21	14	7	0
Colorado	94	69	15	10
Idaho	63	63	0	0
Montana	46	38	8	0
Nevada	4	0	4	0
New Mexico	23	17	6	0
Utah	38	38	0	0
Wyoming	14	14	0	0
Total	303	253	40	10
Pacific:				
California	91	51	27	13
Hawaii	3	0	3	0
Oregon	43	32	0	11
Washington	35	18	13	4
Total	172	100	43	29
48-State total	6,723	5,455	1,001	268

Table 36--Employment in feed manufacturing: Employees by type of activity and average per manufacturer, by region and State, 1984

Region and State	Total manufacturers	Type of activity							Average per manufacturer all workers
		Production workers	Maintenance and repair	Warehousing	Truckers	Office and management	Sales and service	All workers	
Number									
Northeast:									
Connecticut	9	144	36	0	194	77	0	450	50.0
Delaware	13	143	30	17	91	61	9	351	27.0
Maine	8	53	13	8	56	27	11	168	21.0
Maryland	60	272	54	47	278	199	32	881	14.7
Massachusetts	4	14	2	0	36	8	8	68	17.0
New Hampshire	2	21	6	15	5	9	2	58	29.0
New Jersey	12	348	72	180	0	108	0	708	59.0
New York	201	841	152	210	539	573	171	2,485	12.4
Pennsylvania	276	1,370	230	289	858	1,281	726	4,754	17.2
Vermont	14	219	56	14	74	58	28	448	32.0
Total	599	3,424	652	781	2,130	2,400	986	10,372	17.3
Lake States:									
Michigan	233	1,421	114	182	313	756	188	2,972	12.8
Minnesota	386	1,275	156	285	561	932	355	3,564	9.2
Wisconsin	544	2,037	374	282	907	1,285	617	5,502	10.1
Total	1,163	4,733	644	748	1,781	2,972	1,160	12,038	10.4
Corn Belt:									
Illinois	382	1,313	183	242	404	995	398	3,535	9.3
Indiana	395	2,004	315	300	614	1,426	432	5,091	12.9
Iowa	583	2,549	447	613	1,196	2,157	1,408	8,370	14.4
Missouri	307	2,214	423	354	642	1,368	409	5,410	17.6
Ohio	316	1,791	224	303	606	1,001	362	4,286	13.6
Total	1,983	9,871	1,592	1,812	3,462	6,947	3,009	26,692	13.5
Northern Plains:									
Kansas	418	1,885	389	297	552	1,158	251	4,531	10.8
Nebraska	300	1,213	260	207	618	891	256	3,446	11.5
North Dakota	49	134	13	36	36	94	31	343	7.0
South Dakota	151	564	47	108	165	345	144	1,373	9.1
Total	918	3,797	709	648	1,370	2,488	682	9,693	10.6
Appalachian:									
Kentucky	151	604	116	194	306	476	77	1,773	11.7
North Carolina	177	897	185	117	555	615	153	2,522	14.3
Tennessee	81	914	239	66	135	536	120	2,010	24.8
Virginia	111	587	79	107	234	345	139	1,491	13.4
West Virginia	22	77	22	50	44	66	22	281	12.8
Total	542	3,079	642	532	1,274	2,039	511	8,076	14.9
Southeast:									
Alabama	84	1,008	216	384	432	450	114	2,604	31.0
Florida	69	325	89	73	235	207	41	970	14.1
Georgia	129	1,007	227	185	381	606	177	2,583	20.0
South Carolina	46	331	83	18	184	193	9	819	17.8
Total	328	2,671	615	661	1,233	1,456	340	6,976	21.3
Delta:									
Arkansas	60	360	60	84	126	180	63	873	14.6
Louisiana	44	434	126	138	211	267	82	1,257	28.6
Mississippi	80	608	89	80	263	219	25	1,285	16.1
Total	184	1,402	275	302	599	667	170	3,415	18.6
Southern Plains:									
Oklahoma	131	900	192	100	166	550	127	2,035	15.5
Texas	400	3,525	650	833	1,067	1,892	738	8,704	21.8
Total	531	4,425	842	934	1,233	2,442	864	10,739	20.2
Mountain:									
Arizona	21	504	196	84	56	154	7	1,001	47.7
Colorado	94	638	109	109	173	322	74	1,425	15.2
Idaho	63	239	50	44	132	176	50	693	11.0
Montana	46	355	25	25	100	167	59	732	15.9
Nevada	4	88	4	8	8	8	4	120	30.0
New Mexico	23	224	40	49	60	98	14	486	21.1
Utah	38	241	57	25	76	120	38	557	14.7
Wyoming	14	35	0	0	14	7	0	56	4.0
Total	303	2,325	482	344	620	1,052	247	5,070	16.7
Pacific:									
California	91	549	233	115	485	324	148	1,854	20.4
Hawaii	3	81	3	9	18	18	6	135	45.0
Oregon	43	333	65	86	226	258	108	1,075	25.0
Washington	35	293	53	4	88	114	44	595	17.0
Total	172	1,257	353	214	817	713	306	3,659	21.3
48-State total	6,723	36,983	6,804	6,975	14,518	23,175	8,273	96,728	14.4

Table 87--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Northeast region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	1.3	139	2.6	70
1,000-9,999 tons	2.3	893	6.3	322
10,000-24,999 tons	4.2	1,455	12.7	481
25,000-49,999 tons	6.3	2,097	25.5	519
50,000-74,999 tons	9.3	2,529	30.8	765
75,000-99,999 tons	7.8	3,069	29.2	814
100,000 tons and more	19.7	5,165	60.6	1,681
Total	6.7	3,204	22.0	974
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.9	539	4.8	215
10,000-24,999 tons	1.1	2,295	1.1	2,313
25,000-49,999 tons	8.7	1,054	21.7	425
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	2.4	765	5.8	313
Single owner:				
Less than 1,000 tons	2.3	75	5.1	34
1,000-9,999 tons	2.8	583	7.9	206
10,000-24,999 tons	3.4	1,083	9.7	382
25,000-49,999 tons	31.6	413	69.3	189
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	1.1	9,578	2.2	4,826
100,000 tons and more	NA	NA	NA	NA
Total	4.2	726	10.7	283
Farmer cooperative:				
Less than 1,000 tons	1.3	206	14.6	18
1,000-9,999 tons	2.0	763	7.5	203
10,000-24,999 tons	2.5	1,689	10.2	405
25,000-49,999 tons	4.8	2,340	15.4	735
50,000-74,999 tons	7.6	3,146	16.1	1,474
75,000-99,999 tons	10.1	2,688	15.2	1,776
100,000 tons and more	15.4	3,032	37.2	1,252
Total	5.5	2,486	15.1	902
All forms of ownership:				
Less than 1,000 tons	1.6	135	8.0	28
1,000-9,999 tons	2.2	749	6.7	248
10,000-24,999 tons	3.4	1,470	11.1	447
25,000-49,999 tons	6.9	1,826	24.2	520
50,000-74,999 tons	8.3	2,854	22.3	1,061
75,000-99,999 tons	8.0	2,968	21.7	1,099
100,000 tons and more	17.8	4,371	50.5	1,544
Total	5.7	2,700	17.3	891

NA = No data available.

Table 88--Labor: Production employees and all employees, average per manufacturer, and output per employee, by form of ownership and capacity size, Lake States region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	2.6	133	5.4	64
1,000-9,999 tons	2.7	1,068	6.1	472
10,000-24,999 tons	3.0	2,394	8.0	908
25,000-49,999 tons	7.7	2,375	17.1	1,075
50,000-74,999 tons	8.3	3,929	27.7	1,185
75,000-99,999 tons	10.0	6,065	40.6	1,491
100,000 tons and more	9.3	12,655	29.2	4,042
Total	4.1	3,196	11.1	1,183
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.9	1,289	3.2	770
10,000-24,999 tons	1.6	8,305	4.2	3,173
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.9	2,337	3.4	1,287
Single owner:				
Less than 1,000 tons	2.7	133	3.2	113
1,000-9,999 tons	1.7	1,642	3.3	867
10,000-24,999 tons	5.0	1,472	8.9	831
25,000-49,999 tons	2.1	1,590	6.3	540
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	36.4	2,572	86.2	1,087
Total	4.1	1,747	7.9	896
Farmer cooperative:				
Less than 1,000 tons	1.6	39	8.4	8
1,000-9,999 tons	2.7	2,301	7.3	841
10,000-24,999 tons	3.2	3,386	9.1	1,211
25,000-49,999 tons	6.2	4,198	17.5	1,487
50,000-74,999 tons	38.9	903	71.8	489
75,000-99,999 tons	2.7	22,950	9.5	6,494
100,000 tons and more	NA	NA	NA	NA
Total	4.3	2,745	11.0	1,073
All forms of ownership:				
Less than 1,000 tons	2.5	124	5.5	55
1,000-9,999 tons	2.5	1,628	6.0	682
10,000-24,999 tons	3.3	2,615	8.4	1,039
25,000-49,999 tons	6.8	3,111	16.8	1,260
50,000-74,999 tons	15.7	2,127	38.3	871
75,000-99,999 tons	8.0	7,628	32.0	1,899
100,000 tons and more	14.5	7,827	40.0	2,830
Total	4.1	2,842	10.4	1,117

NA = No data available.

Table 89--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Corn Belt region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	1.5	209	6.0	52
1,000-9,999 tons	2.3	938	6.8	324
10,000-24,999 tons	3.5	1,883	11.1	588
25,000-49,999 tons	6.3	2,446	17.2	902
50,000-74,999 tons	11.5	2,055	28.6	828
75,000-99,999 tons	17.2	2,367	49.4	825
100,000 tons and more	19.9	3,448	47.6	1,440
Total	5.6	2,209	15.7	792
Partnership:				
Less than 1,000 tons	2.1	198	3.7	114
1,000-9,999 tons	2.9	461	3.9	343
10,000-24,999 tons	2.8	2,376	8.1	824
25,000-49,999 tons	0.9	2,199	4.5	458
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	2.3	786	4.4	420
Single owner:				
Less than 1,000 tons	1.7	107	4.2	43
1,000-9,999 tons	1.7	868	3.0	487
10,000-24,999 tons	1.6	2,344	4.3	861
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	4.7	4,667	21.6	1,012
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.7	1,531	4.1	656
Farmer cooperative:				
Less than 1,000 tons	1.6	267	5.2	79
1,000-9,999 tons	2.6	1,310	7.7	437
10,000-24,999 tons	3.8	1,435	10.0	543
25,000-49,999 tons	7.0	2,727	18.9	1,017
50,000-74,999 tons	4.9	3,337	15.5	1,046
75,000-99,999 tons	7.8	3,284	25.0	1,025
100,000 tons and more	33.3	1,871	59.7	1,043
Total	4.8	1,810	12.2	706
All forms of ownership:				
Less than 1,000 tons	1.6	202	5.3	62
1,000-9,999 tons	2.4	1,057	6.6	378
10,000-24,999 tons	3.4	1,756	10.1	587
25,000-49,999 tons	6.4	2,527	17.4	933
50,000-74,999 tons	9.5	2,280	25.0	869
75,000-99,999 tons	16.2	2,414	46.8	837
100,000 tons and more	23.1	2,896	50.5	1,326
Total	5.0	2,063	13.5	763

NA = No data available.

Table 90--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Northern Plains region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	1.1	149	4.1	40
1,000-9,999 tons	2.3	1,476	5.3	638
10,000-24,999 tons	2.9	1,788	7.9	665
25,000-49,999 tons	5.2	2,867	14.0	1,070
50,000-74,999 tons	8.5	3,610	28.7	1,072
75,000-99,999 tons	8.4	4,399	25.8	1,436
100,000 tons and more	18.7	4,322	38.1	2,127
Total	5.2	3,203	13.4	1,246
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	0.8	479	2.5	159
10,000-24,999 tons	2.5	4,717	8.3	1,413
25,000-49,999 tons	0.8	2,205	0.8	2,201
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	4.1	17,967	6.6	11,208
Total	1.9	8,929	4.3	3,961
Single owner:				
Less than 1,000 tons	0.8	419	2.5	140
1,000-9,999 tons	1.6	916	3.6	392
10,000-24,999 tons	1.7	1,277	5.4	392
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.7	861	4.5	335
Farmer cooperative:				
Less than 1,000 tons	2.4	172	4.9	86
1,000-9,999 tons	1.8	1,148	4.3	485
10,000-24,999 tons	3.1	1,813	6.9	807
25,000-49,999 tons	3.3	3,180	10.0	1,038
50,000-74,999 tons	6.7	3,187	19.1	1,113
75,000-99,999 tons	8.3	2,570	20.7	1,026
100,000 tons and more	14.5	2,841	43.5	945
Total	3.0	1,876	7.5	743
All forms of ownership:				
Less than 1,000 tons	1.5	187	4.3	65
1,000-9,999 tons	2.0	1,286	4.7	553
10,000-24,999 tons	2.9	1,836	7.4	732
25,000-49,999 tons	4.3	2,949	12.0	1,063
50,000-74,999 tons	8.1	3,535	26.7	1,078
75,000-99,999 tons	8.4	4,159	25.1	1,391
100,000 tons and more	17.1	4,527	35.7	2,175
Total	4.1	2,873	10.6	1,125

NA = No data available.

Table 91--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Appalachian region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	1.6	126	5.3	39
1,000-9,999 tons	2.6	724	7.8	243
10,000-24,999 tons	3.0	948	9.4	305
25,000-49,999 tons	8.2	988	19.6	413
50,000-74,999 tons	6.7	2,500	19.5	864
75,000-99,999 tons	6.2	4,614	23.3	1,223
100,000 tons and more	17.5	3,252	44.6	1,272
Total	6.7	2,318	18.2	850
Partnership:				
Less than 1,000 tons	2.0	16	2.0	16
1,000-9,999 tons	1.2	772	4.7	202
10,000-24,999 tons	2.2	1,495	6.2	536
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.7	1,084	4.9	376
Single owner:				
Less than 1,000 tons	1.5	27	3.5	12
1,000-9,999 tons	1.8	537	4.5	212
10,000-24,999 tons	2.5	371	4.0	231
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	2.0	428	2.0	427
Total	1.8	454	4.2	200
Farmer cooperative:				
Less than 1,000 tons	1.0	197	7.9	25
1,000-9,999 tons	1.5	529	4.1	190
10,000-24,999 tons	1.0	1,550	7.0	221
25,000-49,999 tons	6.1	1,439	15.5	570
50,000-74,999 tons	17.8	1,357	26.8	901
75,000-99,999 tons	18.3	994	28.8	631
100,000 tons and more	11.7	4,931	26.7	2,169
Total	6.5	2,825	15.2	1,208
All forms of ownership:				
Less than 1,000 tons	1.3	120	6.0	26
1,000-9,999 tons	2.1	670	6.2	230
10,000-24,999 tons	2.7	994	8.1	332
25,000-49,999 tons	7.5	1,103	18.3	454
50,000-74,999 tons	7.7	2,261	20.1	869
75,000-99,999 tons	10.2	2,454	25.2	997
100,000 tons and more	14.9	3,655	37.0	1,476
Total	5.7	2,342	14.9	893

NA = No data available.

Table 92--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Southeast region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	4.7	26	10.9	11
1,000-9,999 tons	4.0	345	10.1	138
10,000-24,999 tons	6.4	499	15.3	207
25,000-49,999 tons	4.8	2,106	13.2	768
50,000-74,999 tons	5.5	2,460	20.1	670
75,000-99,999 tons	10.2	2,307	32.7	716
100,000 tons and more	14.8	4,672	39.5	1,754
Total	8.5	3,083	23.5	1,114
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	0.5	1,714	1.0	859
10,000-24,999 tons	NA	NA	NA	NA
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	4.2	3,839	5.2	3,078
100,000 tons and more	NA	NA	NA	NA
Total	2.5	3,603	3.3	2,708
Single owner:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.6	754	1.6	756
10,000-24,999 tons	NA	NA	NA	NA
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	2.1	7,349	7.3	2,104
75,000-99,999 tons	6.2	1,229	18.7	411
100,000 tons and more	7.3	3,937	18.7	1,534
Total	3.7	2,883	9.5	1,131
Farmer cooperative:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	2.1	126	2.1	127
10,000-24,999 tons	12.5	217	15.5	174
25,000-49,999 tons	1.0	2,910	4.1	729
50,000-74,999 tons	4.6	14,472	12.2	5,511
75,000-99,999 tons	12.5	2,497	34.2	910
100,000 tons and more	12.5	4,696	28.7	2,037
Total	9.4	5,237	21.6	2,285
All forms of ownership:				
Less than 1,000 tons	4.7	26	10.9	11
1,000-9,999 tons	3.0	401	6.9	174
10,000-24,999 tons	6.9	441	14.9	203
25,000-49,999 tons	4.5	2,124	12.3	766
50,000-74,999 tons	4.8	7,634	15.4	2,362
75,000-99,999 tons	8.3	2,623	26.1	836
100,000 tons and more	14.1	4,563	35.2	1,823
Total	8.1	3,671	21.3	1,405

NA = No data available.

Table 93--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Delta region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	3.6	47	3.6	47
1,000-9,999 tons	2.8	742	9.0	234
10,000-24,999 tons	17.7	390	32.4	213
25,000-49,999 tons	7.3	2,435	20.0	888
50,000-74,999 tons	9.2	3,036	23.5	1,192
75,000-99,999 tons	5.4	9,831	17.3	3,048
100,000 tons and more	14.0	7,454	31.1	3,348
Total	8.7	4,374	20.9	1,823
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	2.7	332	4.1	217
10,000-24,999 tons	0.7	4,524	3.4	888
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.7	1,170	6.1	319
Single owner:				
Less than 1,000 tons	2.7	57	6.8	22
1,000-9,999 tons	3.8	188	3.9	185
10,000-24,999 tons	1.3	492	2.7	241
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	10.7	5,705	28.6	2,134
100,000 tons and more	8.0	25,430	13.6	14,979
Total	4.2	7,434	7.7	4,105
Farmer cooperative:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	3.7	2,406	15.5	575
10,000-24,999 tons	4.8	190	10.4	88
25,000-49,999 tons	6.4	3,487	24.0	934
50,000-74,999 tons	12.5	2,298	20.9	1,373
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	10.7	7,691	19.1	4,315
Total	6.2	3,251	17.6	1,146
All forms of ownership:				
Less than 1,000 tons	3.2	51	4.9	33
1,000-9,999 tons	3.1	1,072	9.5	354
10,000-24,999 tons	8.6	428	16.5	222
25,000-49,999 tons	7.1	2,593	20.6	897
50,000-74,999 tons	10.0	2,922	24.2	1,212
75,000-99,999 tons	7.5	7,473	21.8	2,568
100,000 tons and more	13.4	8,005	29.4	3,665
Total	7.6	4,362	18.6	1,791

NA = No data available.

Table 94--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Southern Plains region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	5.8	48.6	10.0	28.2
1,000-9,999 tons	4.4	602.1	8.6	307.3
10,000-24,999 tons	4.8	1,599.0	9.6	800.1
25,000-49,999 tons	7.8	2,314.3	21.4	849.2
50,000-74,999 tons	9.3	2,893.5	22.3	1,203.4
75,000-99,999 tons	12.5	3,358.6	37.1	1,129.1
100,000 tons and more	20.6	4,009.9	51.8	1,593.8
Total	10.2	3,058.3	25.3	1,239.8
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	2.5	502.4	4.6	274.3
10,000-24,999 tons	2.5	4,366.9	5.9	1,872.9
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	3.4	8,316.7	8.4	3,329.2
75,000-99,999 tons	11.8	5,425.8	34.5	1,854.1
100,000 tons and more	NA	NA	NA	NA
Total	4.2	4,614.8	10.6	1,823.0
Single owner:				
Less than 1,000 tons	3.2	48.4	5.3	29.1
1,000-9,999 tons	2.2	609.9	4.5	305.2
10,000-24,999 tons	1.9	1,037.7	6.1	319.5
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	5.3	9,609.7	9.5	5,342.7
100,000 tons and more	10.5	7,924.8	12.6	6,608.9
Total	2.9	3,178.9	5.6	1,644.3
Farmer cooperative:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.0	1,770.3	3.5	506.2
10,000-24,999 tons	2.6	957.7	7.4	333.4
25,000-49,999 tons	6.4	2,655.8	10.6	1,607.0
50,000-74,999 tons	10.5	2,387.9	23.1	1,086.2
75,000-99,999 tons	10.5	2,556.6	32.6	825.3
100,000 tons and more	7.4	29,357.9	8.4	25,707.4
Total	4.6	5,211.4	9.9	2,404.2
All forms of ownership:				
Less than 1,000 tons	5.2	48.6	8.9	28.3
1,000-9,999 tons	3.4	633.7	6.8	315.9
10,000-24,999 tons	3.8	1,722.1	8.4	788.1
25,000-49,999 tons	7.5	2,379.6	19.0	944.2
50,000-74,999 tons	8.4	3,106.8	20.0	1,303.8
75,000-99,999 tons	11.2	3,812.3	32.9	1,301.9
100,000 tons and more	19.7	4,450.1	48.7	1,801.9
Total	8.3	3,241.0	20.2	1,335.5

NA = No data available.

