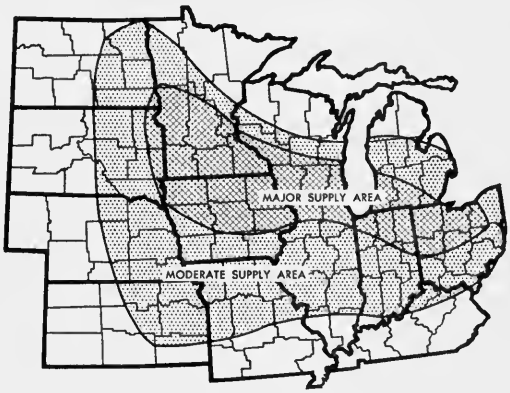
EGG SUPPLY and MARKETING in the NORTH CENTRAL REGION



Agricultural Experiment Stations of Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin and U. S. Department of Agriculture, cooperating

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EGG SUPPLY AND MARKETING in the North Central Region[1]

THE MAIN OBJECTIVES OF THIS STUDY were to describe and analyze supply and egg marketing areas in a way that would show differences among various "homogeneous"[2] parts of the North Central Region[3]; to provide reference data for the development of markets; to determine surplus and deficit areas of egg production within the region; and to furnish researchers, extension workers, and people in the trade with some general background information with which they can appraise current research and guide further research and action programs.

Data on Which Study Is Based

This study is based largely on 1951 data that were collected from egg producers in 1952, as well as on supplementary data covering the years 1925-1953, which were assembled by the Poultry Branch of the Production and Marketing Administration of the U.S. Department of Agriculture.[4] The original intention of the study was to analyze both the egg and poultry situation in the North Central Region. For this purpose, two kinds of questionnaires were mailed, one to a 2-percent sample of farmers,[5] the second to every known egg buyer in the region. The response from the farmers provided detailed information about their egg production and marketing practices, but so little about their poultry production and marketing practices that this aspect of the study had to be excluded. The response from dealers was not as

[1] EMER E. BROADBENT, Associate Professor of Agriculture Marketing, and MICHAL I. ZAWADZKI, formerly graduate assistant in Agricultural Economics, University of Illinois, were primarily responsible for analyzing the data and preparing this report.

[2] This term is used loosely to describe sections of the region having similar egg supply and marketing characteristics.

[3] This term is used here to include Kentucky.

[4] Now part of the Agricultural Marketing Service of the U.S. Department of Agriculture.

[5] More than 40,000 questionnaires were mailed to farmers on January 15, 1952; mailing to nonrespondents was made on February 15, 1952. Of the 14,447 replies, 9,795 records were usable. For