Table 95--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Mountain region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	7.5	37	14.5	19
1,000-9,999 tons	4.6	1,036	9.4	507
10,000-24,999 tons	5.9	1,879	14.3	773
25,000-49,999 tons	5.2	4,876	13.7	1,856
50,000-74,999 tons	21.2	1,642	39.1	892
75,000-99,999 tons	7.0	5,447	12.4	3,069
100,000 tons and more	21.9	3,463	44.5	1,706
Total	8.7	2,411	17.9	1,164
Partnership:				
Less than 1,000 tons	2.5	27	4.2	16
1,000-9,999 tons	NA	NA	NA	NA
10,000-24,999 tons	0.8	12,982	0.8	12,888
25,000-49,999 tons	2.5	4,249	10.0	1,055
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	2.1	3,687	5.3	1,423
Single owner:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.4	312	2.1	207
10,000-24,999 tons	1.4	545	5.0	155
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.5	429	3.9	170
Farmer cooperative:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	29.9	177	63.2	84
10,000-24,999 tons	3.2	2,835	11.0	819
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	4.0	11,598	21.1	2,193
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	12.9	6,672	26.1	3,312
Total	6.8	2,909	18.6	1,070
All forms of ownership:				
Less than 1,000 tons	5.6	35	10.7	18
1,000-9,999 tons	5.9	753	12.1	366
10,000-24,999 tons	4.1	2,302	11.4	831
25,000-49,999 tons	4.9	4,838	13.2	1,783
50,000-74,999 tons	18.8	1,944	36.5	999
75,000-99,999 tons	7.0	5,447	12.4	3,069
100,000 tons and more	19.7	3,991	39.9	1,968
Total	7.7	2,488	16.7	1,141

NA = No data available.

Table 96--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, Pacific region, 1984

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	17.5	277	26.1	185
10,000-24,999 tons	3.9	8,936	9.2	3,825
25,000-49,999 tons	3.5	7,670	11.1	2,438
50,000-74,999 tons	15.8	2,823	38.0	1,176
75,000-99,999 tons	15.3	3,212	34.1	1,438
100,000 tons and more	10.1	16,341	36.7	4,500
Total	9.5	8,331	25.7	3,072
Partnership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	2.2	817	2.9	607
10,000-24,999 tons	0.7	5,122	2.9	1,269
25,000-49,999 tons	0.7	28,816	3.7	5,713
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	1.1	7,278	3.0	2,775
Single owner:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	NA	NA	NA	NA
10,000-24,999 tons	1.1	11,913	2.2	5,904
25,000-49,999 tons	NA	NA	NA	NA
50,000-74,999 tons	NA	NA	NA	NA
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	9.8	65,522	83.7	7,691
Total	6.2	60,161	49.1	7,645
Farmer cooperative:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	1.7	3,267	8.8	648
10,000-24,999 tons	1.7	9,439	6.2	2,673
25,000-49,999 tons	3.8	4,065	9.9	1,567
50,000-74,999 tons	2.6	10,075	9.7	2,724
75,000-99,999 tons	NA	NA	NA	NA
100,000 tons and more	NA	NA	NA	NA
Total	2.9	5,360	8.8	1,743
All forms of ownership:				
Less than 1,000 tons	NA	NA	NA	NA
1,000-9,999 tons	9.6	420	15.6	260
10,000-24,999 tons	3.0	8,228	7.5	3,343
25,000-49,999 tons	3.2	6,754	9.6	2,279
50,000-74,999 tons	10.0	3,503	25.2	1,389
75,000-99,999 tons	15.3	3,212	34.1	1,438
100,000 tons and more	10.1	20,597	40.9	5,080
Total	7.3	9,838	21.2	3,380

NA = No data available.

Table 97--Labor: Production employees and all employees, average per manufacturer and output per employee, by form of ownership and capacity size, United States, 1964

Form of ownership and capacity size	Production employees		All employees	
	Average per manufacturer	Output per employee	Average per manufacturer	Output per employee
	Number	Tons	Number	Tons
Corporation:				
Less than 1,000 tons	2.5	107	6.1	44
1,000-9,999 tons	2.8	925	7.0	376
10,000-24,999 tons	3.7	1,907	10.2	692
25,000-49,999 tons	6.4	2,517	17.8	903
50,000-74,999 tons	10.1	2,611	27.1	977
75,000-99,999 tons	11.4	3,381	34.9	1,107
100,000 tons and more	17.9	4,889	45.4	1,933
Total	6.5	3,055	17.3	1,146
Partnership:				
Less than 1,000 tons	2.0	125	3.1	79
1,000-9,999 tons	2.0	737	4.0	363
10,000-24,999 tons	1.8	4,042	4.8	1,491
25,000-49,999 tons	2.2	4,075	6.8	1,346
50,000-74,999 tons	3.3	8,448	8.2	3,428
75,000-99,999 tons	4.5	7,712	12.9	2,672
100,000 tons and more	10.8	6,903	14.7	5,058
Total	2.3	3,026	5.2	1,314
Single owner:				
Less than 1,000 tons	1.9	100	4.2	47
1,000-9,999 tons	2.0	831	4.1	400
10,000-24,999 tons	3.0	1,571	6.6	701
25,000-49,999 tons	18.3	411	40.8	185
50,000-74,999 tons	3.2	5,872	14.1	1,345
75,000-99,999 tons	5.9	4,663	14.6	1,893
100,000 tons and more	12.8	13,523	37.1	4,665
Total	2.9	3,238	6.9	1,392
Farmer cooperative:				
Less than 1,000 tons	1.5	187	7.8	37
1,000-9,999 tons	2.4	1,512	7.0	523
10,000-24,999 tons	3.2	2,166	8.8	781
25,000-49,999 tons	5.5	3,042	15.1	1,107
50,000-74,999 tons	10.0	2,990	22.2	1,354
75,000-99,999 tons	10.3	2,922	21.7	1,389
100,000 tons and more	16.6	3,846	36.2	1,765
Total	4.7	2,654	12.1	1,038
All forms of ownership:				
Less than 1,000 tons	2.2	121	6.1	43
1,000-9,999 tons	2.6	1,076	6.4	426
10,000-24,999 tons	3.4	1,997	9.2	736
25,000-49,999 tons	6.1	2,616	16.9	945
50,000-74,999 tons	9.9	2,752	25.4	1,074
75,000-99,999 tons	10.7	3,414	31.0	1,181
100,000 tons and more	17.4	4,915	42.8	1,996
Total	5.5	2,963	14.4	1,133

Table 98--Feed ingredients used in primary manufacturing: Quantities of specified feed grains used, by region and State, 1984

Region and State	Corn	Sorghum	Barley	Oats	Wheat	Other	Total
Tons							
Northeast:							
Connecticut	124,593	0	11,085	257	0	0	135,935
Delaware	437,854	0	17,072	339	6,349	113	461,727
Maine	62,263	0	2,411	598	0	0	65,272
Maryland	898,215	0	9,664	9,761	14,477	724	932,842
Massachusetts	49,472	0	890	1,643	0	0	52,006
New Hampshire	33,852	0	0	9,571	85	0	43,508
New Jersey	45,097	0	1,735	46,832	867	0	94,531
New York	561,135	0	10,446	51,652	2,979	5,921	632,133
Pennsylvania	1,120,140	2,338	31,219	56,055	22,604	27,872	1,260,229
Vermont	105,690	0	10,577	19,476	279	1,900	137,922
Total	3,438,313	2,338	95,099	196,183	47,641	36,529	3,816,104
Lake States:							
Michigan	866,956	23	5	26,274	3,830	3,058	900,146
Minnesota	1,469,698	0	19,576	165,033	6,428	17,144	1,677,879
Wisconsin	839,508	0	8,109	82,414	3,922	14,691	948,645
Total	3,176,163	23	27,689	273,721	47,641	36,529	3,526,670
Corn Belt:							
Illinois	672,001	11,651	4,823	54,157	28,634	47,635	818,901
Indiana	1,066,223	2,643	6,055	39,949	33,544	18,266	1,166,682
Iowa	1,190,485	11,075	504	44,962	1,676	68,197	1,316,898
Missouri	989,472	560,173	34,867	25,225	52,162	66,697	1,728,598
Ohio	579,523	806	0	113,015	82,026	57,123	832,494
Total	4,497,704	586,349	46,250	277,308	198,043	257,919	5,863,573
Northern Plains:							
Kansas	821,214	917,558	125,752	30,810	139,719	152,289	2,187,342
Nebraska	987,071	79,932	2,279	35,407	6,866	55,081	1,166,636
North Dakota	44,974	0	92,439	35,024	21,075	3,324	196,836
South Dakota	88,703	15,768	33,175	37,481	4,011	11,315	190,453
Total	1,941,962	1,013,259	253,645	138,723	171,671	222,008	3,741,267
Appalachian:							
Kentucky	276,343	6,687	4,222	24,212	21,698	279	333,440
North Carolina	1,696,757	18,387	19,100	16,777	95,704	2,544	1,849,270
Tennessee	654,125	60,164	149	12,054	16,522	9,664	752,678
Virginia	517,082	245	13,440	10,924	18,500	6,761	566,950
West Virginia	81,359	0	0	21,308	0	0	102,667
Total	3,225,666	85,483	36,910	85,275	152,424	19,247	3,605,006
Southeast:							
Alabama	1,110,272	245,605	706	4,711	41,677	24,747	1,427,719
Florida	820,933	15,145	1,443	23,194	106,687	6,786	974,188
Georgia	2,319,276	72,706	2,169	17,554	93,975	12,831	2,518,512
South Carolina	257,669	434	145	2,935	29,556	390	291,128
Total	4,508,150	333,890	4,463	48,394	271,895	44,755	5,211,546
Delta:							
Arkansas	1,197,284	409,459	0	19,479	40,344	1,910	1,668,476
Louisiana	443,917	149,504	69	25,852	56,608	12,561	688,512
Mississippi	1,014,864	211,371	0	7,160	87,686	30,518	1,351,600
Total	2,656,064	770,334	69	52,492	184,639	44,989	3,708,588
Southern Plains:							
Oklahoma	811,076	358,291	30,113	79,355	293,727	1,374	1,573,935
Texas	2,168,368	2,291,302	83,384	103,183	369,106	222,007	5,237,350
Total	2,979,444	2,649,593	113,497	182,538	662,833	223,381	6,811,285
Mountain:							
Arizona	NA	NA	NA	NA	NA	NA	NA
Colorado	613,223	33,321	111,826	91,277	55,117	6,047	910,809
Idaho	150,035	9,844	364,216	17,957	64,363	270	606,684
Montana	43,011	0	182,765	1,952	11,875	10,547	250,150
Nevada	0	0	472	0	5,855	0	6,327
New Mexico	85,921	148,991	14,352	13,296	68,824	0	331,384
Utah	30,577	66,150	42,355	2,271	23,475	19,985	184,813
Wyoming	NA	NA	NA	NA	NA	NA	NA
Total	922,767	258,306	715,987	126,751	229,509	36,848	2,290,168
Pacific:							
California	4,421,749	343,102	1,199,105	43,978	743,798	106,658	6,858,390
Hawaii	NA	NA	NA	NA	NA	NA	NA
Oregon	164,864	537	142,569	107,098	132,603	15,643	563,314
Washington	320,976	0	148,871	6,559	16,222	1,036	493,665
Total	4,907,589	343,639	1,490,545	157,636	892,623	123,337	7,915,369
48-State total	32,253,821	6,043,214	2,784,154	1,539,021	2,858,919	1,045,543	46,489,576

NA= No data available.

Table 99--Feed ingredients used in primary manufacturing: Quantities of oilseed meal used, by region and State, 1984

Region and State	Soybean meal	Cottonseed meal	Other	Total
		Tons		
Northeast:				
Connecticut	60,115	0	0	60,115
Delaware	131,797	0	0	131,797
Maine	37,781	0	0	37,781
Maryland	241,687	0	18	241,705
Massachusetts	13,117	0	0	13,117
New Hampshire	12,946	0	0	12,946
New Jersey	19,080	0	0	19,080
New York	421,056	4	7,369	428,429
Pennsylvania	619,950	582	12,637	633,169
Vermont	50,886	62	10,073	61,022
Total	1,608,415	649	30,098	1,639,162
Lake States:				
Michigan	355,206	660	5,151	361,018
Minnesota	917,360	1,945	28,853	948,158
Wisconsin	2,369,083	33	69,802	2,438,918
Total	3,641,650	2,638	103,806	3,748,093
Corn Belt:				
Illinois	848,600	4,507	27,578	880,685
Indiana	921,813	8,240	2,171	932,224
Iowa	1,853,698	3,216	79,678	1,936,592
Missouri	700,862	42,277	20,350	763,490
Ohio	467,050	484	4,167	471,701
Total	4,792,024	58,724	133,945	4,984,692
Northern Plains:				
Kansas	294,643	94,028	59,420	448,091
Nebraska	464,165	7,542	88,297	560,004
North Dakota	15,144	0	5,086	20,230
South Dakota	230,857	6	30,653	261,516
Total	1,004,809	101,576	183,456	1,289,841
Appalachian:				
Kentucky	160,496	15,445	60	176,001
North Carolina	709,107	2,309	3,953	715,369
Tennessee	246,084	72,658	0	318,743
Virginia	246,738	5	5,697	252,440
West Virginia	21,308	0	0	21,308
Total	1,383,734	90,417	9,710	1,483,861
Southeast:				
Alabama	458,102	8,700	4,779	471,581
Florida	277,865	12,611	14,584	305,060
Georgia	842,109	33,634	2,391	878,134
South Carolina	106,788	159	0	106,947
Total	1,684,863	55,104	21,754	1,761,722
Delta:				
Arkansas	499,815	27,203	0	527,018
Louisiana	191,745	32,392	0	224,137
Mississippi	398,890	14,233	0	413,123
Total	1,090,449	73,828	0	1,164,278
Southern Plains:				
Oklahoma	218,690	62,811	9,389	290,890
Texas	547,954	366,119	46,717	960,790
Total	766,644	428,930	56,106	1,251,680
Mountain:				
Arizona	NA	NA	NA	NA
Colorado	98,855	49,175	25,942	173,972
Idaho	44,015	7,139	11,737	62,891
Montana	24,044	1,604	76,465	102,112
Nevada	236	850	0	1,086
New Mexico	20,409	33,924	0	54,333
Utah	41,738	3,979	1,581	47,297
Wyoming	NA	NA	NA	NA
Total	229,296	96,671	115,725	441,692
Pacific:				
California	935,090	138,916	10,273	1,084,280
Hawaii	NA	NA	NA	NA
Oregon	29,244	4,134	4,996	38,375
Washington	22,285	0	65,618	87,903
Total	986,619	143,050	80,888	1,210,558
48-State total	17,188,503	1,051,587	735,488	18,975,579

NA= No data available.

Table 100--Feed ingredients used in primary manufacturing: Quantities of grain byproducts used, by region and State, 1984

Region and State	Brewers grains	Distillers grains	Corn gluten meal	Corn gluten feed	Hominy feed	Wheat millfeeds	Soybean millfeeds	Other	Total
Tons									
Northeast:									
Connecticut	13,102	15,727	1,960	15,984	8,979	51,704	0	1,153	108,609
Delaware	0	0	76,297	0	0	4,233	423	0	80,953
Maine	6,343	21,875	337	0	19,029	48,788	0	0	96,373
Maryland	5,741	849	102,542	868	0	47,264	7,708	27,531	192,502
Massachusetts	5,224	3,281	3,694	1,547	2,110	22,031	0	1,315	39,201
New Hampshire	1,334	5,409	165	2,000	3,334	45,307	0	978	58,527
New Jersey	3,469	5,204	3,122	4,336	1,214	20,814	0	0	38,159
New York	41,596	192,976	14,653	80,652	117,514	391,691	19,636	11,956	870,675
Pennsylvania	19,397	47,764	43,625	42,244	17,175	142,137	14,085	38,091	364,518
Vermont	9,467	57,367	3,905	5,784	12,214	118,562	0	11,320	218,620
Total	105,673	350,453	250,300	153,417	181,569	892,530	41,852	92,342	2,068,137
Lake States:									
Michigan	1,990	0	2,604	4,551	0	77,314	16,609	1,733	104,801
Minnesota	6,324	8,674	43,161	2,386	0	163,467	20,383	43,638	288,033
Wisconsin	45,710	13,059	8,983	1,942	10,719	240,697	12,870	12,021	346,002
Total	54,025	21,733	54,748	8,879	10,719	481,478	49,862	57,392	738,836
Corn Belt:									
Illinois	19,931	33,371	19,776	31,327	11,646	271,664	22,675	57,890	468,280
Indiana	18,004	27,122	24,016	57,189	16,239	381,095	37,826	54,598	616,090
Iowa	7,076	40,206	21,012	14,347	28,681	413,471	73,561	127,834	726,188
Missouri	9,678	17,974	6,777	17,305	6,984	427,488	60,551	82,325	629,081
Ohio	8,710	7,258	9,253	33,435	2,688	186,902	57,865	19,796	325,906
Total	63,400	125,932	80,833	153,603	66,239	1,680,620	252,478	342,443	2,765,545
Northern Plains:									
Kansas	456	4,683	13,585	16,760	0	370,911	24,738	90,620	521,753
Nebraska	0	5,421	3,748	0	2,223	147,724	13,995	67,560	240,670
North Dakota	8,330	0	0	0	0	5,739	0	17,285	31,354
South Dakota	461	814	1,591	2,621	0	136,191	5,686	28,155	175,519
Total	9,247	10,918	18,924	19,382	2,223	660,565	44,418	203,621	969,297
Appalachians:									
Kentucky	6,270	29,927	223	14,420	28,267	203,900	49,413	31,904	364,324
North Carolina	1,397	4,824	62,168	6,444	321	64,849	3,344	8,745	152,093
Tennessee	0	18,326	6,520	7,175	12,129	212,858	13,102	72,129	342,238
Virginia	9,744	14,825	16,244	4,685	16,714	124,569	21,412	1,858	210,051
West Virginia	0	0	0	0	0	0	0	0	0
Total	17,411	67,901	85,156	32,724	57,431	606,176	87,271	114,637	1,068,706
Southeast:									
Alabama	1,009	0	19,692	8,004	0	49,804	11,153	16,618	106,280
Florida	11,751	13,726	10,848	2,775	99,675	50,035	46,466	157,164	392,439
Georgia	74,796	899	77,512	6,952	0	105,804	188,356	31,386	485,703
South Carolina	0	0	4,510	29	0	36,038	4,048	752	45,377
Total	87,556	14,625	112,562	17,760	99,675	241,681	250,022	205,919	1,029,799
Delta:									
Arkansas	0	0	10,928	0	3,607	50,956	13,602	50,256	129,349
Louisiana	0	0	1,878	1,677	0	78,567	15,092	41,199	138,413
Mississippi	3,248	0	1,123	879	0	43,348	156	8,399	57,152
Total	3,248	0	13,929	2,556	3,607	172,872	28,850	99,853	324,914
Southern Plains:									
Oklahoma	3,886	1,360	12,529	5,344	1,511	305,954	13,505	99,221	443,309
Texas	21,555	7,179	52,964	17,564	20,128	352,725	34,150	701,773	1,208,037
Total	25,441	8,538	65,493	22,907	21,639	658,678	47,655	800,994	1,651,346
Mountain:									
Arizona	NA	NA	NA	NA	NA	NA	NA	NA	NA
Colorado	1,147	18,160	200	0	62,635	292,199	0	53,072	427,412
Idaho	0	0	0	0	0	6,490	0	120,028	126,518
Montana	0	0	0	0	0	129,537	632	44,175	174,344
Nevada	0	0	0	0	0	0	0	2,455	2,455
New Mexico	0	1,748	0	0	0	1,226	0	5,809	8,784
Utah	790	0	0	0	0	22,997	0	0	23,787
Wyoming	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	1,938	19,908	200	0	62,635	452,450	632	225,539	763,301
Pacific:									
California	539	8,839	121,648	4,769	24,784	230,293	1,370	162,219	554,461
Hawaii	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oregon	163	112	0	0	224	21,021	0	3,845	25,365
Washington	6,905	3,452	0	0	0	111,855	0	14,845	137,057
Total	7,607	12,404	121,648	4,769	25,008	363,168	1,370	180,910	716,884
48-State total	375,545	632,411	803,792	415,995	530,746	6,210,217	804,410	2,323,648	12,096,765

NA= No data available.

Table 101--Feed Ingredients used in primary manufacturing: Quantities of specified animal proteins used, by region and State, 1984

Region and State	Meat meal tankage	Meat and bone meal	Fish meal	Poultry byproduct meal	Feather meal	Dried milk products	Total
Tons							
Northeast:							
Connecticut	0	3,325	565	8,185	0	216	12,292
Delaware	0	32,524	7,054	22,648	0	0	62,226
Maine	0	407	0	102	0	0	508
Maryland	0	25,514	10,455	51,620	707	373	88,669
Massachusetts	0	2,428	56	0	0	0	2,483
New Hampshire	0	625	50	756	0	0	1,431
New Jersey	0	3,469	347	0	0	347	4,163
New York	17	12,584	1,173	7,757	0	1,212	22,741
Pennsylvania	29,020	46,036	10,695	117,687	3,144	2,102	208,683
Vermont	0	3,486	0	1,598	0	96	5,181
Total	29,036	130,396	30,395	210,352	3,851	4,346	408,377
Lake States:							
Michigan	98	65,322	656	0	2,678	2,899	71,653
Minnesota	42,555	203,325	5,757	1,611	1,297	7,718	262,263
Wisconsin	8,722	84,000	2,891	78	0	18,159	113,851
Total	51,376	352,647	9,304	1,689	3,975	28,776	447,767
Corn Belt:							
Illinois	1,276	168,329	2,000	0	15	15,274	186,894
Indiana	44	223,234	13,762	8,934	2,058	15,527	263,559
Iowa	12,393	456,708	11,357	49	1,766	61,982	544,255
Missouri	20,719	130,968	16,990	19,250	6,784	6,502	201,212
Ohio	75	105,618	978	8,387	6,312	6,667	128,037
Total	34,507	1,084,856	45,087	36,620	16,935	105,951	1,323,957
Northern Plains:							
Kansas	342	101,725	232	3,501	672	4,569	111,041
Nebraska	306,474	120,802	428	9,729	40,070	9,872	487,375
North Dakota	167	2,353	108	0	0	87	2,716
South Dakota	0	72,645	39	0	0	5,267	77,952
Total	306,983	297,525	808	13,230	40,742	19,796	679,083
Appalachian:							
Kentucky	5,044	13,475	58	0	1,115	1,843	21,535
North Carolina	2,597	43,340	55,925	28,607	6,624	4,959	142,051
Tennessee	3	30,970	17,622	24,516	4,523	1,985	79,620
Virginia	547	9,063	9,270	16,884	399	1,053	37,217
West Virginia	0	0	0	0	0	0	0
Total	8,191	96,848	82,875	70,007	12,661	9,841	280,423
Southeast:							
Alabama	0	94,514	47,355	76,994	16,531	0	235,394
Florida	0	28,800	12,148	21,807	577	13	63,345
Georgia	49,362	67,290	46,038	91,334	7,345	1,650	263,020
South Carolina	0	12,345	7,693	10,053	2,053	494	32,638
Total	49,362	202,948	113,234	200,188	26,507	2,158	594,397
Delta:							
Arkansas	0	70,985	21,402	27,012	1,167	115	120,681
Louisiana	0	27,964	24,263	18,411	570	301	71,509
Mississippi	9,368	51,377	69,865	54,471	4,871	228	190,180
Total	9,368	150,326	115,530	99,894	6,608	644	382,370
Southern Plains:							
Oklahoma	0	45,962	11,228	7,009	0	1,054	65,253
Texas	12,066	94,541	31,718	30,251	10,965	754	180,295
Total	12,066	140,502	42,946	37,260	10,965	1,809	245,548
Mountain:							
Arizona	NA	NA	NA	NA	NA	NA	NA
Colorado	0	28,731	0	768	1,721	70	31,290
Idaho	87	18,249	0	0	0	0	18,335
Montana	0	9,814	0	0	0	110	9,924
Nevada	0	0	0	0	0	47	47
New Mexico	0	8,943	0	0	0	0	8,943
Utah	0	8,021	0	1,998	0	56	10,076
Wyoming	NA	NA	NA	NA	NA	NA	NA
Total	87	73,757	0	2,767	1,721	283	78,615
Pacific:							
California	925	403,453	375,432	32,977	136,840	1,657	951,284
Hawaii	NA	NA	NA	NA	NA	NA	NA
Oregon	806	9,959	190	56	0	482	11,493
Washington	0	9,542	0	0	0	242	9,784
Total	1,731	422,954	375,623	33,033	136,840	2,380	972,561
48-State total	502,706	2,952,761	815,802	705,041	260,804	175,984	5,413,098

NA= No data available.

Table 102--Feed ingredients used in primary manufacturing: Quantities of minerals used, by region and State, 1984

Region and State	Calcium	Phosphorus	Salt	Trace minerals	Other	Total
Tons						
Northeast:						
Connecticut	19,270	3,325	1,805	228	95	24,724
Delaware	7,252	2,145	1,778	195	0	11,369
Maine	4,538	813	2,533	358	0	8,242
Maryland	13,596	13,091	5,360	1,832	441	34,321
Massachusetts	4,910	194	757	283	912	7,056
New Hampshire	2,304	464	880	134	17	3,800
New Jersey	278	2,706	867	0	0	3,851
New York	52,267	11,206	19,553	13,638	12,623	109,287
Pennsylvania	66,282	37,836	16,463	6,043	12,176	138,800
Vermont	8,455	3,025	3,646	387	2,358	17,870
Total	179,151	74,806	53,642	23,097	28,622	359,319
Lake States:						
Michigan	52,557	28,681	16,764	4,406	4,495	106,903
Minnesota	66,364	68,432	32,331	4,130	40,438	211,695
Wisconsin	106,859	90,654	45,661	10,671	27,104	280,948
Total	225,780	187,767	94,756	19,207	72,037	599,546
Corn Belt:						
Illinois	100,868	132,330	88,001	21,936	2,517	345,652
Indiana	119,712	88,532	39,569	12,652	2,800	263,266
Iowa	210,183	207,391	117,275	23,327	28,883	587,060
Missouri	64,654	32,922	41,589	3,908	10,667	153,740
Ohio	48,559	27,301	25,505	6,177	6,242	113,784
Total	543,976	488,476	311,939	68,001	51,110	1,463,502
Northern Plains:						
Kansas	138,485	53,277	80,568	12,751	19,578	304,659
Nebraska	108,520	54,553	39,561	5,317	7,783	215,734
North Dakota	2,278	2,174	3,124	158	242	7,976
South Dakota	52,773	26,450	30,506	2,287	12,860	124,876
Total	302,056	136,454	153,759	20,513	40,463	653,245
Appalachian:						
Kentucky	24,916	11,879	11,500	2,120	2,225	52,639
North Carolina	31,110	29,377	11,291	3,683	33,971	109,431
Tennessee	36,720	14,197	17,746	3,856	6,903	79,421
Virginia	25,111	12,098	6,091	1,104	272	44,677
West Virginia	0	0	387	0	0	387
Total	117,857	67,551	47,014	10,762	43,372	286,556
Southeast:						
Alabama	25,504	18,956	8,593	1,317	4,079	58,449
Florida	47,390	13,909	10,477	673	7,716	80,164
Georgia	40,098	38,639	20,416	5,957	10,185	115,295
South Carolina	9,396	4,843	2,035	841	422	17,538
Total	122,388	76,346	41,521	8,787	22,401	271,445
Delta:						
Arkansas	45,622	21,879	14,945	1,424	284	84,154
Louisiana	18,013	7,559	36,799	1,642	1,054	65,066
Mississippi	25,446	9,382	10,374	1,294	938	47,434
Total	89,080	38,820	62,117	4,360	2,276	196,654
Southern Plains:						
Oklahoma	92,711	15,207	30,744	2,941	6,339	147,942
Texas	233,856	76,831	118,005	12,133	52,452	493,276
Total	326,567	92,037	148,749	15,074	58,790	641,217
Mountain:						
Arizona	NA	NA	NA	NA	NA	NA
Colorado	105,984	14,677	36,449	7,109	12,747	176,965
Idaho	33,285	3,537	12,494	216	7,139	56,671
Montana	25,290	7,944	17,135	889	6,991	58,249
Nevada	1,228	1,605	1,133	66	0	4,032
New Mexico	10,556	1,660	4,663	120	0	16,998
Utah	3,779	1,788	4,933	145	9	10,654
Wyoming	NA	NA	NA	NA	NA	NA
Total	180,120	31,212	76,807	8,546	26,886	323,571
Pacific:						
California	119,881	29,287	33,547	8,895	19,494	211,103
Hawaii	NA	NA	NA	NA	NA	NA
Oregon	876	4,076	1,868	179	614	7,612
Washington	14,141	2,279	3,725	1,847	13,809	35,801
Total	135,897	35,642	39,139	10,921	33,916	254,516
48-State total	2,221,872	1,229,110	1,029,443	189,269	379,875	5,049,570

NA= No data available.

Table 103--Feed ingredients used in primary manufacturing: Quantities of other ingredients used, by region and State, 1984

Region and State	Fats	Molasses	Sugar	Dehydrated alfalfa	Sun-cured alfalfa
			Tons		
Northeast:					
Connecticut	1,454	4,766	0	288	0
Delaware	24,241	468	0	0	0
Maine	0	6,672	0	163	0
Maryland	19,945	7,403	3	2,858	0
Massachusetts	240	1,818	0	151	0
New Hampshire	48	4,397	0	3,095	0
New Jersey	347	26,018	35	1,735	0
New York	887	79,247	17	7,514	31
Pennsylvania	19,516	48,197	1,891	19,237	32
Vermont	1,105	23,992	0	4,001	0
Total	67,784	202,978	1,945	39,041	63
Lake States:					
Michigan	8,382	18,005	98	12,399	0
Minnesota	54,539	91,849	726	22,590	6,431
Wisconsin	35,908	59,797	17,663	20,953	8,396
Total	98,828	169,651	18,488	55,942	14,827
Corn Belt:					
Illinois	25,755	32,703	2,060	41,154	2,271
Indiana	45,209	40,146	2,272	45,616	0
Iowa	64,035	115,662	16,417	93,035	1,764
Missouri	55,248	94,372	1,297	36,540	9,108
Ohio	16,129	42,666	694	13,790	11,736
Total	206,376	325,549	22,739	230,135	24,879
Northern Plains:					
Kansas	22,059	100,146	941	85,361	193,420
Nebraska	35,607	36,224	2,393	57,160	17,555
North Dakota	104	5,935	8	991	53,104
South Dakota	4,234	21,246	3,926	15,684	37,954
Total	62,003	163,552	7,269	159,196	302,034
Appalachian:					
Kentucky	2,864	29,865	51	5,914	0
North Carolina	55,439	8,154	275	4,322	742
Tennessee	19,449	26,517	472	7,565	60
Virginia	19,711	16,267	28	6,565	416
West Virginia	0	1,550	0	0	0
Total	97,463	82,352	826	24,365	1,218
Southeast:					
Alabama	75,608	6,708	3	1,607	0
Florida	63,983	62,514	3	5,115	0
Georgia	77,878	42,631	183	10,910	414
South Carolina	9,682	5,117	9	280	489
Total	227,152	116,971	197	17,912	903
Delta:					
Arkansas	69,039	12,759	42	6,514	0
Louisiana	23,737	45,289	5	9,115	0
Mississippi	27,033	22,437	0	6,042	0
Total	119,810	80,485	47	21,672	0
Southern Plains:					
Oklahoma	18,840	39,954	14	78,096	5,279
Texas	204,795	248,033	5,692	97,446	266,339
Total	223,635	287,986	5,706	175,542	271,619
Mountain:					
Arizona	NA	NA	NA	NA	NA
Colorado	4,460	50,817	10	69,999	141,135
Idaho	0	123,230	0	15,815	10,763
Montana	4,197	18,042	9	6,377	63,206
Nevada	38	567	0	0	57,303
New Mexico	2,489	7,348	0	7,333	2,294
Utah	3,626	3,775	4	0	10,628
Wyoming	NA	NA	NA	NA	NA
Total	14,810	203,779	23	99,524	285,330
Pacific:					
California	210,217	128,557	0	15,239	173,862
Hawaii	NA	NA	NA	NA	NA
Oregon	1,774	9,930	60	67	10,916
Washington	7,385	25,730	3	0	15,204
Total	219,375	164,218	64	15,306	199,982
48-State total	1,337,237	1,797,520	57,304	838,636	1,100,855

See footnote at end of table

--Continued

Table 103--Feed ingredients used in primary manufacturing: Quantities of other ingredients used, by region and State, 1984--Continued

Region and State	Liquid whey	Urea	Beet pulp	Citrus pulp	Total
Tons					
Northeast:					
Connecticut	0	360	40	0	6,909
Delaware	0	7	0	0	24,716
Maine	0	81	0	0	6,916
Maryland	0	74	28	0	26,068
Massachusetts	0	0	0	0	2,209
New Hampshire	0	18	402	0	7,960
New Jersey	0	87	867	0	29,088
New York	10	2,269	3,205	352	93,532
Pennsylvania	40	3,086	2,999	169	95,167
Vermont	0	127	3,568	0	32,793
Total	51	6,108	11,109	521	325,358
Lake States:					
Michigan	0	3,695	183	0	42,761
Minnesota	12,055	12,418	4,289	0	204,897
Wisconsin	10,863	5,981	10,781	0	170,343
Total	22,918	22,094	15,253	0	418,002
Corn Belt:					
Illinois	0	12,706	6,105	0	122,754
Indiana	0	9,791	8,607	35	151,675
Iowa	6,317	31,552	9,513	0	338,295
Missouri	177	15,113	61	0	211,915
Ohio	27	5,715	656	0	91,413
Total	6,521	74,877	24,941	35	916,052
Northern Plains:					
Kansas	1,733	52,953	5	0	456,617
Nebraska	0	30,925	1,289	0	181,153
North Dakota	0	550	325	0	61,018
South Dakota	60	9,835	6	0	92,945
Total	1,794	94,263	1,624	0	791,734
Appalachian:					
Kentucky	0	2,062	0	53	40,809
North Carolina	0	299	228	0	69,458
Tennessee	15	2,216	0	0	56,294
Virginia	0	786	2	0	43,774
West Virginia	0	0	0	0	1,550
Total	15	5,363	229	53	211,885
Southeast:					
Alabama	0	490	0	299	84,715
Florida	0	6,453	0	283,581	421,649
Georgia	0	4,562	16	7,267	143,861
South Carolina	0	55	0	0	15,632
Total	0	11,559	16	291,147	665,857
Delta:					
Arkansas	0	685	8	0	89,049
Louisiana	0	5,384	0	0	83,530
Mississippi	0	1,966	0	0	57,479
Total	0	8,035	8	0	230,058
Southern Plains:					
Oklahoma	0	20,121	0	0	162,304
Texas	0	79,139	16,122	1,408	918,974
Total	0	99,260	16,122	1,408	1,081,278
Mountain:					
Arizona	NA	NA	NA	NA	NA
Colorado	0	37,796	2,085	0	306,302
Idaho	2,163	6,707	8,978	0	167,656
Montana	0	9,438	7,559	0	108,829
Nevada	0	94	0	0	58,002
New Mexico	0	391	665	0	20,521
Utah	0	1,090	8,866	0	27,990
Wyoming	NA	NA	NA	NA	NA
Total	2,163	55,516	28,155	0	689,300
Pacific:					
California	1,481	13,355	62,890	0	605,601
Hawaii	NA	NA	NA	NA	NA
Oregon	0	90	5,644	0	28,481
Washington	0	456	22,095	0	70,873
Total	1,481	13,901	90,628	0	704,954
48-State total	34,943	390,976	188,086	293,164	6,034,478

NA= No data available.

Table 104--Feed ingredients used in primary manufacturing: Quantities of vitamins, drugs, premixes, and other microingredients used, by region and State, 1984

Region and State	Vitamins	Drugs	Other micro-ingredients	Flavors	Premixes	Total
Tons						
Northeast:						
Connecticut	196	89	114	0	222	621
Delaware	226	301	0	7	195	728
Maine	2	0	0	0	6	8
Maryland	1,907	699	3,939	1	4,646	11,192
Massachusetts	7	31	0	0	180	219
New Hampshire	27	3	16	0	30	76
New Jersey	0	0	0	0	0	0
New York	6,035	87	8,956	2	7,123	22,203
Pennsylvania	2,755	2,674	719	96	28,991	35,235
Vermont	253	54	55	122	1,605	2,088
Total	11,407	3,938	13,799	229	42,997	72,369
Lake States:						
Michigan	1,335	716	1,246	267	55,254	58,818
Minnesota	4,088	5,611	5,112	389	8,875	24,075
Wisconsin	2,907	1,873	3,479	822	32,612	41,693
Total	8,330	8,201	9,836	1,478	96,742	124,586
Corn Belt:						
Illinois	4,773	6,717	11,465	347	10,430	33,733
Indiana	5,889	1,796	10,105	778	19,136	37,704
Iowa	11,922	13,564	17,057	1,345	19,526	63,412
Missouri	2,228	1,779	5,952	260	19,447	29,665
Ohio	769	1,484	22	27	12,763	15,064
Total	25,581	25,339	44,600	2,756	81,302	179,579
Northern Plains:						
Kansas	1,658	3,736	1,998	221	33,883	41,496
Nebraska	1,732	4,526	944	109	25,017	32,328
North Dakota	300	167	0	12	991	1,470
South Dakota	910	2,911	5,011	60	4,646	13,538
Total	4,600	11,339	7,952	403	64,538	88,832
Appalachian:						
Kentucky	2,073	580	78	11	1,910	4,652
North Carolina	6,388	5,353	4,964	20	4,502	21,228
Tennessee	3,865	3,981	393	36	7,032	15,306
Virginia	713	798	1,216	24	6,539	9,291
West Virginia	0	0	0	0	387	387
Total	13,039	10,711	6,652	91	20,370	50,864
Southeast:						
Alabama	1,284	3,129	63,767	0	582	68,763
Florida	723	429	20,891	16	9,696	31,755
Georgia	4,287	5,818	3,791	45	12,435	26,375
South Carolina	202	379	81	20	1,119	1,801
Total	6,496	9,755	88,530	81	23,832	128,694
Delta:						
Arkansas	1,299	1,481	4,957	15	3,522	11,274
Louisiana	917	1,350	2,077	42	347	4,734
Mississippi	2,487	1,346	11,787	3	909	16,532
Total	4,703	4,177	18,821	60	4,778	32,539
Southern Plains:						
Oklahoma	7,671	2,327	8,929	241	3,799	22,967
Texas	6,669	9,859	6,936	315	144,799	168,578
Total	14,340	12,186	15,866	556	148,598	191,545
Mountain:						
Arizona	NA	NA	NA	NA	NA	NA
Colorado	1,132	2,165	0	5	35,446	38,749
Idaho	454	108	0	0	3,581	4,143
Montana	623	614	2,529	0	9,126	12,892
Nevada	4	9	23	4	66	106
New Mexico	271	29	26	8	540	874
Utah	42	49	0	5	787	883
Wyoming	NA	NA	NA	NA	NA	NA
Total	2,527	2,974	2,578	22	49,546	57,647
Pacific:						
California	6,125	860	111	17	114,115	121,229
Hawaii	NA	NA	NA	NA	NA	NA
Oregon	190	67	22	4	475	759
Washington	735	55	0	0	3,794	4,585
Total	7,051	983	134	22	118,384	126,573
48-State total	98,072	89,603	208,768	5,698	651,087	1,053,228

NA= No data available.

Table 105---Starter-grower and layer-breeder primary feed production: Quantities of feed ingredients used, by region, 1984

Ingredient	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State total
Tons											
Grains:											
Corn	1,158,211	835,318	1,007,835	127,658	822,400	1,232,459	621,288	559,659	131,366	613,963	7,110,157
Sorghum	0	0	18,926	21,313	0	77,265	333,532	224,240	68,106	235,954	979,335
Barley	13,348	1,404	0	892	1,033	0	0	0	6,223	115,775	138,675
Oats	17,933	77,960	76,629	4,257	2,408	0	2,013	466	18,502	3,051	203,219
Wheat	4,646	39,731	2,080	15,725	6,785	47,858	90,524	138,608	47,724	66,616	460,297
Other grain	9,048	105	0	10,672	0	22,177	0	44,823	0	10,521	97,347
Total	1,203,186	954,519	1,105,470	180,518	832,626	1,379,759	1,047,357	967,795	271,922	1,045,880	8,989,030
Oilseed meals:											
Soybean meal	317,570	258,457	132,946	4,573	163,676	381,736	294,869	38,079	27,371	109,902	1,729,178
Cottonseed meal	0	3,511	0	6	37	0	2,255	4,035	172	13,069	23,085
Other oil meals	277	1,720	73	3	0	0	0	0	0	16,512	18,585
Total	317,846	263,688	133,019	4,582	163,713	381,736	297,123	42,114	27,543	139,482	1,770,848
Grain byproducts:											
Brewers grains	3,473	16,642	1,715	0	0	6,834	0	0	0	0	28,664
Distillers grains	19,908	801	730	0	5,091	2,875	0	0	7,088	0	36,494
Corn gluten feed	13,461	1,404	438	0	0	0	0	0	0	0	15,304
Corn gluten meal	123,503	421	4,379	0	0	4,652	2,604	2,591	0	4,068	142,220
Hominy	7,858	0	0	0	0	0	0	0	0	0	7,858
Wheat millfeed	33,746	5,365	36	136	0	0	54	22,862	44,842	38,571	145,612
Soybean millfeed	2,014	260	43,792	0	0	0	0	0	0	0	46,066
Other millfeeds	53,859	632	146	406	0	6,320	19,561	0	1,839	42,151	124,913
Total	257,823	25,525	51,237	542	5,091	20,682	22,219	25,453	53,769	84,791	547,131
Animal proteins:											
Meat meal	14	49	380	40	7	0	0	0	0	0	490
Meat and bone meal	49,844	20,406	8,014	1,182	24,258	30,928	64,159	11,740	9,175	52,235	271,942
Fish meal	600	28	51	0	0	22,837	34,944	0	0	12,977	71,439
Poultry byproduct	72,597	169	0	0	0	76,192	14,461	73	0	0	163,492
Feather meal	2,111	0	0	1	0	0	895	0	0	0	3,007
Dry milk products	0	147	1,058	1	372	0	0	0	0	259	1,838
Total	125,166	20,800	9,503	1,224	24,637	129,958	114,460	11,813	9,175	65,472	512,208
Minerals:											
Calcium	35,752	25,554	21,210	45,718	64,005	40,826	55,543	14,505	10,010	73,532	386,654
Phosphorus	9,499	5,625	4,467	26,479	14,396	20,928	6,755	911	1,107	1,088	
Salt	10,202	8,876	1,504	171	11,631	9,372	6,066	1,039	1,499	3,616	53,976
Trace minerals	3,807	1,046	606	10	1,085	1,210	1,032	84	286	259	9,426
Other minerals	69	11,095	146	58	186	4,943	1,062	15	0	0	17,574
Total	59,329	52,196	27,932	72,436	91,303	77,280	70,458	16,555	12,902	78,495	558,886
Other byproducts:											
Fats	23,799	21	2,956	359	0	38,932	26,140	598	2,127	17,752	112,684
Molasses	11,818	21,123	82,198	4,144	3,590	634	766	10,458	13,284	5,161	153,175
Sugar	11	0	0	0	0	0	0	2,364	0	0	2,376
Alfalfa-dehydrated	487	1,046	1,525	166	974	0	1,694	1,773	7,382	8,391	23,438
Alfalfa-Suncured	0	0	1,314	2,459	0	0	0	22,326	8,925	4,577	39,601
Liquid whey	14	0	0	0	0	0	0	0	0	0	370
Urea	257	147	2,941	8	74	22	0	0	0	356	3,382
Beet pulp	451	744	445	2	0	0	12	0	431	1,500	5,382
Citrus pulp	277	0	44	0	0	0	0	0	259	4,958	6,872
Total	37,113	23,082	91,424	7,139	4,638	39,774	28,613	37,520	32,407	42,695	344,405
Microingredients:											
Vitamins	3,185	857	693	12	661	3,892	1,399	54	228	666	11,646
Drugs	66	632	730	78	193	5,538	811	43	26	76	8,193
Other microingredients	2,629	0	0	4	0	1,468	1,169	58	7	0	5,334
Flavors	0	288	44	1	0	28	0	0	0	5	365
Premixes	335	72,103	24,035	258	20,587	15,859	81	1,419	11,671	2,441	148,788
Total	6,215	73,880	25,502	352	21,441	26,785	3,460	1,574	11,931	3,188	174,327
Total ingredients	2,006,678	1,413,689	1,444,086	266,792	1,143,449	2,055,973	1,583,689	1,102,824	419,650	1,460,004	12,896,834

NA= No data available.

Table 106--Broiler primary feed production: Quantities of feed ingredients used, by region, 1984

Ingredient	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain Pacific	48-State total	
Tons											
Grain:											
Corn	1,095,040	NA	178,130	NA	1,196,303	2,602,606	1,511,421	597,716	NA	135,615	7,316,832
Sorghum	0	NA	356,260	NA	1,271	222,388	397,877	312,439	NA	4,289	1,294,523
Barley	18,538	NA	0	NA	0	0	0	0	NA	0	18,538
Oats	1,126	NA	0	NA	0	0	0	0	NA	0	1,126
Wheat	16,383	NA	0	NA	11,451	110,705	66,919	0	NA	18,340	223,798
Other grain	0	NA	0	NA	0	27	12,182	519	NA	3,985	16,713
Total	1,131,087	NA	534,390	NA	1,209,026	2,935,726	1,988,399	910,674	NA	162,229	8,871,529
Dilseed meals:											
Soybean meal	329,459	NA	178,130	NA	421,536	839,269	580,752	247,470	NA	34,790	2,631,404
Cottonseed meal	19	NA	0	NA	8,959	3,461	0	0	NA	0	12,439
Other oil meals	0	NA	0	NA	0	0	0	0	NA	0	0
Total	329,478	NA	178,130	NA	430,495	842,729	580,752	247,470	NA	34,790	2,643,843
Grain byproducts:											
Brewers grains	19	NA	0	NA	0	0	0	0	NA	0	19
Distillers grains	932	NA	0	NA	0	0	0	0	NA	0	932
Corn gluten feed	155	NA	0	NA	5,118	0	0	3,966	NA	0	9,239
Corn gluten meal	127,877	NA	0	NA	55,232	104,649	9,144	40,950	NA	5,619	343,671
Hominy	0	NA	0	NA	0	0	0	0	NA	0	0
Wheat millfeed	5,823	NA	0	NA	2,214	22,483	2,590	1,169	NA	0	34,278
Soybean millfeed	1,941	NA	0	NA	0	3,693	0	0	NA	0	5,634
Other millfeeds	0	NA	0	NA	14,932	9,008	7,274	15,118	NA	0	46,332
Total	136,942	NA	0	NA	77,495	139,833	19,008	61,203	NA	5,619	440,100
Animal proteins:											
Meat meal	0	NA	0	NA	0	55,633	9,699	0	NA	0	65,332
Meat and bone meal	51,929	NA	3,563	NA	16,068	70,575	74,513	10,237	NA	14,419	241,305
Fish meal	25,996	NA	3,563	NA	60,377	72,623	68,928	25,859	NA	18,228	275,574
Poultry byproduct	54,049	NA	3,563	NA	42,358	126,712	81,774	28,161	NA	1,072	335,689
Feather meal	971	NA	3,563	NA	8,705	15,407	0	8,153	NA	6,855	43,654
Dry milk products	0	NA	0	NA	0	102	0	0	NA	0	102
Total	132,945	NA	14,250	NA	127,509	341,052	234,914	70,410	NA	40,575	961,656
Minerals:											
Calcium	14,462	NA	0	NA	12,065	27,645	27,841	11,547	NA	1,415	94,975
Phosphorus	11,449	NA	0	NA	18,070	35,773	24,273	16,189	NA	858	106,612
Salt	3,446	NA	0	NA	6,758	13,874	9,602	2,125	NA	475	36,279
Trace minerals	629	NA	0	NA	3,227	2,156	1,498	334	NA	178	8,021
Other minerals	0	NA	0	NA	25,980	10,833	0	0	NA	0	36,813
Total	29,985	NA	0	NA	66,100	90,281	63,214	30,195	NA	42,682	322,456
Other byproducts:											
Fats	40,717	NA	0	NA	41,394	141,140	70,357	28,291	NA	53,767	375,666
Molasses	641	NA	0	NA	7,244	1,013	0	0	NA	1,453	10,350
Sugar	0	NA	0	NA	0	0	0	0	NA	0	0
Alfalfa-dehydrated	2,456	NA	0	NA	0	113	0	0	NA	396	2,965
Alfalfa-Suncured	0	NA	0	NA	0	0	0	0	NA	0	0
Liquid whey	0	NA	0	NA	0	0	0	0	NA	0	0
Urea	12	NA	0	NA	0	18	0	0	NA	4	33
Beet pulp	0	NA	0	NA	0	0	0	0	NA	0	0
Citrus pulp	0	NA	0	NA	0	0	0	0	NA	0	0
Total	43,825	NA	0	NA	48,637	142,283	70,357	28,291	NA	55,620	389,014
Microingredients:											
Vitamins	571	NA	0	NA	3,211	2,066	1,030	1,568	NA	1,474	9,919
Drugs	1,293	NA	0	NA	3,483	2,743	2,803	5,845	NA	2,082	18,250
Other microingredients	5,315	NA	0	NA	31	60,360	11,860	0	NA	11,689	89,235
Flavors	12	NA	0	NA	0	0	8	0	NA	2	22
Premixes	316	NA	0	NA	6,270	1,143	406	136	NA	4,034	12,306
Total	7,506	NA	0	NA	12,996	66,312	16,107	7,549	NA	19,282	129,752
Total ingredients	1,811,768	NA	726,770	NA	1,972,258	4,558,217	2,972,750	1,355,792	NA	360,795	13,758,350

NA= No data available.

Table 107--Turkey primary feed production: Quantities of feed ingredients used, by region, 1984

Ingredient	Northeast	Lake States	Corn Belt	Northern Appalachian Plains	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State total
Tons										
Grain:										
Corn	161,463	392,547	489,720	42,444	431,541	62,994	NA 7,126	15,715	NA	1,603,550
Sorghum	0	0	34,407	0	22,099	3,604	NA 188,923	70,719	NA	319,752
Barley	0	0	0	0	0	0	NA 0	4,307	NA	4,307
Oats	0	215	0	0	0	0	NA 0	0	NA	215
Wheat	0	644	11,087	0	38,172	6,728	NA 1,370	23,386	NA	81,387
Other grain	0	0	0	0	0	0	NA 0	0	NA	0
Total	161,463	393,406	535,213	42,444	491,812	73,326	NA 197,419	114,126	NA	2,009,210
Oilseed meals:										
Soybean meal	64,585	1,069,069	213,481	13,967	203,515	30,040	NA 79,754	39,849	NA	1,714,261
Cottonseed meal	0	0	0	0	0	0	NA 822	0	NA	822
Other oil meals	0	0	0	0	0	0	NA 0	0	NA	0
Total	64,585	1,069,069	213,481	13,967	203,515	30,040	NA 80,576	39,849	NA	1,715,083
Grain byproducts:										
Brewers grains	0	0	0	0	1,808	0	NA 0	266	NA	2,074
Distillers grains	0	0	229	0	3,014	0	NA 0	0	NA	3,243
Corn gluten feed	0	0	5,964	0	0	0	NA 0	0	NA	5,964
Corn gluten meal	0	0	3,823	0	0	0	NA 2,741	0	NA	6,564
Nominy	0	0	0	0	0	0	NA 0	0	NA	0
Wheat millfeed	0	25,343	13,954	0	0	0	NA 0	0	NA	39,297
Soybean millfeed	0	0	0	0	1,005	0	NA 0	0	NA	1,005
Other millfeeds	0	0	0	0	0	0	NA 0	0	NA	0
Total	0	25,343	23,970	0	5,826	0	NA 2,741	266	NA	58,146
Animal proteins:										
Meat meal	0	0	0	0	0	0	NA 0	0	NA	0
Meat and bone meal	0	53,414	52,559	3,519	2,411	4,803	NA 29,325	8,074	NA	154,104
Fish meal	0	344	765	0	15,269	0	NA 1,370	0	NA	17,747
Poultry byproduct	26,911	0	0	0	25,314	0	NA 0	2,166	NA	54,391
Feather meal	0	0	0	0	0	0	NA 0	0	NA	0
Dry milk products	0	64	0	0	0	0	NA 0	0	NA	64
Total	26,911	53,822	53,323	3,519	42,993	4,803	NA 30,696	10,241	NA	226,307
Minerals:										
Calcium	0	34,363	6,874	596	8,926	0	NA 1,754	886	NA	53,399
Phosphorus	0	10,309	8,594	677	14,083	3,604	NA 4,476	0	NA	41,743
Salt	646	2,695	3,192	189	4,743	597	NA 987	532	NA	13,582
Trace minerals	269	1,289	306	0	3,431	597	NA 567	0	NA	6,459
Other minerals	0	10,743	0	217	0	0	NA 0	0	NA	10,959
Total	915	59,329	18,966	1,678	31,184	4,798	NA 7,784	1,418	NA	126,143
Other byproducts:										
Fats	0	22,396	23,129	3,032	35,482	4,803	NA 138,259	3,545	NA	230,645
Molasses	0	107	0	0	0	0	NA 0	0	NA	107
Sugar	0	0	19	0	0	0	NA 0	0	NA	19
Alfalfa-dehydrated	0	0	4,664	0	1,205	599	NA 3,563	0	NA	10,032
Alfalfa-Suncured	0	0	0	0	0	0	NA 0	197	NA	197
Liquid whey	0	0	0	0	0	0	NA 0	0	NA	0
Urea	0	43	38	0	0	0	NA 0	0	NA	81
Beet pulp	0	0	0	0	0	0	NA 0	197	NA	197
Citrus pulp	0	0	0	0	0	0	NA 0	0	NA	0
Total	0	22,547	27,851	3,032	36,687	5,402	NA 141,822	3,939	NA	241,279
Microingredients:										
Vitamins	0	973	69	184	7,032	599	NA 0	0	NA	8,857
Drugs	0	226	463	0	6,138	117	NA 41	0	NA	6,984
Other microingredients	0	64	4	0	0	0	NA 0	0	NA	68
Flavors	0	2	8	0	0	0	NA 0	0	NA	10
Premixes	0	1,375	1,636	141	1,129	0	NA 480	817	NA	5,578
Total	0	2,640	2,179	325	14,298	716	NA 521	817	NA	21,496
Total ingredients	253,874	1,626,225	874,983	64,965	826,317	119,085	NA 461,558	170,656	NA	4,397,663

NA= No data available.

Table 108--All poultry primary feed production: Quantities of feed ingredients used, by region, 1984

Ingredient	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State total
Tons											
Grain:											
Corn	2,414,714	1,227,865	1,675,684	170,102	2,450,244	3,898,060	2,132,709	1,164,501	147,081	749,577	16,030,538
Sorghum	0	0	409,592	21,313	23,370	303,257	731,409	725,602	138,825	240,243	2,593,611
Barley	31,886	1,404	0	892	1,033	0	0	0	10,530	115,775	161,520
Oats	19,059	78,175	76,629	4,257	2,408	0	2,013	466	18,502	3,051	204,560
Wheat	21,029	40,376	13,167	15,725	56,409	165,291	157,442	139,978	71,110	84,956	765,481
Other grain	9,048	105	0	10,672	0	22,204	12,182	45,341	0	14,506	114,059
Total	2,495,735	1,347,924	2,175,073	222,961	2,533,464	4,388,811	3,035,755	2,075,888	386,048	1,208,108	19,869,770
Oilseed meals:											
Soybean meal	711,614	1,327,525	524,556	18,541	788,727	1,251,044	875,621	365,303	67,220	144,691	6,074,842
Cottonseed meal	19	3,511	0	6	8,997	3,461	2,255	4,857	172	13,069	36,347
Other oil meals	277	1,720	73	3	0	0	0	0	0	16,512	18,585
Total	711,910	1,332,757	524,629	18,549	797,723	1,254,505	877,875	370,160	67,393	174,272	6,129,774
Grain byproducts:											
Brewers grains	3,492	16,642	1,715	0	1,808	6,834	0	0	266	0	30,758
Distillers grains	20,840	801	959	0	8,105	2,875	0	0	7,088	0	40,668
Corn gluten feed	13,617	1,404	6,402	0	5,118	0	0	3,966	0	0	30,506
Corn gluten meal	251,380	421	8,202	0	55,232	109,302	11,748	46,283	0	9,687	492,254
Hominy	7,858	0	0	0	0	0	0	0	0	0	7,858
Wheat millfeed	39,569	30,708	13,990	136	2,214	22,483	2,643	24,030	44,842	38,571	219,188
Soybean millfeed	3,955	260	43,792	0	1,005	3,693	0	0	0	0	52,705
Other millfeeds	53,859	632	146	406	14,932	15,327	26,835	15,118	1,839	42,151	171,245
Total	394,765	50,869	75,207	542	88,413	160,514	41,227	89,397	54,035	90,409	1,045,377
Animal proteins:											
Meat meal	14	49	380	40	7	55,633	9,699	0	0	0	65,822
Meat and bone meal	101,774	73,820	64,135	4,701	42,737	106,306	138,872	51,302	17,250	66,655	667,351
Fish meal	26,596	372	4,378	0	75,646	95,460	103,872	27,229	0	31,205	364,760
Poultry byproduct	153,556	169	3,563	0	67,672	202,905	96,236	26,234	2,166	1,072	553,573
Feather meal	3,082	0	3,563	1	8,705	15,407	895	8,153	0	6,855	48,661
Dry milk products	0	212	1,058	1	372	102	0	0	0	259	2,004
Total	285,022	74,621	77,077	4,743	195,140	475,813	349,374	112,918	19,416	106,047	1,700,171
Minerals:											
Calcium	50,213	59,917	28,084	46,313	84,996	68,471	83,384	27,806	10,896	74,947	535,028
Phosphorus	20,948	15,934	13,061	27,156	46,549	60,305	31,028	21,576	1,107	1,946	239,611
Salt	14,293	11,571	4,696	361	23,133	23,843	15,668	4,151	2,030	4,090	103,837
Trace minerals	4,705	2,335	912	10	7,743	3,963	2,530	985	286	437	23,906
Other minerals	69	21,838	146	274	26,165	15,776	1,062	15	0	0	65,346
Total	90,229	111,595	46,898	74,114	188,587	172,359	133,672	54,533	14,320	121,177	1,007,484
Other byproducts:											
Fats	64,516	22,417	26,085	3,391	76,875	184,875	96,497	167,148	5,671	71,519	718,996
Molasses	12,458	21,230	82,198	4,144	10,833	1,647	766	10,458	13,284	6,614	163,633
Sugar	11	0	19	0	0	0	0	2,364	0	0	2,395
Alfalfa-dehydrated	2,943	1,046	6,189	166	2,179	712	1,694	5,336	7,382	8,787	36,434
Alfalfa-Suncured	0	0	1,314	2,459	0	0	0	22,326	9,122	4,577	39,798
Liquid whey	14	0	0	0	0	0	0	0	0	356	370
Urea	269	190	2,980	8	74	40	0	0	431	1,504	5,497
Beet pulp	451	744	445	2	0	0	12	0	456	4,958	7,069
Citrus pulp	277	0	44	0	0	0	0	0	0	0	320
Total	80,938	45,628	119,274	10,171	89,962	187,460	98,970	207,633	36,346	98,316	974,698
Microingredients:											
Vitamins	3,755	1,830	762	196	10,904	6,557	2,428	1,622	228	2,140	30,422
Drugs	1,359	858	1,192	78	9,814	8,398	3,614	5,929	26	2,159	33,426
Other microingredients	7,943	64	4	4	31	61,828	13,029	58	7	11,689	94,657
Flavors	12	290	51	1	0	28	8	0	0	7	397
Premixes	651	73,478	25,671	399	27,986	17,003	486	2,035	12,488	6,475	166,672
Total	13,721	76,519	27,681	676	48,735	93,813	19,566	9,644	12,749	22,470	325,575
Total ingredients	4,072,320	3,039,914	3,045,839	331,757	3,942,024	6,733,275	4,556,439	2,920,174	590,306	1,820,799	31,052,847

Table 109--Ingredient storage capacity of feed manufacturers by storage type, by region and State, 1984

Region and State	Grains		Other dry ingredients		Liquid	
	Bag	Bulk	Bag	Bulk	Molasses	Fat
Tons						
Northeast:						
Connecticut	105	18,305	52	20,920	52	42
Delaware	21	155,844	702	2,527	140	421
Maine	0	3,955	0	1,547	136	0
Maryland	218	507,616	18,174	20,652	593	200
Massachusetts	0	1,005	0	57	36	0
New Hampshire	536	2,700	225	847	203	1,021
New Jersey	0	11,515	0	12,206	1,152	69
New York	13,058	112,417	5,506	49,534	3,741	447
Pennsylvania	203,940	202,912	8,027	55,784	2,774	1,414
Vermont	827	13,545	1,615	8,262	429	62
Total	218,705	1,029,816	34,302	172,336	9,257	3,677
Lake States:						
Michigan	2,812	693,428	10,454	42,275	2,456	712
Minnesota	4,625	4,672,005	17,857	664,040	52,727	1,674
Wisconsin	3,808	1,153,555	39,909	98,623	11,254	1,443
Total	11,245	6,518,988	68,220	804,938	66,437	3,830
Corn Belt:						
Illinois	3,982	3,707,210	21,585	149,440	8,056	3,111
Indiana	1,304	1,183,719	13,592	99,807	45,002	49,906
Iowa	32,654	4,746,580	37,299	172,897	38,140	4,295
Missouri	8,279	677,705	13,675	102,523	9,943	1,824
Ohio	8,006	2,956,752	39,875	181,288	9,710	1,721
Total	54,225	13,271,966	126,025	705,956	110,851	60,857
Northern Plains:						
Kansas	53,035	1,771,948	11,323	70,941	55,047	1,471
Nebraska	31,870	3,393,000	23,400	69,004	8,154	1,058
North Dakota	2,144	11,792	364	53,994	364	172
South Dakota	106,806	1,643,525	8,286	17,924	8,045	440
Total	193,855	6,820,265	43,374	211,864	71,610	3,141
Appalachian:						
Kentucky	3,112	407,332	18,609	37,817	1,413	250
North Carolina	20,177	339,259	6,440	24,807	645	975
Tennessee	1,446	33,167	2,266	16,471	2,306	586
Virginia	473	126,624	1,663	18,653	1,038	388
West Virginia	1,701	203,027	105	0	93	0
Total	26,909	1,109,410	29,083	97,748	5,495	2,199
Southeast:						
Alabama	0	73,505	812	12,278	648	1,070
Florida	66	53,542	663	20,994	6,029	262
Georgia	685	171,483	1,972	46,137	1,600	114,132
South Carolina	232	38,202	639	6,534	407	348
Total	983	336,732	4,086	85,943	8,683	115,813
Delta:						
Arkansas	406	90,565	1,138	18,199	821	218
Louisiana	681	34,191	1,419	11,400	1,498	431
Mississippi	960	475,852	2,493	12,990	1,344	599
Total	2,047	600,608	5,050	42,589	3,664	1,248
Southern Plains:						
Oklahoma	356	286,174	3,400	42,518	11,399	695
Texas	16,144	1,724,931	27,532	647,453	207,100	193,135
Total	16,499	2,011,105	30,932	689,971	218,499	193,830
Mountain:						
Arizona	306	26,579	0	92,261	306	0
Colorado	16,546	277,801	5,397	15,235	2,999	530
Idaho	598,360	3,106,984	1,368	13,249	18,079	427
Montana	43	94,572	10,151	21,009	2,158	350
Nevada	0	569	284	758	76	0
New Mexico	700	251,990	500	7,236	80	210
Utah	0	38,181	547	3,258	812	95
Wyoming	0	216,397	1,110	0	0	0
Total	615,953	4,013,072	19,357	153,007	24,510	1,612
Pacific:						
California	11,356	568,459	9,456	180,744	1,818	1,009
Hawaii	0	25,340	0	6,335	0	0
Oregon	219	12,281	746	5,921	164	83
Washington	6,842	141,154	3,328	11,852	1,057	460
Total	18,417	747,233	13,529	204,853	3,040	1,552
48-State total	1,158,837	36,459,195	373,957	3,169,207	522,046	387,758

Table 110--Inshipments of feed ingredients received by mode of transportation, by region and State, 1984

Region and State	Trucks			Rail	Barge
	Company	Other	Total		
			Percent		
Northeast:					
Connecticut	2.9	8.0	10.9	89.1	0
Delaware	5.2	77.7	82.9	17.1	0
Maine	0	5.0	5.0	95.0	0
Maryland	12.4	65.6	78.0	22.0	0
Massachusetts	60.7	39.3	100.0	0	0
New Hampshire	6.5	20.7	27.2	72.8	0
New Jersey	0	30.0	30.0	70.0	0
New York	5.3	39.9	45.3	54.7	0
Pennsylvania	7.6	55.2	62.8	37.2	0
Vermont	4.7	20.0	24.7	66.3	9.0
Total	7.6	48.8	56.4	43.1	0.5
Lake States:					
Michigan	18.3	38.4	56.6	43.4	0
Minnesota	15.9	79.6	95.5	4.1	0.3
Wisconsin	8.2	66.9	75.2	24.8	0
Total	12.6	66.4	79.0	20.9	0.1
Corn Belt:					
Illinois	15.9	70.7	86.6	13.4	0
Indiana	26.9	64.6	91.5	8.5	0
Iowa	19.4	70.7	90.1	9.4	0.5
Missouri	8.7	56.9	65.6	34.4	0
Ohio	30.5	55.0	85.5	14.5	0
Total	19.4	64.9	84.3	15.6	0.2
Northern Plains:					
Kansas	12.1	77.9	90.0	8.6	1.4
Nebraska	24.5	59.5	84.0	15.5	0.5
North Dakota	24.0	71.7	95.6	4.4	0
South Dakota	19.3	76.6	95.9	4.1	0
Total	17.9	70.9	88.8	10.3	0.9
Appalachian:					
Kentucky	8.7	57.8	66.5	33.5	0
North Carolina	6.6	37.3	43.9	56.1	0
Tennessee	6.7	34.2	40.9	47.2	11.9
Virginia	1.1	26.5	27.6	72.4	0
West Virginia	0	100.0	100.0	0	0
Total	5.8	39.2	45.0	52.2	2.7
Southeast:					
Alabama	2.1	31.2	33.3	48.7	18.0
Florida	3.3	23.0	26.3	73.7	0
Georgia	3.4	25.3	28.7	71.3	0
South Carolina	11.6	69.6	81.2	18.8	0
Total	3.5	28.5	32.0	63.5	4.5
Delta:					
Arkansas	4.2	51.9	56.1	43.9	0
Louisiana	6.8	42.3	49.1	48.9	1.9
Mississippi	6.2	25.2	31.4	66.8	1.8
Total	5.5	40.4	45.9	53.1	1.0
Southern Plains:					
Oklahoma	2.6	70.5	73.1	26.9	0
Texas	9.1	69.7	78.8	21.2	0
Total	7.8	69.9	77.7	22.3	0
Mountain:					
Arizona	0	58.0	58.0	42.0	0
Colorado	14.9	62.1	77.0	23.0	0
Idaho	31.2	63.5	94.6	5.4	0
Montana	5.7	91.5	97.2	2.8	0
Nevada	90.0	10.0	100.0	0	0
New Mexico	23.0	65.6	88.6	11.4	0
Utah	1.6	95.7	97.3	2.7	0
Wyoming	44.3	55.7	100.0	0	0
Total	16.1	67.0	83.1	16.9	0
Pacific:					
California	14.6	44.3	58.9	41.1	0
Hawaii	0	0	0	0	100.0
Oregon	12.8	52.6	65.4	34.6	0
Washington	2.5	44.7	47.2	52.8	0
Total	13.6	44.6	58.1	41.2	0.7
48-State total	12.0	56.5	68.5	30.7	0.9

Table 111--Ingredient storage capacity of feed manufacturers: Average per manufacturer, by region and capacity size, 1984

Region and capacity size	Grains		Other dry ingredients		Liquid	
	Bag	Bulk	Bag	Bulk	Molasses	Fat
Tons per manufacturer						
Northeast:						
Less than 1,000 tons	475	517	80	49	32	0
1,000-9,999 tons	560	3,768	236	125	15	0
10,000-24,999 tons	2,264	895	44	212	22	1
25,000-49,999 tons	35	2,068	85	557	37	53
50,000-74,999 tons	10	1,669	82	1,037	47	9
75,000-99,999 tons	27	4,360	25	806	28	18
100,000 tons and more	32	16,004	145	2,770	71	46
Total	753	3,906	130	612	30	15
Lake States:						
Less than 1,000 tons	10	967	22	113	11	0
1,000-9,999 tons	10	3,081	33	58	9	0
10,000-24,999 tons	11	14,918	80	2,144	15	1
25,000-49,999 tons	4	1,831	152	462	60	13
50,000-74,999 tons	22	2,544	174	1,071	1,213	20
75,000-99,999 tons	0	2,122	49	767	145	33
100,000 tons and more	38	2,815	120	637	29	36
Total	11	6,742	66	857	71	4
Corn Belt:						
Less than 1,000 tons	8	699	16	21	6	0
1,000-9,999 tons	50	9,710	59	101	9	0
10,000-24,999 tons	33	6,595	128	363	15	5
25,000-49,999 tons	105	10,311	98	747	405	222
50,000-74,999 tons	9	37,225	79	1,490	66	23
75,000-99,999 tons	6	2,300	169	1,522	111	49
100,000 tons and more	0	5,007	165	3,040	237	56
Total	48	9,448	91	501	83	37
Northern Plains:						
Less than 1,000 tons	0	1,852	23	1	11	0
1,000-9,999 tons	143	13,457	59	28	33	1
10,000-24,999 tons	615	12,290	31	328	20	2
25,000-49,999 tons	824	3,711	154	542	73	10
50,000-74,999 tons	5	2,132	93	833	147	20
75,000-99,999 tons	0	3,412	107	679	2,938	20
100,000 tons and more	0	1,035	217	1,635	94	27
Total	314	11,224	71	330	133	5
Appalachian:						
Less than 1,000 tons	16	8,835	13	189	8	0
1,000-9,999 tons	342	2,833	176	51	8	1
10,000-24,999 tons	9	3,035	35	121	7	2
25,000-49,999 tons	66	3,729	336	484	46	8
50,000-74,999 tons	36	5,247	28	698	22	22
75,000-99,999 tons	0	1,516	50	732	60	30
100,000 tons and more	46	8,728	85	1,579	71	42
Total	139	4,570	125	454	26	11
Southeast:						
Less than 1,000 tons	1	10	12	0	15	0
1,000-9,999 tons	19	818	37	86	11	0
10,000-24,999 tons	33	3,138	17	158	23	1
25,000-49,999 tons	0	1,799	47	446	205	13
50,000-74,999 tons	8	1,546	42	384	27	10,017
75,000-99,999 tons	9	2,740	26	613	63	29
100,000 tons and more	0	4,970	35	1,541	31	66
Total	9	2,902	34	731	53	1,249
Delta:						
Less than 1,000 tons	11	23	3	0	5	0
1,000-9,999 tons	42	1,496	13	95	24	0
10,000-24,999 tons	2	256	1	138	18	2
25,000-49,999 tons	11	1,940	40	360	25	0
50,000-74,999 tons	14	1,216	186	589	37	25
75,000-99,999 tons	0	1,494	10	355	0	61
100,000 tons and more	3	24,069	43	754	55	27
Total	18	6,248	46	353	31	11

--Continued

Table 111--Ingredient storage capacity of feed manufacturers: Average per manufacturer, by region and capacity size, 1984--Continued

Region and size interval	Grains		Other dry ingredients		Liquid	
	Bag	Bulk	Bag	Bulk	Molasses	Fat
Tons per manufacturer						
Southern Plains:						
Less than 1,000 tons	3	1,137	34	75	4	0
1,000-9,999 tons	28	11,238	13	5,172	2,066	2,052
10,000-24,999 tons	1	1,734	17	97	21	1
25,000-49,999 tons	6	7,105	392	2,612	86	11
50,000-74,999 tons	556	2,026	236	759	159	6
75,000-99,999 tons	10	4,625	102	918	41	17
100,000 tons and more	24	7,346	77	969	310	40
Total	55	6,774	104	2,311	731	647
Mountain:						
Less than 1,000 tons	33	24,800	0	0	0	0
1,000-9,999 tons	27	799	13	78	11	0
10,000-24,999 tons	4,291	19,439	84	257	33	7
25,000-49,999 tons	65	2,320	53	176	251	16
50,000-74,999 tons	0	18,747	29	697	34	13
75,000-99,999 tons	0	1,800	300	200	29	2
100,000 tons and more	0	4,300	0	7,654	25	0
Total	1,236	9,911	55	725	61	6
Pacific:						
Less than 1,000 tons	NA	NA	NA	NA	NA	NA
1,000-9,999 tons	400	2,260	300	340	51	2
10,000-24,999 tons	89	2,737	18	180	3	0
25,000-49,999 tons	6	2,411	72	649	32	18
50,000-74,999 tons	0	27,543	167	217	27	12
75,000-99,999 tons	167	8,333	7	1,800	3	0
100,000 tons and more	168	4,650	90	3,868	20	22
Total	130	5,410	96	1,444	22	11
48-State average:						
Less than 1,000 tons	65	3,145	25	65	11	0
1,000-9,999 tons	132	6,929	77	417	151	136
10,000-24,999 tons	544	8,569	73	712	17	3
25,000-49,999 tons	148	5,103	144	736	169	75
50,000-74,999 tons	56	11,215	103	915	191	911
75,000-99,999 tons	14	3,177	91	950	333	29
100,000 tons and more	27	8,675	97	1,986	112	43
Total	210	7,433	86	723	121	127

NA= No data available.

Table 112--Ingredient losses in production: Manufacturers by percent of shrinkage, by region and State, 1984

Region and State	Total manufacturers	Percent of shrinkage						
		0.1-0.5	0.6-1.0	1.1-1.5	1.6-2.0	2.1-2.5	2.6-3.0	Above 3.0
		Percent						
Northeast:								
Maine	9	33.3	66.7	0	0	0	0	0
New Hampshire	13	0	25.0	0	75.0	0	0	0
Vermont	8	60.0	20.0	20.0	0	0	0	0
Massachusetts	60	100.0	0	0	0	0	0	0
Connecticut	4	33.3	66.7	0	0	0	0	0
New York	2	18.8	50.0	4.2	14.6	4.2	2.1	6.3
New Jersey	12	NA	NA	NA	NA	NA	NA	NA
Pennsylvania	201	21.4	23.2	14.3	32.1	0	5.4	3.6
Delaware	276	66.7	33.3	0	0	0	0	0
Maryland	14	12.5	37.5	25.0	25.0	0	0	0
Total	599	22.3	36.0	10.8	23.0	1.4	2.9	3.6
Lake States:								
Michigan	233	8.3	41.7	4.2	37.5	0	4.2	4.2
Minnesota	386	17.0	35.2	14.8	17.0	5.7	4.5	5.7
Wisconsin	544	28.3	31.1	9.4	20.8	1.9	4.7	3.8
Total	1,163	21.6	33.9	11.0	21.1	3.2	4.6	4.6
Corn Belt:								
Ohio	316	12.5	33.3	12.5	33.3	0	0	8.3
Indiana	395	13.0	32.6	6.5	23.9	0	6.5	17.4
Illinois	582	33.3	35.1	10.5	15.8	3.5	1.8	0
Iowa	583	44.7	33.5	8.1	9.3	1.2	2.5	0.6
Missouri	307	33.3	27.5	7.8	19.6	0	7.8	3.9
Total	1,983	34.5	32.7	8.6	15.6	1.2	3.5	3.8
Northern Plains:								
North Dakota	49	25.0	50.0	0	0	0	0	25.0
South Dakota	151	21.4	39.3	14.3	14.3	3.6	0	7.1
Nebraska	300	29.6	29.6	5.6	24.1	1.9	1.9	7.4
Kansas	418	13.4	39.0	13.4	20.7	1.2	6.1	6.1
Total	918	20.2	36.3	10.7	20.2	1.8	3.6	7.1
Appalachian:								
Virginia	111	9.5	28.6	23.8	19.0	4.8	4.8	9.5
West Virginia	22	0	100.0	0	0	0	0	0
North Carolina	177	29.0	29.0	9.7	19.4	0	12.9	0
Kentucky	151	0	28.0	20.0	40.0	0	8.0	4.0
Tennessee	81	6.7	40.0	20.0	6.7	0	0	26.7
Total	542	12.9	31.2	17.2	22.6	1.1	7.5	7.5
Southeast:								
South Carolina	46	25.0	25.0	50.0	0	0	0	0
Georgia	129	25.9	37.0	18.5	11.1	0	0	7.4
Florida	69	33.3	38.9	5.6	5.6	0	5.6	11.1
Alabama	84	14.3	50.0	7.1	7.1	0	21.4	0
Total	328	25.4	39.7	14.3	7.9	0	6.3	6.3
Delta:								
Mississippi	80	18.5	25.9	7.4	33.3	3.7	3.7	7.4
Arkansas	60	42.9	14.3	42.9	0	0	0	0
Louisiana	44	23.1	15.4	23.1	30.8	0	0	7.7
Total	184	23.4	21.3	17.0	27.7	2.1	2.1	6.4
Southern Plains:								
Oklahoma	131	35.5	22.6	0	32.3	0	3.2	6.5
Texas	400	8.2	26.2	6.6	36.1	4.9	8.2	9.8
Total	531	17.4	25.0	4.3	34.8	3.3	6.5	8.7
Mountain:								
Montana	46	16.7	33.3	0	50.0	0	0	0
Idaho	63	14.3	42.9	0	42.9	0	0	0
Wyoming	14	0	0	0	0	0	100.0	0
Colorado	94	0	37.5	12.5	31.3	0	12.5	6.3
New Mexico	23	33.3	0	0	16.7	0	16.7	33.3
Arizona	21	0	50.0	0	50.0	0	0	0
Utah	38	0	20.0	40.0	40.0	0	0	0
Nevada	4	0	0	0	100.0	0	0	0
Total	303	8.7	30.4	8.7	37.0	0	8.7	6.5
Pacific:								
Washington	35	0	75.0	0	25.0	0	0	0
Oregon	43	0	50.0	0	0	0	0	50
California	91	25.0	25.0	14.3	25.0	0	7.1	3.6
Hawaii	3	0	0	100.0	0	0	0	0
Total	172	20.0	31.4	14.3	22.9	0	5.7	5.7
48-State total	6,823	23.8	32.9	10.6	21.0	1.7	4.5	5.4

NA= No data available.

Table 113--Primary feed production bagged by livestock type, by region and State, 1984

Region and State	Poultry	Dairy	Beef and sheep	Swine	Other	Total bagged feed
Tons						
Northeast:						
Connecticut	5,141	7,043	0	1,393	6,949	20,525
Delaware	380,804	1,402	34	2,913	2,151	387,303
Maine	0	0	0	0	0	0
Maryland	16,059	37,194	5,270	15,032	42,280	115,836
Massachusetts	0	0	0	0	0	0
New Hampshire	12,751	20,798	2,157	4,459	36,455	76,619
New Jersey	18,981	9,444	9,349	18,884	37,764	94,421
New York	53,214	294,360	11,146	25,517	64,186	448,423
Pennsylvania	41,685	171,158	28,232	40,043	143,401	424,518
Vermont	14,618	66,205	2,780	7,060	19,218	109,881
Total	543,253	607,602	58,966	115,301	352,403	1,677,525
Lake States:						
Michigan	66,617	69,560	44,499	89,159	50,991	320,825
Minnesota	66,163	144,353	51,173	256,552	156,280	674,522
Wisconsin	41,399	395,014	39,999	133,581	102,226	712,220
Total	174,179	608,927	135,672	479,293	309,497	1,707,567
Corn Belt:						
Illinois	106,591	111,929	151,870	605,213	133,449	1,109,052
Indiana	46,073	149,876	115,667	369,811	310,639	992,078
Iowa	64,192	166,801	267,006	1,053,193	86,765	1,637,956
Missouri	179,027	117,249	365,814	361,224	132,174	1,155,487
Ohio	41,413	127,813	64,494	137,057	282,720	653,496
Total	437,296	673,668	964,850	2,526,509	945,748	5,548,070
Northern Plains:						
Kansas	30,311	68,596	438,609	85,973	147,160	770,648
Nebraska	26,964	32,337	168,086	271,453	28,807	527,646
North Dakota	7,237	7,370	13,145	12,011	19,272	59,034
South Dakota	6,444	22,359	118,902	138,247	11,125	297,077
Total	70,956	130,661	738,742	507,684	206,364	1,654,407
Appalachian:						
Kentucky	16,348	84,281	37,984	61,938	66,311	266,861
North Carolina	27,645	10,387	5,046	71,699	41,630	156,407
Tennessee	65,286	40,477	86,166	92,476	52,689	337,094
Virginia	25,881	34,629	23,277	51,605	66,053	201,445
West Virginia	991	6,685	937	13,227	43	21,883
Total	136,151	176,459	153,410	290,945	226,726	983,691
Southeast:						
Alabama	371,036	14,952	14,793	9,968	7,739	418,489
Florida	12,129	2,978	12,403	8,148	84,621	120,279
Georgia	54,951	31,797	87,343	102,041	80,758	356,891
South Carolina	10,780	4,806	3,114	28,048	17,613	64,361
Total	448,897	54,533	117,653	148,205	190,731	960,019
Delta:						
Arkansas	10,738	12,138	81,632	8,825	70,135	183,468
Louisiana	30,385	44,190	93,443	11,514	90,555	270,587
Mississippi	3,325	981	39,458	5,654	212,587	262,005
Total	44,948	57,309	214,532	25,993	373,277	716,060
Southern Plains:						
Oklahoma	69,697	36,956	395,814	61,915	164,985	729,366
Texas	169,262	34,711	1,072,013	114,558	435,560	1,826,104
Total	238,959	71,667	1,467,827	176,473	600,545	2,555,470
Mountain:						
Arizona	0	1,322	0	0	0	1,322
Colorado	85,264	33,591	78,021	23,362	127,579	347,817
Idaho	25,651	23,802	914	2,060	492	52,920
Montana	2,662	4,538	98,126	9,991	7,926	123,242
Nevada	0	0	5,551	0	7,524	13,075
New Mexico	22,805	8,442	131,939	19,035	5,220	187,441
Utah	4,754	12,552	19,729	1,526	4,148	42,709
Wyoming	0	0	0	0	0	0
Total	141,136	84,247	334,280	55,975	152,888	768,525
Pacific:						
California	88,875	126,660	65,272	32,973	98,385	412,165
Hawaii	0	0	0	0	0	0
Oregon	18,327	164,430	23,378	7,684	22,320	236,140
Washington	0	3,475	6,228	218	0	9,921
Total	107,203	294,565	94,878	40,875	120,705	658,226
48-State total	2,342,978	2,759,638	4,280,809	4,367,253	3,478,883	17,229,560

Table 114--Manufactured feed storage capacity: Quantity by storage type, by region and State, 1984

Region and State	Manufactured feed		
	Bag	Dry bulk	Liquid
		Tons	
Northeast:			
Connecticut	20,946	327,895	0
Delaware	10,596	386,709	0
Maine	0	249,070	0
Maryland	115,080	1,148,960	5,389
Massachusetts	610	114,398	0
New Hampshire	78,095	50,410	0
New Jersey	94,142	94,142	0
New York	427,868	1,858,929	7,341
Pennsylvania	519,318	2,218,011	455
Vermont	109,223	478,304	0
Total	1,375,879	6,926,827	13,185
Lake States:			
Michigan	311,515	1,332,681	329
Minnesota	698,128	2,836,652	64,957
Wisconsin	628,479	3,563,917	23,872
Total	1,638,122	7,733,250	89,158
Corn Belt:			
Illinois	1,117,103	1,700,295	6,182
Indiana	1,144,849	2,332,131	2,829
Iowa	1,840,450	3,673,671	63,893
Missouri	1,045,884	2,556,485	16,645
Ohio	923,610	798,021	1,099
Total	6,071,897	11,060,603	90,648
Northern Plains:			
Kansas	804,085	3,181,459	101,397
Nebraska	581,160	2,183,845	101,121
North Dakota	48,030	276,272	343
South Dakota	274,303	647,694	53,165
Total	1,707,578	6,289,270	256,026
Appalachian:			
Kentucky	271,884	718,591	2,243
North Carolina	160,574	2,834,057	386
Tennessee	337,568	1,273,115	7,076
Virginia	147,507	660,122	1,266
West Virginia	20,317	107,355	0
Total	937,850	5,593,240	10,971
Southeast:			
Alabama	185,884	2,246,076	6,887
Florida	128,993	2,106,645	32,931
Georgia	316,622	4,085,765	20,935
South Carolina	62,715	449,438	0
Total	694,214	8,887,924	60,753
Delta:			
Arkansas	183,855	1,981,121	843
Louisiana	395,858	876,272	2,724
Mississippi	259,490	1,877,682	4,175
Total	839,204	4,735,076	7,742
Southern Plains:			
Oklahoma	582,377	1,474,273	0
Texas	1,845,864	7,508,764	136,836
Total	2,428,241	8,983,037	136,836
Mountain:			
Arizona	1,344	218,671	0
Colorado	478,167	1,565,174	20,438
Idaho	30,585	651,956	185,184
Montana	149,787	560,848	2,559
Nevada	13,020	59,313	0
New Mexico	144,830	188,214	0
Utah	41,098	264,217	0
Wyoming	0	13,872	0
Total	858,831	3,522,262	208,181
Pacific:			
California	452,776	9,811,449	4,691
Hawaii	0	82,989	0
Oregon	235,658	440,767	110
Washington	23,857	810,046	6,220
Total	712,290	11,145,251	11,020
48-State total	15,997,450	68,428,216	871,336

Table 115--Manufactured feed storage capacity: Average per manufacturer, by region and size interval, 1984

State and region	Bag	Bulk	Liquid
	Tons		
Northeast:			
Less than 1,000 tons	194	35	NA
1,000-9,999 tons	555	41	44
10,000-24,999 tons	126	124	40
25,000-49,999 tons	257	194	NA
50,000-74,999 tons	200	257	NA
75,000-99,999 tons	253	441	NA
100,000 tons and more	647	1,001	1,008
Total	341	300	236
Lake States:			
Less than 1,000 tons	32	153	NA
1,000-9,999 tons	142	65	37
10,000-24,999 tons	102	2,033	95
25,000-49,999 tons	348	174	55
50,000-74,999 tons	392	211	55
75,000-99,999 tons	344	329	NA
100,000 tons and more	1,050	665	NA
Total	185	748	56
Corn Belt:			
Less than 1,000 tons	32	62	80
1,000-9,999 tons	74	72	273
10,000-24,999 tons	143	113	37
25,000-49,999 tons	404	213	50
50,000-74,999 tons	523	289	42
75,000-99,999 tons	940	396	96
100,000 tons and more	1,050	739	176
Total	260	181	131
Northern Plains:			
Less than 1,000 tons	52	49	NA
1,000-9,999 tons	83	48	50
10,000-24,999 tons	149	162	50
25,000-49,999 tons	487	282	128
50,000-74,999 tons	543	283	NA
75,000-99,999 tons	1,133	360	250
100,000 tons and more	1,316	458	NA
Total	291	176	78
Appalachian:			
Less than 1,000 tons	39	57	NA
1,000-9,999 tons	44	74	NA
10,000-24,999 tons	83	95	20
25,000-49,999 tons	385	159	NA
50,000-74,999 tons	297	193	NA
75,000-99,999 tons	480	373	NA
100,000 tons and more	774	746	24
Total	266	298	22
Southeast:			
Less than 1,000 tons	13	35	NA
1,000-9,999 tons	76	55	50
10,000-24,999 tons	235	88	NA
25,000-49,999 tons	250	198	500
50,000-74,999 tons	275	273	NA
75,000-99,999 tons	625	290	NA
100,000 tons and more	580	879	98
Total	290	497	186
Delta:			
Less than 1,000 tons	18	NA	NA
1,000-9,999 tons	165	246	NA
10,000-24,999 tons	130	50	20
25,000-49,999 tons	308	187	NA
50,000-74,999 tons	417	437	NA
75,000-99,999 tons	NA	454	NA
100,000 tons and more	480	693	140
Total	241	430	80

See footnote at end of table.

--Continued

Table 115--Manufactured feed storage capacity: Average per manufacturer, by region and capacity size, 1984--Continued

Region and State	Bag	Bulk	Liquid
Tons			
Southern Plains:			
Less than 1,000 tons	128	NA	NA
1,000-9,999 tons	169	71	85
10,000-24,999 tons	132	99	70
25,000-49,999 tons	901	238	450
50,000-74,999 tons	813	260	NA
75,000-99,999 tons	672	1,155	3
100,000 tons and more	695	702	54
Total	426	442	104
Mountain:			
Less than 1,000 tons	4,005	70	NA
1,000-9,999 tons	139	109	NA
10,000-24,999 tons	6,088	5,450	260
25,000-49,999 tons	800	3,652	NA
50,000-74,999 tons	725	1,221	NA
75,000-99,999 tons	200	136	NA
100,000 tons and more	NA	406	NA
Total	2,770	2,626	260
Pacific:			
Less than 1,000 tons	NA	NA	NA
1,000-9,999 tons	208	91	NA
10,000-24,999 tons	277	76	NA
25,000-49,999 tons	128	130	NA
50,000-74,999 tons	1,500	126	NA
75,000-99,999 tons	10	145	NA
100,000 tons and more	680	456	NA
Total	377	213	NA
48-State average:			
Less than 1,000 tons	239	85	80
1,000-9,999 tons	160	71	102
10,000-24,999 tons	434	834	67
25,000-49,999 tons	413	355	134
50,000-74,999 tons	464	319	47
75,000-99,999 tons	676	487	111
100,000 tons and more	808	745	265
Total	365	447	118

NA = No data available.

Table 116--Outshipments of formula feed: Percent shipped by mode of transportation, by region and State, 1984

Region and State	Trucks				Rail	Barge
	Company	Customer	Other	Total		
Percent						
Northeast:						
Connecticut	88.0	6.0	6.0	100.0	0	0
Delaware	71.4	28.6	0	100.0	0	0
Maine	92.3	6.6	0	98.9	1.1	0
Maryland	94.1	3.4	2.5	100.0	0	0
Massachusetts	96.0	4.0	0	100.0	0	0
New Hampshire	53.3	12.1	32.1	97.5	2.5	0
New Jersey	0.0	30.0	60.0	90.0	10.0	0
New York	70.7	17.4	8.8	96.9	3.1	0
Pennsylvania	52.0	32.5	15.2	99.7	0.3	0
Vermont	49.3	25.4	7.5	82.2	12.8	5.0
Total	67.6	20.4	9.9	97.9	1.9	0.3
Lake States:						
Michigan	58.3	31.3	10.3	100.0	0	0
Minnesota	67.2	20.8	11.0	99.0	0.2	0.7
Wisconsin	45.7	46.7	7.6	100.0	0	0
Total	56.0	34.3	9.3	99.6	0.1	0.3
Corn Belt:						
Illinois	41.9	40.2	17.6	99.8	0.2	0
Indiana	38.0	31.0	29.3	98.2	1.8	0
Iowa	44.7	37.5	17.8	100.0	0.0	0
Missouri	38.3	38.6	19.3	96.2	3.8	0
Ohio	53.3	35.1	6.5	95.0	5.0	0
Total	42.5	36.6	19.1	98.2	1.8	0
Northern Plains:						
Kansas	57.8	27.7	14.4	99.9	0.1	0
Nebraska	47.3	28.4	21.2	96.9	1.9	1.3
North Dakota	40.6	33.4	23.3	97.2	2.8	0
South Dakota	48.6	44.4	6.8	99.8	0.2	0
Total	52.4	30.1	16.3	98.7	0.8	0.4
Appalachian:						
Kentucky	53.7	33.6	10.8	98.1	1.9	0
North Carolina	81.9	14.1	2.3	98.3	1.7	0
Tennessee	15.1	61.1	23.1	99.2	0.8	0
Virginia	48.7	28.6	22.6	100.0	0	0
West Virginia	76.7	18.8	4.5	100.0	0	0
Total	56.5	30.4	11.8	98.8	1.2	0
Southeast:						
Alabama	71.8	18.0	6.7	96.5	3.5	0
Florida	78.1	5.1	16.7	99.9	0.1	0
Georgia	84.5	8.3	4.4	97.3	2.7	0
South Carolina	97.8	2.2	0	100.0	0.0	0
Total	80.5	9.7	7.7	97.8	2.2	0
Delta:						
Arkansas	60.8	8.0	30.6	99.4	0.6	0
Louisiana	65.3	25.5	5.2	96.0	2.2	1.8
Mississippi	94.0	3.5	1.3	98.8	1.2	0
Total	73.5	10.1	14.9	98.5	1.2	0.3
Southern Plains:						
Oklahoma	50.0	35.0	14.6	99.6	0.4	0
Texas	72.1	16.5	7.4	96.0	4.0	0
Total	67.0	20.8	9.0	96.8	3.2	0
Mountain:						
Arizona	98.5	1.5	0	100.0	0	0
Colorado	36.4	38.8	23.8	99.0	1.0	0
Idaho	88.5	9.9	1.7	100.0	0	0
Montana	46.0	33.2	20.9	100.0	0	0
Nevada	35.6	27.8	36.7	100.0	0	0
New Mexico	87.3	8.4	4.2	100.0	0	0
Utah	26.8	68.7	4.5	100.0	0	0
Wyoming	NA	NA	NA	NA	NA	NA
Total	55.8	29.0	14.7	99.6	0.4	0
Pacific:						
California	92.6	3.8	3.5	100.0	0	0
Hawaii	50.0	20.0	0	70.0	0	30.0
Oregon	70.9	12.4	14.8	98.1	1.9	0
Washington	90.3	9.4	0.3	100.0	0	0
Total	91.0	4.8	3.9	99.7	0.1	0.2
48-State total	63.7	23.1	11.7	98.5	1.4	0.1

NA= No data available.

Table 117--Outshipments of formula feed: Average distances shipped by mode of transportation, by region and State, 1984

Region and State	Trucks				Rail	Barge	Weighted average
	Company	Customer	Other	Total			
				Miles			
Northeast:							
Connecticut	40	10	50	39	0	0	39
Delaware	41	29	0	38	0	0	38
Maine	76	72	0	76	100	0	76
Maryland	25	29	58	26	0	0	26
Massachusetts	77	15	0	75	0	0	75
New Hampshire	88	135	120	105	120	0	105
New Jersey	0	80	160	133	300	0	150
New York	40	37	49	40	0	0	39
Pennsylvania	56	53	151	69	900	0	72
Vermont	58	41	275	73	92	0	71
Total	43	46	126	52	119	0	53
Lake States:							
Michigan	30	59	100	46	0	0	46
Minnesota	44	54	82	50	0	0	50
Wisconsin	73	48	109	64	0	0	64
Total	52	51	95	56	0	0	56
Corn Belt:							
Illinois	64	66	137	78	360	0	78
Indiana	107	61	84	86	97	0	86
Iowa	69	53	96	67	0	0	67
Missouri	64	65	116	75	79	0	75
Ohio	92	87	112	91	350	0	104
Total	77	63	103	77	176	0	79
Northern Plains:							
Kansas	37	65	98	54	150	0	54
Nebraska	48	72	147	77	750	441	94
North Dakota	82	43	337	130	700	0	145
South Dakota	121	38	122	84	60	0	84
Total	51	62	135	68	689	441	75
Appalachian:							
Kentucky	45	72	119	62	100	0	63
North Carolina	34	50	63	37	140	0	38
Tennessee	42	57	67	57	105	0	58
Virginia	30	44	87	47	0	0	47
West Virginia	45	17	60	40	0	0	40
Total	35	56	80	47	126	0	48
Southeast:							
Alabama	50	43	71	50	250	0	57
Florida	51	44	50	50	31	0	50
Georgia	41	55	172	48	155	0	51
South Carolina	54	25	0	53	0	0	53
Total	46	48	87	50	192	0	53
Delta:							
Arkansas	25	43	36	30	150	0	31
Louisiana	35	91	288	63	155	0	64
Mississippi	55	87	439	61	788	0	70
Total	40	74	67	48	386	0	52
Southern Plains:							
Oklahoma	29	168	97	88	95	0	88
Texas	52	78	88	59	263	0	67
Total	48	113	91	66	259	0	72
Mountain:							
Arizona	4	0	0	4	0	0	4
Colorado	26	118	218	108	300	0	110
Idaho	22	12	100	22	0	0	22
Montana	63	53	51	57	0	0	57
Nevada	250	300	300	282	0	0	282
New Mexico	158	183	250	164	0	0	164
Utah	9	33	150	32	0	0	32
Wyoming	0	0	0	0	0	0	0
Total	48	91	183	80	300	0	81
Pacific:							
California	28	30	157	33	0	0	33
Hawaii	20	20	0	20	0	150	59
Oregon	88	51	156	94	300	0	98
Washington	17	26	200	18	0	0	18
Total	30	32	157	35	300	150	36
48-State total	47	65	109	58	232	149	61

Table 118--Major activity of feed manufacturers by major source of gross income, by region, 1984

Major source of gross income	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State total
	Number										
Feed manufacturing	455	567	889	341	253	172	71	254	171	108	3,282
Pet food	4	5	16	0	5	4	6	0	0	0	39
Grain: Storage	0	19	68	43	5	0	3	5	11	0	155
Merchandising	7	116	657	317	32	13	3	42	34	9	1,230
Processing	7	34	32	5	9	0	6	5	11	0	108
Oilseed processing	0	0	5	0	0	0	0	0	0	0	5
Farm supply	47	136	105	14	72	0	15	28	0	0	417
Hatchery	0	5	0	0	5	0	0	0	0	0	9
Milk production	0	29	5	5	0	8	0	0	0	0	48
Cattle feeding	0	29	5	87	9	4	0	111	51	13	309
Hog production	0	29	53	29	32	4	9	5	0	9	168
Turkey production	4	19	21	5	14	4	0	5	0	0	71
Broiler production	22	5	11	0	45	88	47	23	0	9	250
Egg production	7	10	11	14	9	25	9	23	23	13	144
Purchased product	36	136	74	43	36	4	12	28	0	9	377
Other	11	24	32	14	18	0	3	5	0	4	111
Total	600	1,163	1,983	918	542	328	184	531	302	172	6,723

Table 119--Production: Primary and secondary formula feeds by major source of gross income, United States, 1984

Major source of gross income	Primary feed		Secondary production		Both primary and secondary		Total production				
	Manufac-turers	Production	Manufac-turers	Production	Manufac-turers	Primary production	Secondary production	Primary production	Secondary production	All manufac-turers	
										Number	Tons
Feed manufacturing	2,432	48,197,208	239	996,208	611	4,915,877	2,056,215	53,113,085	3,052,423	3,282	56,165,508
Milk production	19	243,764	5	6,348	24	19,670	126,190	263,434	132,539	48	395,973
Cattle feeding	203	3,946,586	82	4,633,245	24	673,982	36,726	4,620,568	4,669,971	309	9,290,540
Hog production	93	479,738	37	59,478	37	168,062	106,101	647,800	165,578	168	813,378
Turkey production	52	1,175,284	14	80,797	5	52,839	7,081	1,228,123	87,878	71	1,316,001
Broiler production	242	17,099,064	0	0	8	90,577	74,490	17,189,641	74,490	250	17,264,131
Egg production	122	1,424,600	9	174,576	14	145,701	245,399	1,570,301	419,975	144	1,990,277
Other	892	15,863,255	919	3,788,648	641	919,393	1,783,098	16,782,647	5,571,746	2,451	22,354,393
Total	4,054	88,429,500	1,305	9,739,300	1,364	6,986,100	4,435,300	95,415,600	14,174,600	6,723	109,590,200

Percent distribution (row)

Feed manufacturing	74.1	85.8	7.3	1.8	18.6	8.8	3.7	94.6	5.4	100.0	100.0
Milk production	40.0	61.6	10.0	1.6	50.0	5.0	31.9	66.5	33.5	100.0	100.0
Cattle feeding	65.6	42.5	26.6	49.9	7.8	7.3	0.4	49.7	50.3	100.0	100.0
Hog production	55.6	59.0	22.2	7.3	22.2	20.7	13.0	79.6	20.4	100.0	100.0
Turkey production	73.3	89.3	20.0	6.1	6.7	4.0	0.5	93.3	6.7	100.0	100.0
Broiler production	96.8	99.0	0	0	3.2	0.5	0.4	99.6	0.4	100.0	100.0
Egg production	84.4	71.6	6.3	8.8	9.4	7.3	12.3	78.9	21.1	100.0	100.0
Other	36.4	71.0	37.5	16.9	26.1	4.1	8.0	75.1	24.9	100.0	100.0
Total	60.3	80.7	19.4	8.9	20.3	6.4	4.0	87.1	12.9	100.0	100.0

Table 120--Formula feed: Number of manufacturers with feed manufacturing as the major source of gross income, by only primary, only secondary, and both primary and secondary manufacturing, by region and State, 1984

Region and State	Only primary	Only secondary	Both primary and secondary	Total
Number				
Northeast:				
Connecticut	7	0	0	7
Delaware	4	0	0	4
Maine	7	0	4	11
Maryland	25	4	4	33
Massachusetts	4	0	4	7
New Hampshire	7	0	0	7
New Jersey	4	0	0	4
New York	119	14	54	188
Pennsylvania	119	14	33	166
Vermont	29	0	0	29
Total	325	33	98	455
Lake States:				
Michigan	34	19	19	73
Minnesota	165	19	44	228
Wisconsin	111	53	102	267
Total	310	92	165	567
Corn Belt:				
Illinois	100	26	26	153
Indiana	89	16	0	105
Iowa	321	11	95	426
Missouri	95	5	32	131
Ohio	53	5	16	74
Total	657	63	168	889
Northern Plains:				
Kansas	87	5	14	106
Nebraska	139	5	14	159
North Dakota	10	0	14	24
South Dakota	43	10	0	53
Total	279	19	43	341
Appalachian:				
Kentucky	45	0	14	59
North Carolina	81	14	9	104
Tennessee	32	0	0	32
Virginia	36	0	18	54
West Virginia	0	0	5	5
Total	194	14	45	253
Southeast:				
Alabama	8	0	8	17
Florida	34	0	0	34
Georgia	93	4	17	114
South Carolina	8	0	0	8
Total	143	4	25	172
Delta:				
Arkansas	15	3	3	21
Louisiana	27	0	0	27
Mississippi	18	3	3	24
Total	59	6	6	71
Southern Plains:				
Oklahoma	60	5	9	74
Texas	171	0	9	180
Total	231	5	18	254
Mountain:				
Arizona	6	0	0	6
Colorado	57	0	6	63
Idaho	11	6	6	23
Montana	34	0	0	34
Nevada	6	0	0	6
New Mexico	23	0	0	23
Utah	11	0	6	17
Wyoming	0	0	0	0
Total	148	6	17	171
Pacific:				
California	47	0	17	65
Hawaii	4	0	0	4
Oregon	9	0	9	17
Washington	22	0	0	22
Total	82	0	26	108
48-State total	2,429	241	612	3,282

Table 121--Formula feed: Production of manufacturers with feed manufacturing as the major source of gross income, by only primary, only secondary, and both primary and secondary manufacturing, by region and State, 1984

Region and State	Only primary	Only secondary	Both primary and secondary		Total
			Primary	Secondary	
Tons					
Northeast:					
Connecticut	348,841	0	0	0	348,841
Delaware	387,112	0	0	0	387,112
Maine	152,056	0	63,270	1,406	216,732
Maryland	378,580	2,566	4,747	642	386,535
Massachusetts	113,787	0	2,154	287	116,228
New Hampshire	128,504	0	0	0	128,504
New Jersey	188,282	0	0	0	188,282
New York	1,525,804	18,329	486,967	83,488	2,114,589
Pennsylvania	2,166,626	101,428	35,203	56,956	2,360,213
Vermont	475,855	0	0	0	475,855
Total	5,865,448	122,323	592,341	142,779	6,722,892
Lake States:					
Michigan	860,832	73,307	89,482	159,654	1,183,276
Minnesota	2,539,289	83,386	84,229	171,160	2,878,064
Wisconsin	2,690,987	310,918	1,023,696	604,995	4,630,596
Total	6,091,108	467,611	1,197,407	935,810	8,691,936
Corn Belt:					
Illinois	1,894,193	122,666	401,693	86,258	2,504,811
Indiana	2,673,320	30,041	0	0	2,703,361
Iowa	4,640,321	11,400	174,981	190,213	5,016,915
Missouri	1,928,685	58,750	405,276	68,975	2,461,686
Ohio	914,161	6,471	280,612	71,719	1,272,963
Total	12,050,680	229,328	1,262,562	417,165	13,959,736
Northern Plains:					
Kansas	1,936,420	63,280	12,642	43,433	2,055,775
Nebraska	1,938,214	7,394	43,644	16,768	2,006,021
North Dakota	68,702	0	128,374	25,625	222,702
South Dakota	747,036	10,090	0	0	757,126
Total	4,690,373	80,765	184,661	85,826	5,041,624
Appalachian:					
Kentucky	714,854	0	48,976	5,997	769,827
North Carolina	1,214,472	19,048	1,904	2,892	1,238,315
Tennessee	894,134	0	0	0	894,134
Virginia	424,403	0	49,620	13,606	487,629
West Virginia	0	0	126,300	29,470	155,770
Total	3,247,863	19,048	226,799	51,965	3,545,675
Southeast:					
Alabama	197,494	0	7,652	3,821	208,967
Florida	701,298	0	0	0	701,298
Georgia	1,760,822	4,500	12,436	5,064	1,782,821
South Carolina	243,730	0	0	0	243,730
Total	2,903,344	4,500	20,088	8,884	2,936,816
Delta:					
Arkansas	414,084	3,364	2,098	26	419,572
Louisiana	802,064	0	0	0	802,064
Mississippi	259,633	14,135	6,733	1,285	281,786
Total	1,475,781	17,499	8,831	1,311	1,503,422
Southern Plains:					
Oklahoma	1,080,679	6,666	15,998	3,555	1,106,898
Texas	4,086,691	0	119,019	8,585	4,214,295
Total	5,167,369	6,666	135,017	12,140	5,321,193
Mountain:					
Arizona	67,265	0	0	0	67,265
Colorado	1,687,302	0	20,555	15,342	1,723,199
Idaho	341,920	48,467	127,365	2,137	519,889
Montana	561,735	0	0	0	561,735
Nevada	72,332	0	0	0	72,332
New Mexico	243,038	0	0	0	243,038
Utah	32,512	0	67,108	3,532	103,152
Wyoming	0	0	0	0	0
Total	3,006,104	48,467	215,028	21,011	3,290,611
Pacific:					
California	2,960,211	0	420,730	256,567	3,637,508
Hawaii	82,989	0	0	0	82,989
Oregon	24,123	0	652,411	122,758	799,291
Washington	631,815	0	0	0	631,815
Total	3,699,138	0	1,073,141	379,325	5,151,603
48-State total	48,197,208	996,208	4,915,877	2,056,215	56,165,507

Table 122--Formula feed from primary manufacturing: Production of manufacturers with feed manufacturing as the major source of gross income, by type of livestock, by region and State, 1984

Region and State	Starter-grower, layer-breeders	Broilers	Turkeys	Dairy cattle	Beef cattle and sheep	Hogs	Horses	All other	Total
Tons									
Northeast:									
Connecticut	179,731	5,886	4,588	143,576	1,046	2,046	3,357	8,612	348,841
Delaware	33,542	329,704	421	18,662	34	2,363	2,387	0	387,112
Maine	12,034	0	0	203,292	0	0	0	0	215,326
Maryland	55,051	195,454	286	80,971	4,193	8,946	30,325	8,101	383,327
Massachusetts	57,532	38	1,592	56,158	0	351	179	91	115,941
New Hampshire	16,145	6,411	5,039	52,624	3,525	4,620	25,061	15,079	128,504
New Jersey	16,948	8,470	2,823	37,656	28,242	28,097	56,483	9,562	188,282
New York	193,778	3,315	6,313	1,590,788	36,393	34,235	71,388	76,561	2,012,771
Pennsylvania	546,217	413,817	119,486	692,816	51,416	210,938	107,206	59,933	2,201,829
Vermont	21,398	1,417	2,584	366,837	2,934	7,137	30,689	42,859	475,855
Total	1,132,376	964,512	143,133	3,243,380	127,784	298,732	327,074	220,798	6,457,788
Lake States:									
Michigan	182,624	26,493	16,453	383,374	47,048	225,305	31,494	37,523	950,314
Minnesota	320,493	10,734	724,662	481,998	169,786	806,414	7,435	101,995	2,623,518
Wisconsin	308,391	5,693	668,455	1,987,393	124,791	442,024	30,226	147,710	3,714,683
Total	811,508	42,920	1,409,570	2,852,766	341,625	1,473,743	69,155	287,228	7,288,515
Corn Belt:									
Illinois	140,367	17,208	5,807	375,757	319,052	1,302,845	40,765	94,085	2,295,886
Indiana	329,830	13,327	18,856	485,234	206,860	1,134,648	70,530	414,036	2,673,320
Iowa	200,511	14,739	67,326	435,166	760,181	3,172,148	24,600	140,629	4,815,302
Missouri	177,496	1,168	187,941	631,071	462,407	712,306	43,988	117,584	2,333,961
Ohio	199,191	733	41,611	430,996	98,813	338,300	65,041	20,088	1,194,773
Total	1,047,395	47,174	321,541	2,358,224	1,847,313	6,660,247	244,924	786,423	13,313,242
Northern Plains:									
Kansas	89,569	9,112	5,766	320,788	1,174,748	201,786	35,509	111,783	1,949,062
Nebraska	60,200	8,350	17,818	101,190	824,461	899,495	11,770	58,574	1,981,858
North Dakota	6,759	610	491	44,444	80,857	34,357	5,031	23,899	196,446
South Dakota	43,915	3,452	13,054	62,583	296,652	298,649	2,777	25,954	747,036
Total	200,443	21,524	37,128	529,006	2,376,718	1,434,287	55,086	220,211	4,874,402
Appalachian:									
Kentucky	33,836	6,484	44,319	377,524	54,565	167,257	41,320	38,526	763,830
North Carolina	203,551	141,568	334,180	151,623	12,370	291,066	26,671	55,347	1,216,376
Tennessee	147,567	0	21,953	446,271	98,486	125,922	39,228	14,707	894,134
Virginia	105,716	59	1,615	205,383	17,642	95,343	31,366	16,899	474,023
West Virginia	3,579	0	0	21,050	0	47,363	54,309	0	126,300
Total	494,249	148,111	402,068	1,201,851	183,062	726,950	192,894	125,479	3,474,663
Southeast:									
Alabama	32,495	15,351	190	74,316	26,183	23,929	11,197	21,485	205,146
Florida	100,396	1,022	0	418,650	51,866	13,655	44,996	70,714	701,298
Georgia	323,901	43,287	93,070	900,366	120,985	193,643	47,958	50,048	1,773,258
South Carolina	81,539	78	24,591	68,084	1,978	47,518	4,963	14,979	243,730
Total	538,331	59,738	117,850	1,461,416	201,011	278,746	109,113	157,226	2,923,432
Delta:									
Arkansas	21,262	0	28,706	163,379	96,360	8,807	23,255	74,411	416,182
Louisiana	73,941	265,250	0	175,371	142,781	13,892	77,241	53,588	802,064
Mississippi	4,740	257	0	32,333	41,586	8,825	15,791	162,832	266,366
Total	99,943	265,507	28,706	371,083	280,727	31,525	116,288	290,832	1,484,612
Southern Plains:									
Oklahoma	62,560	173	162	165,311	630,546	79,087	114,726	44,112	1,096,677
Texas	336,687	42,945	38,259	757,681	2,249,642	153,234	408,137	219,127	4,205,710
Total	399,247	43,118	38,420	922,992	2,880,188	232,321	522,863	263,239	5,302,387
Mountain:									
Arizona	0	0	0	67,265	0	0	0	0	67,265
Colorado	42,457	9,970	1,820	293,533	1,053,571	47,029	117,707	141,770	1,707,857
Idaho	15,386	0	0	217,119	213,700	16,241	6,838	0	469,285
Montana	5,690	537	1,365	30,708	474,140	36,295	6,781	6,218	561,735
Nevada	0	0	0	2,353	42,863	142	3,180	23,795	72,332
New Mexico	17,539	0	0	24,729	145,186	15,826	29,277	10,481	243,038
Utah	4,362	177	353	48,687	26,559	1,692	3,442	14,349	99,620
Wyoming	0	0	0	0	0	0	0	0	0
Total	85,433	10,684	3,538	684,394	1,956,018	117,226	167,225	196,613	3,221,132
Pacific:									
California	1,049,214	190,723	10,590	1,635,479	120,659	45,585	34,228	294,463	3,380,941
Hawaii	39,780	0	0	13,854	7,270	3,841	2,058	16,186	82,989
Oregon	31,644	17,962	2,636	522,450	30,771	11,127	16,642	40,602	673,834
Washington	115,092	435	93	483,459	8,397	3,079	311	20,949	631,815
Total	1,235,730	209,120	13,320	2,655,242	167,096	63,632	53,239	372,201	4,769,579
48-State total	6,044,655	1,812,407	2,515,274	16,280,353	10,361,543	11,317,409	1,857,862	2,920,248	53,109,752

Table 123--Complete feed from primary manufacturing: Production of manufacturers with feed manufacturing as the major source of gross income, by type of livestock, by region and State, 1984

Region and State	Starter-grower, layer-breeders	Broilers	Turkeys	Dairy cattle	Beef cattle and sheep	Hogs	Horses	All other	Total
Tons									
Northeast:									
Connecticut	179,731	5,886	4,588	143,576	1,046	2,046	3,357	8,612	348,841
Delaware	33,542	329,704	421	18,662	34	2,363	2,387	0	387,112
Maine	12,034	0	0	203,292	0	0	0	0	215,326
Maryland	55,028	195,454	286	66,122	4,492	8,088	31,416	7,675	368,562
Massachusetts	56,651	38	1,592	55,727	498	754	1,130	91	116,479
New Hampshire	16,145	6,411	5,039	52,624	3,525	4,620	25,061	15,079	128,504
New Jersey	16,948	8,470	2,823	37,656	28,242	28,097	56,483	9,562	188,282
New York	186,744	3,324	6,272	1,358,067	36,180	29,252	71,558	76,561	1,767,960
Pennsylvania	515,421	413,787	118,577	439,476	34,233	156,214	97,236	55,969	1,830,913
Vermont	21,398	1,417	2,584	355,393	2,934	7,137	30,689	41,613	463,165
Total	1,093,642	964,491	142,182	2,730,595	111,184	238,570	319,317	215,162	5,815,144
Lake States:									
Michigan	110,149	7,929	6,478	197,161	10,186	87,342	29,513	18,905	467,664
Minnesota	241,951	11,983	652,198	225,893	39,054	303,318	4,493	52,255	1,531,144
Wisconsin	230,357	4,584	647,023	506,181	27,078	130,023	24,467	100,851	1,670,564
Total	582,458	24,496	1,305,700	929,235	76,317	520,683	58,473	172,011	3,669,372
Corn Belt:									
Illinois	106,946	5,905	5,393	112,525	92,999	525,465	38,643	54,718	942,593
Indiana	218,853	19,836	15,459	245,353	43,957	383,916	63,980	389,643	1,380,998
Iowa	213,857	9,852	56,367	78,583	179,655	749,967	15,786	22,747	1,326,814
Missouri	159,529	986	187,368	575,339	479,282	321,985	43,306	108,880	1,876,675
Ohio	125,640	733	37,406	319,003	49,283	183,894	63,684	19,565	799,209
Total	824,826	37,313	301,992	1,330,802	845,176	2,165,228	225,400	595,552	6,326,289
Northern Plains:									
Kansas	76,374	8,050	1,797	245,162	160,615	55,208	15,324	78,314	640,844
Nebraska	44,055	3,564	17,536	43,867	293,796	290,021	8,375	33,041	734,254
North Dakota	5,142	610	491	34,958	62,407	23,775	4,339	12,997	144,719
South Dakota	29,379	2,093	12,114	18,464	67,960	58,520	2,123	16,455	207,108
Total	154,950	14,317	31,938	342,451	584,778	427,524	30,162	140,806	1,726,925
Appalachian:									
Kentucky	32,028	6,484	183	324,393	46,278	121,091	40,813	30,577	601,845
North Carolina	199,919	141,568	334,149	142,075	10,852	158,511	26,609	56,597	1,070,280
Tennessee	139,293	0	290	434,413	63,837	58,095	38,823	14,107	748,858
Virginia	103,385	59	1,615	178,824	14,214	32,850	31,572	14,143	376,662
West Virginia	3,158	0	0	189,450	0	42,100	54,309	0	289,017
Total	477,782	148,111	336,237	1,269,155	135,181	412,646	192,126	115,424	3,086,663
Southeast:									
Alabama	31,852	15,351	190	71,222	24,393	16,840	11,197	20,714	191,759
Florida	96,817	781	0	403,768	23,043	11,976	39,625	27,680	603,690
Georgia	309,360	43,030	92,866	876,971	108,348	127,521	47,230	49,739	1,655,065
South Carolina	79,471	78	23,363	66,400	1,798	28,999	4,963	14,979	220,051
Total	517,499	59,241	116,418	1,418,361	157,581	185,337	103,014	113,112	2,670,564
Delta:									
Arkansas	21,490	0	28,706	163,361	96,143	8,518	23,255	75,258	416,733
Louisiana	72,300	265,250	0	173,249	111,723	11,062	76,624	53,588	763,794
Mississippi	4,740	257	0	32,333	41,556	8,738	15,791	162,832	266,248
Total	98,530	265,507	28,706	368,943	249,421	28,318	115,671	291,678	1,446,775
Southern Plains:									
Oklahoma	44,064	173	162	152,683	359,605	66,935	108,943	44,112	776,676
Texas	301,694	41,986	37,373	664,968	1,074,844	115,604	347,247	165,336	2,749,052
Total	345,757	42,159	37,535	817,650	1,434,449	182,539	456,190	209,449	3,525,728
Mountain:									
Arizona	0	0	0	65,400	416	0	0	746	66,563
Colorado	91,823	1,456	4,061	359,246	350,197	40,449	219,523	116,905	1,183,659
Idaho	15,386	0	0	119,245	42,740	13,677	6,838	0	197,886
Montana	3,813	537	529	22,195	74,058	11,294	2,278	3,054	117,757
Nevada	0	0	0	1,557	37,662	0	3,005	23,795	66,018
New Mexico	17,539	0	0	22,654	144,148	15,826	29,277	10,481	239,924
Utah	4,141	177	353	41,916	12,009	1,339	3,214	14,349	77,497
Wyoming	0	0	0	0	0	0	0	0	0
Total	132,703	2,170	4,943	632,212	661,229	82,584	264,136	169,329	1,949,305
Pacific:									
California	1,025,495	48,582	10,590	1,513,657	96,674	43,275	33,881	270,842	3,042,995
Hawaii	39,780	0	0	13,854	7,270	3,841	2,058	16,186	82,989
Oregon	31,614	17,951	2,630	513,151	30,323	10,773	16,382	7,178	630,001
Washington	115,092	435	93	482,526	8,086	2,550	311	20,949	630,042
Total	1,211,980	66,968	13,313	2,523,188	142,353	60,439	52,632	315,155	4,386,027
48-State total	5,440,127	1,624,771	2,318,965	12,362,592	4,397,671	4,303,867	1,817,120	2,337,678	34,602,791

Table 124--Distribution: Formula feed by manufacturers' major source of gross income, 1984

Major source of gross income	Wholesale		Retail		Custom feeding		Own livestock		Custom grind		Total	
	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production	Manufac- turers	Production
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Feed manufacturing	1,814	29,806,690	2,290	19,466,125	78	723,599	319	3,090,615	1,039	3,078,479	3,282	56,165,508
Milk production	10	43,372	19	33,263	10	5,373	14	237,383	10	76,581	48	395,973
Cattle feeding	0	0	43	72,477	183	5,200,083	159	3,268,935	34	749,044	309	9,290,540
Hog production	14	7,856	65	166,823	5	76	98	468,384	70	170,240	168	813,378
Turkey production	9	36,150	5	10,161	0	0	66	1,266,144	5	3,547	71	1,316,001
Broiler production	20	108,596	28	185,337	0	0	250	16,910,363	8	59,834	250	17,264,131
Egg production	9	3,737	41	149,099	0	0	131	1,766,867	23	70,574	144	1,990,277
Other	414	4,053,895	1,847	9,174,765	81	792,954	221	1,157,161	1,572	7,175,619	2,451	22,354,393
Total	2,290	34,060,296	4,337	29,258,049	358	6,722,084	1,258	28,165,852	2,759	11,383,917	6,723	109,590,200
Percent distribution (row)												
Feed manufacturing	55.3	53.1	69.8	34.7	2.4	1.3	9.7	5.5	31.6	5.5	100.0	100.0
Milk production	20.0	11.0	40.0	8.4	20.0	1.4	30.0	59.9	20.0	19.3	100.0	100.0
Cattle feeding	0	0	14.1	0.8	59.4	56.0	51.6	35.2	10.9	6.1	100.0	100.0
Hog production	8.3	1.0	38.9	20.5	2.8	1/	58.3	57.6	41.7	20.9	100.0	100.0
Turkey production	13.3	2.7	6.7	0.8	0	0	93.3	96.2	6.7	0.3	100.0	100.0
Broiler production	7.9	0.6	11.1	1.1	0	0	100.0	98.0	3.2	0.3	100.0	100.0
Egg production	6.3	0.2	28.1	7.5	0	0	90.6	88.8	15.6	3.5	100.0	100.0
Other	16.9	18.1	75.3	41.0	3.3	3.5	9.0	5.2	64.1	32.1	100.0	100.0
Total	34.1	31.1	64.5	26.7	5.3	6.1	18.7	25.7	41.0	10.4	100.0	100.0

1/ Less than .1 percent.

Table 125--Production of formula feed by manufacturers with feed manufacturing as the major source of gross income, by method of disposition, by region and State, 1984

Region and State	Wholesale	Retail	Custom feeding	Own livestock	Custom grind and mix	Total
Tons						
Northeast:						
Connecticut	49,894	298,947	0	0	0	348,841
Delaware	10	143,731	0	0	243,371	387,112
Maine	92,209	124,523	0	0	0	216,732
Maryland	109,268	55,101	0	216,855	5,310	386,535
Massachusetts	104,943	1,871	0	0	9,413	116,228
New Hampshire	98,444	30,060	0	0	0	128,504
New Jersey	188,282	0	0	0	0	188,282
New York	1,143,584	893,083	13,482	0	64,440	2,114,589
Pennsylvania	929,718	1,000,442	1,561	329,245	99,247	2,360,213
Vermont	298,010	171,641	0	0	6,204	475,855
Total	3,014,363	2,719,400	15,043	546,101	427,985	6,722,891
Lake States:						
Michigan	636,615	337,994	13,491	2,159	193,017	1,183,276
Minnesota	1,407,988	931,234	51,323	72,827	414,692	2,878,064
Wisconsin	2,028,785	958,369	632,531	7,318	1,003,592	4,630,596
Total	4,073,389	2,227,598	697,345	82,304	1,611,301	8,691,936
Corn Belt:						
Illinois	1,910,610	361,888	0	15,836	216,476	2,504,811
Indiana	2,197,952	457,831	0	22,689	24,889	2,703,361
Iowa	3,776,432	1,032,134	6,639	45,124	156,586	5,016,915
Missouri	2,061,345	242,103	156	74,288	83,793	2,461,686
Ohio	834,169	297,475	11,341	13,531	116,447	1,272,963
Total	10,780,508	2,391,432	18,136	171,469	598,192	13,959,736
Northern Plains:						
Kansas	1,474,293	553,565	0	57	27,860	2,055,775
Nebraska	1,140,676	818,470	0	4,282	42,593	2,006,021
North Dakota	90,094	109,735	0	0	22,874	222,702
South Dakota	654,941	68,547	1,506	23,494	8,638	757,126
Total	3,360,004	1,550,317	1,506	27,833	101,964	5,041,624
Appalachian:						
Kentucky	578,778	181,599	0	0	9,450	769,827
North Carolina	508,302	161,681	0	409,028	159,304	1,238,315
Tennessee	812,550	2,635	0	78,949	0	894,134
Virginia	322,426	155,299	152	0	9,752	487,629
West Virginia	42,100	84,200	0	0	29,471	155,770
Total	2,264,156	585,414	152	487,977	207,577	3,545,675
Southeast:						
Alabama	126,681	78,466	0	0	3,820	208,967
Florida	207,436	493,862	0	0	0	701,298
Georgia	588,549	939,908	226	182,381	71,757	1,782,821
South Carolina	72,713	107,175	0	63,842	0	243,730
Total	995,379	1,619,411	226	246,222	75,577	2,936,816
Delta:						
Arkansas	331,504	84,183	0	0	3,885	419,572
Louisiana	451,049	56,291	0	294,723	0	802,064
Mississippi	101,211	175,808	0	1,324	3,443	281,786
Total	883,765	316,282	0	296,048	7,328	1,503,422
Southern Plains:						
Oklahoma	738,463	350,881	0	4,444	13,110	1,106,898
Texas	2,017,417	1,950,463	0	122,971	123,444	4,214,295
Total	2,755,880	2,301,344	0	127,415	136,553	5,321,193
Mountain:						
Arizona	0	67,265	0	0	0	67,265
Colorado	609,226	933,115	151,673	0	29,185	1,723,199
Idaho	22,671	397,723	0	0	99,495	519,889
Montana	131,447	420,111	0	0	10,176	561,735
Nevada	56,597	10,119	5,616	0	0	72,332
New Mexico	84,857	106,598	11,602	0	39,980	243,038
Utah	38,428	64,724	0	0	0	103,152
Wyoming	0	0	0	0	0	0
Total	943,227	1,999,655	168,891	0	178,836	3,290,610
Pacific:						
California	220,345	3,134,218	191,488	32,592	58,866	3,637,508
Hawaii	63,350	19,639	0	0	0	82,989
Oregon	366,625	417,694	0	14,624	348	799,291
Washington	1,555	529,272	0	97,794	3,194	631,815
Total	651,875	4,100,822	191,488	145,010	62,408	5,151,603
48-State total	29,722,544	19,811,674	1,092,788	2,130,379	3,408,121	56,165,506

Table 126--Annual rated capacity by type of mill and major source of gross income, 1984

Major source of gross income	Meal		Pellets		Blocks		Liquid		Total formula feed	
	Manufac- turers	Capacity	Manufac- turers	Capacity	Manufac- turers	Capacity	Manufac- turers	Capacity	Manufac- turers	Capacity
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons
Feed manufacturing	3,225	41,554,280	2,003	51,269,086	237	792,652	332	3,562,283	3,282	97,178,300
Milk production	48	422,459	5	576	0	0	10	34,320	48	457,354
Cattle feeding	309	8,199,216	29	455,634	10	625,397	20	17,993	309	9,298,240
Hog production	168	1,132,914	10	95,923	5	413	0	0	168	1,229,250
Turkey production	71	1,207,390	33	1,355,007	0	0	0	0	71	2,562,398
Broiler production	250	11,101,982	238	16,716,299	0	0	4	5,331	250	27,823,612
Egg production	144	2,512,378	10	28,777	0	0	0	0	144	2,541,155
Total	6,673	87,417,000	2,652	74,808,000	305	1,576,000	481	3,861,000	6,723	164,695,000
Percent distribution (column)										
Feed manufacturing	48.3	47.5	75.5	68.5	77.5	50.3	68.9	92.3	48.8	59.0
Milk production	0.7	0.5	0.2	1/	0	0	2.0	0.9	0.7	0.3
Cattle feeding	4.6	9.4	1.1	0.6	3.2	39.7	4.1	0.5	4.6	5.6
Hog production	2.5	1.3	0.4	0.1	1.6	0	0	0	2.5	0.7
Turkey production	1.1	1.4	1.2	1.8	0	0	0	0	1.1	1.6
Broiler production	3.7	12.7	9.0	22.3	0	0	0.8	0.1	3.7	16.9
Egg production	2.2	2.9	0.4	0	0	0	0	0	2.1	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Less than .1 percent.

Table 127--Labor: Production employees and all employees, average per manufacturer and output per employee, by major source of gross income, 1984

Major source of gross income	Production employees		All employees	
	Average per manufac- turer	Output per employee	Average per manufac- turer	Output per employee
	Number	Tons	Number	Tons
Feed manufacturing	6.6	2,611	17.5	978
Dairy production	3.6	2,277	8.0	1,032
Cattle feeding	5.2	5,738	11.0	2,726
Hog feeding	1.6	3,118	3.6	1,356
Turkey production	3.9	4,743	9.5	1,942
Broiler production	9.6	7,188	24.3	2,843
Egg production	2.7	5,113	6.8	2,023
Total	5.5	2,963	14.4	1,133

Table 128--Feed grains, proteins, and byproduct feeds: Average number of working days inventory held by formula feed manufacturers, by major source of gross income, by region, 1984

Major source of gross income	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State average	Days
Feed manufacturing:												
Grains	38	33	22	29	53	33	9	42	40	30	32	
Proteins	19	20	8	19	15	20	7	16	14	17	15	
Byproduct feeds	27	18	12	17	14	9	11	29	13	23	18	
Pet food:												
Grains	30	NA	19	NA	NA	60	11	NA	NA	NA	24	
Proteins	10	32	35	NA	12	7	2	NA	NA	NA	17	
Byproduct feeds	1	NA	8	NA	NA	NA	30	NA	NA	NA	12	
Grain storage:												
Grains	NA	218	83	143	30	NA	20	30	60	NA	108	
Proteins	NA	215	46	24	5	NA	NA	30	35	NA	57	
Byproduct feeds	NA	NA	17	28	NA	NA	3	NA	NA	NA	19	
Grain merchandising:												
Grains	33	45	63	57	151	32	60	135	44	45	64	
Proteins	18	16	19	25	17	11	30	26	30	15	20	
Byproduct feeds	30	21	25	34	201	11	NA	40	30	NA	34	
Grain processing:												
Grains	180	45	73	2	10	NA	10	NA	10	NA	46	
Proteins	15	13	12	30	6	NA	7	NA	NA	NA	12	
Byproduct feeds	NA	15	12	NA	30	NA	3	NA	3	NA	13	
Oilseed processing:												
Grains	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	5	
Proteins	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	2	
Byproduct feeds	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	2	
Farm supply:												
Grains	61	89	47	30	62	NA	18	12	NA	NA	60	
Proteins	17	40	9	NA	36	NA	21	18	NA	NA	27	
Byproduct feeds	21	54	9	NA	57	NA	30	22	NA	NA	38	
Hatchery:												
Grains	NA	3	NA	NA	5	NA	NA	NA	NA	NA	4	
Proteins	NA	7	NA	NA	5	NA	NA	NA	NA	NA	6	
Byproduct feeds	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Milk production:												
Grains	NA	14	NA	30	NA	8	NA	NA	NA	NA	14	
Proteins	NA	10	NA	10	NA	13	NA	NA	NA	NA	11	
Byproduct feeds	NA	15	NA	30	NA	3	NA	NA	NA	NA	15	
Cattle feeding:												
Grains	NA	53	5	31	10	14	NA	33	23	16	31	
Proteins	NA	39	100	22	10	14	NA	39	7	6	28	
Byproduct feeds	NA	15	NA	7	11	7	NA	8	7	5	8	
Hog production:												
Grains	NA	50	50	163	57	60	4	NA	NA	10	69	
Proteins	NA	20	14	69	14	30	3	NA	NA	10	25	
Byproduct feeds	NA	14	30	11	NA	NA	4	NA	NA	15	14	
Turkey production:												
Grains	325	13	9	175	177	90	NA	3	NA	NA	74	
Proteins	14	6	5	10	25	7	NA	3	NA	NA	10	
Byproduct feeds	14	18	5	NA	4	NA	NA	3	NA	NA	10	
Broiler production:												
Grains	36	7	4	NA	7	8	28	8	NA	15	16	
Proteins	6	2	4	NA	3	3	4	4	NA	10	4	
Byproduct feeds	5	4	10	NA	3	3	8	6	NA	7	5	
Egg production:												
Grains	30	37	45	30	12	6	8	55	54	7	28	
Proteins	14	6	5	7	4	4	6	12	18	8	8	
Byproduct feeds	7	15	NA	7	7	90	6	4	14	10	16	
Purchased products sales:												
Grains	40	27	45	90	38	160	51	56	NA	140	48	
Proteins	16	14	35	29	19	30	54	32	NA	NA	24	
Byproduct feeds	17	18	23	83	18	NA	9	30	NA	NA	27	
Other:												
Grains	48	154	21	NA	100	NA	NA	5	NA	10	74	
Proteins	6	77	13	3	30	NA	5	14	NA	NA	32	
Byproduct feeds	7	171	4	10	40	NA	NA	NA	NA	NA	56	
Average days:												
Grains	43	46	42	54	58	26	19	43	38	32	43	
Proteins	18	25	15	24	16	13	10	20	15	14	18	
Byproduct feeds	24	23	15	24	30	8	10	23	13	20	20	

NA = No data available.

Table 129--Prepared premixes and microingredient drugs: Average number of working days inventory held by formula feed manufacturers, by major source of gross income, by region, 1984

Major source of gross income	Northeast	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta	Southern Plains	Mountain	Pacific	48-State average
	Days										
Feed manufacturing:											
Premixes	29	23	22	25	32	26	23	35	30	31	26
Drugs	39	33	30	35	34	32	28	37	44	48	34
Pet food:											
Premixes	60	NA	28	NA	NA	NA	105	NA	NA	NA	65
Drugs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Grain storage:											
Premixes	NA	153	14	26	NA	NA	5	50	30	NA	38
Drugs	NA	153	20	42	NA	NA	1	NA	60	NA	41
Grain merchandising:											
Premixes	30	30	24	39	28	60	30	23	20	NA	29
Drugs	NA	30	32	40	35	22	30	36	30	NA	34
Grain processing:											
Premixes	NA	21	11	NA	26	NA	19	NA	NA	NA	18
Drugs	NA	20	21	NA	26	NA	NA	NA	NA	NA	22
Oilseed processing:											
Premixes	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	15
Drugs	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	15
Farm supply:											
Premixes	27	42	20	NA	37	NA	20	22	NA	NA	33
Drugs	81	76	29	NA	18	NA	30	34	NA	NA	47
Hatchery:											
Premixes	NA	20	NA	NA	14	NA	NA	NA	NA	NA	17
Drugs	NA	60	NA	NA	30	NA	NA	NA	NA	NA	45
Milk production:											
Premixes	NA	19	NA	30	NA	15	NA	NA	NA	NA	20
Drugs	NA	19	NA	45	NA	10	NA	NA	NA	NA	23
Cattle feeding:											
Premixes	NA	9	20	19	16	20	NA	10	21	3	14
Drugs	NA	18	NA	27	53	20	NA	11	13	30	22
Hog production:											
Premixes	NA	15	29	14	27	30	15	NA	NA	22	23
Drugs	NA	16	27	99	20	NA	23	NA	NA	45	39
Turkey production:											
Premixes	30	30	26	45	10	NA	NA	60	NA	NA	28
Drugs	30	23	44	NA	18	14	NA	60	NA	NA	32
Broiler production:											
Premixes	22	15	17	NA	19	28	43	31	NA	18	29
Drugs	23	30	22	NA	19	24	20	25	NA	23	22
Egg production:											
Premixes	10	45	7	45	19	22	30	54	89	32	42
Drugs	30	30	25	75	7	30	15	42	90	30	42
Purchased products sales:											
Premixes	22	27	15	46	30	NA	98	NA	NA	NA	33
Drugs	105	32	24	56	22	30	NA	14	NA	NA	39
Other:											
Premixes	20	80	16	NA	50	NA	NA	30	NA	NA	48
Drugs	40	96	19	NA	30	NA	NA	45	NA	NA	55
Average days:											
Premixes	28	29	22	30	29	27	36	30	34	29	28
Drugs	42	39	30	41	29	28	23	33	45	43	34

NA = No data available.

FORMULA FEED MANUFACTURING
SURVEY - JULY 1985

FORM APPROVED
OMB. NO. 05360027
APPROVAL EXP. 5/31/87

Dear Feed Manufacturer:

Your cooperation with this survey is needed to improve information on feed production and distribution to agriculture.

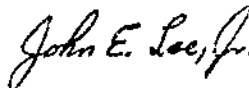
Since no similar survey has been conducted since 1976, the survey will provide important information for your management decisions on plant investment, marketing and services. In addition, this will aid in understanding trends and changes in how animal feed is manufactured, marketed or fed.

Information which you supply will be kept strictly confidential and will be combined with similar reports for summary purposes only.

This survey is endorsed by the American Feed Industry Association (formerly American Feed Manufacturers Association), the National Grain & Feed Association, the National Feed Ingredients Association, and the National Broiler Council.

We ask your cooperation and early response by mail to provide you with the most timely, useful data from this survey. Please complete the questionnaire and return it in the enclosed envelope by August 5, 1985.

Respectfully yours,



John E. Lee, Jr.
Administrator
Economic Research Service

USE TO CORRECT NAME AND ADDRESS, IF NEEDED:					
FIRM NAME					
ADDRESS					
CITY		STATE		ZIP CODE	
IA. MANAGER'S NAME					
IB. PERSON COMPLETING QUESTIONNAIRE					
TELEPHONE NUMBER (include Area Code)					
IC. IF THIS FIRM IS OWNED BY OR AFFILIATED WITH A PARENT FIRM, PLEASE COMPLETE FOLLOWING:					
PARENT FIRM NAME					
ADDRESS					
CITY		STATE		ZIP CODE	
ID. MOST INFORMATION ON THIS SURVEY SHOULD REFER TO CALENDAR YEAR 1984, OR TO YOUR LATEST ACCOUNTING YEAR. IF THE LATEST ACCOUNTING YEAR WAS USED WHEN DID IT END?					
MONTH		DAY	YEAR		001
FOR OFFICE USE ONLY					
STATE	STR	RPT	SAGU	COMP. CODE	002

YOUR COOPERATION IS NEEDED TO MAKE THE RESULTS OF THIS SURVEY COMPREHENSIVE, ACCURATE, AND TIMELY. RESPONSE TO THIS SURVEY IS VOLUNTARY AND NOT REQUIRED BY LAW.

A. GENERAL CHARACTERISTICS OF MILL

1. IS THE OWNERSHIP OF THIS OPERATION HELD BY A (Indicate appropriate number in box 003):				003	
CORPORATION - 1		FARMER COOPERATIVE (INCORPORATED OR UNINCORPORATED) - 4			
PARTNERSHIP - 2		OTHER - 5			
SINGLE OWNER - 3				048	
2. CHECK THE THREE PRINCIPAL ACTIVITIES BY USING SHARE OF GROSS SALES RECEIPTS TO MAKE THIS DETERMINATION AND INDICATE PERCENTS OF GROSS SALES FOR THE THREE ACTIVITIES.				5. HOW MANY SHIFTS PER DAY DID THIS PLANT OPERATE DURING 1984?	
				049	
				HOW MANY HOURS PER SHIFT?	
				050	
				051	
6. PLEASE INDICATE APPROPRIATE NUMBERS IN BOXES 050 AND 051 THAT BEST DESCRIBES THE FEED MILLING OPERATION AT THIS LOCATION.					
DRY FEED - 1 LIQUID FEED - 2 DRY/LIQUID FEED - 3					
STATIONARY ONLY - 1 STATIONARY WITH A MOBILE MILLS - 2 MOBILE ONLY - 3					
7. WHAT IS THE CAPACITY OF YOUR END PRODUCTS AT THIS LOCATION FOR A SINGLE-SHIFT 40 HOUR WEEK (MANUFACTURERS RATED CAPACITY)?					
END PRODUCT FORM				TYPE OF MILL FEED	
				DRY (TONS) LIQUID (TONS)	
TOTAL				052 053	
MEAL				054	
PELLETS				055	
BLOCKS (INCLUDING SOLIDIFIED LIQUID)				056 057	
8. PLEASE SHOW DISPOSITION OF MANUFACTURED FEED PRODUCTION BY THE FOLLOWING CATEGORIES IN 1984. (GIVE TONNAGE FOR EACH METHOD BY TYPE OF FEED)					
DISPOSITION BY METHOD				DRY FEED LIQUID FEED	
A. WHOLESALE (Sold to dealers or jobbers for resale to feeder)				058 059	
B. RETAIL (Sold direct to feeder through salesman or contract)				060 061	
C. FED IN THIS FIRM'S OWN OR CONTRACTED FACILITIES (Feedlots, etc.)				062 063	
(1) To firm's own poultry, live-stock, or other animal's					
(2) For custom feeding of cattle, etc. not your own				064 065	
D. CUSTOM GRIND AND MIX FOR OTHERS (Toll milling, etc.)				066 067	
3. WHAT WAS THE TOTAL NUMBER OF PERSONS (Full-time equivalent) EMPLOYED IN THIS MILL FOR PAY PERIOD ENDING NEAREST MARCH 31, 1984. (Include management, office and delivery personnel, supporting staff, production workers, outside sales and service personnel?)				036	
WHAT WAS THE BREAKDOWN OF THIS TOTAL NUMBER OF PERSONS? (Indicate by number of workers)					
PRODUCTION WORKERS		TRUCKERS		040	
037					
MAINTENANCE & REPAIR		OFFICE & MANAGEMENT		041	
038					
WAREHOUSING		OUTSIDE SALES & SERVICE		042	
039					
4. CHECK APPROPRIATE BOXES OF CUSTOM SERVICES ASSOCIATED WITH FEED SALES PROVIDED BY THIS MILL:				SUBTOTAL (SHOULD EQUAL TOTAL TONNAGE IN 1984)	
LEAST-COST RATION FORMULATION				046	
043					
FEEDING RECORD KEEPING				047	
044					
OTHER SERVICES (Specify)				045	
045					
DESIGN OF FEEDING PRGM				046	
				047	
				048	
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				068	
				069	
				070	
				071	
				072	

B. MANUFACTURED FEED

FOR THE PURPOSE OF THIS SURVEY, PLEASE USE THE FOLLOWING DEFINITIONS IN COMPLETING QUESTIONS 9 THROUGH 16:

COMPLETE FEED - CONTAINS EVERYTHING THE ANIMALS NEED IN THE RATION (EXCEPT MAY OR MAY NOT CONTAIN PROCESSED HAY AND OTHER ROUGHAGE).

SUPPLEMENT - A FORMULA FEED WHICH REQUIRED THE ADDITION OF GRAIN AND SOMETIMES PROTEIN TO MAKE A COMPLETE RATION. USED AT THE RATE OF APPROXIMATELY 200 POUNDS OR MORE (USUALLY MORE THAN 100 POUNDS) PER TON OF COMPLETE FEED.

SUPER CONCENTRATE - DIFFERS FROM SUPPLEMENT IN THAT IT CONTAINS ONLY PART OF THE ANIMAL'S PROTEIN REQUIREMENTS. IT IS ADDED WITH GRAIN AND OTHER HIGH PROTEIN INGREDIENTS (SOYBEAN MEAL, HAYLAGE, ETC.) AT THE RATE OF 100 POUNDS (OR MORE) PER TON TO MAKE A BALANCED RATION.

PREMIX - A COMBINATION OF ONE OR MORE MICRO-INGREDIENTS WITH A CARRIER. USED AT THE RATE OF LESS THAN 100 POUNDS PER TON OF FINISHED FEED.

PRIMARY MANUFACTURED FEED - MANUFACTURED "FROM THE GROUND UP" - FORMULATED FROM SINGLE INGREDIENTS EXCEPT THAT A PREMIX IS SOMETIMES USED AT THE RATE OF LESS THAN 100 POUNDS PER TON OF FINISHED FEED.

SECONDARY MANUFACTURED FEED - MANUFACTURED BY COMBINING SUPPLEMENTS AND OTHER INGREDIENTS. THE SUPPLEMENTS ARE USED AT THE RATE OF 100 POUNDS OR MORE PER TON OF FINISHED FEED. MOST CUSTOM MIXING IN THIS GROUP.

9. OF THE GRAND TOTAL OUTPUT GIVEN IN ITEM 8, HOW MUCH WAS PRIMARY AND SECONDARY MANUFACTURED FEED? (THESE TWO AMOUNTS SHOULD EQUAL GRAND TOTAL OUTPUT GIVEN IN QUESTION 8.)		A. PRIMARY TONS		071	
		B. SECONDARY TONS		072	

10. COMPLETE THE FOLLOWING TABLE SHOWING YOUR PRIMARY FEED PRODUCTION (GIVEN IN ITEM 9A) BY KIND OF FEED AND BY TYPE OF LIVESTOCK FEED.

TYPE OF LIVESTOCK FEED	QUANTITY OF PRIMARY FEED MANUFACTURED (BY KIND)				
	COMPLETE (TONS) 1	SUPPLEMENT (TONS) 2	SUPER CONCENTRATE (TONS) 3	PREMIX (TONS) 4	TOTAL (TONS) 5
POULTRY	073	074	075	076	077
STARTER-GROWER, LAYER-BREEDER					
BROILER	078	079	080	081	082
TURKEY	083	084	085	086	087
DAIRY	088	089	090	091	092
BEEF, SHEEP AND GOATS	093	094	095	096	097
SWINE	098	099	100	101	102
HORSE	103	104	105	106	107
ALL OTHER	108	109	110	111	112
TOTAL	113	114	115	116	117

11. COMPLETE THE FOLLOWING TABLE SHOWING YOUR PRIMARY FEED PRODUCTION (ITEM 9A) BY FORM AND BY TYPE OF LIVESTOCK FEED.

TYPE OF LIVESTOCK FEED	FORM				
	MEAL (TONS)	PELLETS & CRUMBLES (TONS)	CUBES (TONS)	BLOCKS (TONS)	LIQUID (TONS)
POULTRY	118	119		120	
BEEF, SHEEP AND GOATS	121	122	123	124A (ORD.)	124B (SOL. LIQ.)
DAIRY	126	127	128	129	130
SWINE	131	132	133	134	135
ALL OTHER	136	137	138	139	140
TOTAL	141	142	143	144	145

12. WHAT PERCENTAGE OF YOUR PRIMARY FEED PRODUCTION (ITEM 9A) WAS BAGGED?

TYPE OF LIVESTOCK FEED	POULTRY	BEEF, SHEEP AND GOATS	DAIRY	SWINE	ALL OTHER (INCL. GOATS)	TOTAL
PERCENT	146	147	148	149	150	151

C. INGREDIENTS USED AND STORAGE CAPACITY

13. GIVE THE QUANTITY OF INGREDIENTS USED IN PRIMARY FEED MANUFACTURING (ITEM 9A).

INGREDIENTS	QTY. USED IN 1984 (TONS)	INGREDIENTS	QTY. USED IN 1984 (TONS)	INGREDIENTS	QTY. USED IN 1984 (TONS)
GRAIN	152	BYPRODUCT FEEDS	167	BEEF PULP	182
CORN		BREWERS DRIED GRAINS		CITRUS PULP	183
SORGHUM GRAIN	153	DISTILLERS DRIED GRAINS	168	UREA	184
BARLEY	154	CORN GLUTEN MEAL	169	PREMIXES	185
OATS	155	CORN GLUTEN FEED	170	MINERALS	186
WHEAT	156	HOMINY	171	CALCIUM	
OTHER	157	WHEAT MILL FEEDS	172	PHOSPHORUS	187
PROTEINS	158	SOYBEAN MILL FEEDS	173	SALT	188
SOYBEAN MEAL		OTHER MILL FEEDS	174	TRACE MINERALS	189
COTTONSEED MEAL	159	SUGAR	175	OTHER	190
OTHER OIL MEALS	160	FATS	176	INGREDIENTS PURCHASED SEPARATELY	191
FISH MEAL	161	MILK PRODUCTS (DRY)	177	VITAMINS	
FEATHER MEAL	162	LIQUID WHEY	178	DRUGS	192
POULTRY BYPRODUCT MEAL	163	ALFALFA (DEHY)	179	OTHER	193
MEAT MEAL TANKAGE	164	ALFALFA (SUN-CURED)	180	FLAVORS	194
MEAT AND BONE MEAL	165	MOLASSES	181		
OTHER	166				

14. INGREDIENT INVENTORY PRACTICE - HOW LARGE AN INVENTORY OF THE FOLLOWING INGREDIENTS DO YOU USUALLY CARRY AT THIS LOCATION IN TERMS OF WORKING DAYS?				19. FOR STATIONARY MILLS - WHAT WAS THE NORMAL AVERAGE ONE-WAY DISTANCE THAT PRIMARY MANUFACTURED FEED WAS SHIPPED FROM THIS MILL BY (INDICATE BY NUMBER OF MILES):			
GRAIN (NO. DAYS)		195		COMPANY OWNED TRUCK		225	
PROTEINS (NO. DAYS)		196		CUSTOMER OWNED TRUCK		226	
PREMIXES (NO. DAYS)		197		ALL OTHER TRUCKS		227	
DRUGS (NO. DAYS)		198		RAIL		228	
BYPRODUCT FEED (NO. DAYS)		199		BARGE		229	
15. WHAT WAS THE ESTIMATED PERCENTAGE OF PROCESSING SHRINK AT THIS MILL DURING 1984 (COMPARE TONNAGE OF INGREDIENTS USED WITH TONNAGE OF FEED SOLD, SHIPPED, OR FED FROM THE MILL)?				200			
16. WHAT IS THE STORAGE CAPACITY OF THIS MILL (INCLUDE OUTSIDE STORAGE. PLEASE AVOID REPORTING A DUPLICATION OF STORAGE CAPACITY.?)				20. INDICATE THE ENERGY USED IN THE MANUFACTURE OF FEED (PROCESSING ONLY AND EXCLUDE GRAIN DRYING) FOR THIS ESTABLISHMENT IN 1984 (MAKE ESTIMATE IF NECESSARY)?			
STORAGE CAPACITY AT THIS SITE				E. ENERGY			
STORAGE TYPE (IN TONS)				TYPE OF ENERGY			
		BAG		BULK		LIQUID	
FEED GRAIN		201		206		COAL	
OTHER DRY INGREDIENTS		202		207		NATURAL GAS	
LIQUID MOLASSES		203		208		PROPANE	
LIQUID FAT		204		209		FUEL OIL	
MANUFACTURED FEED		205		210		ELECTRICITY	
D. TRANSPORTATION				USED FOR MANUF. OF FEED (NO. UNITS)			
17. WHAT PERCENTAGE OF YOUR INGREDIENTS (QUANTITY BASIS) WERE RECEIVED BY:				TYPE OF ENERGY			
COMPANY OWNED TRUCK		214		COAL		TONS	
ALL OTHER TRUCKS		215		NATURAL GAS		1,000 CU. FT.	
RAIL CAR		216		PROPANE		1,000 GALS.	
BARGE		217		FUEL OIL		1,000 GALS.	
TOTAL		218		ELECTRICITY		1,000 KWH	
18. FOR STATIONARY MILLS - WHAT PERCENTAGE OF YOUR PRIMARY MANUFACTURED FEED LEFT THIS MILL BY:				GASOLINE			
COMPANY OWNED TRUCK		219		DIESEL		1,000 GALS.	
CUSTOMER OWNED TRUCKS		220		F. TECHNOLOGY			
ALL OTHER TRUCKS		221		21. CHECK APPROPRIATE BOXES OF OPERATION WHERE YOUR MILL APPLIES COMPUTERIZED AUTOMATION PRACTICES IN 1984 AND IN 1975 (IF THIS ESTABLISHMENT WAS IN OPERATION THEN).			
RAIL CAR		222		PELLETING		1984	
BARGE		223		MIXING		1975	
TOTAL		224		INGREDIENT STORAGE		237	
				FINISHED PRODUCT STORAGE		246	
				SHIPPING		238	
				FORMULATION		247	
				PURCHASING		239	
				ENERGY MANAGEMENT		248	
				OTHER (Please Specify)		240	
				WAS THIS MILL IN OPERATION IN 1975?		249	
						250	
						251	
						252	
						253	
						254	
						255 (YES)	
						256 (NO)	

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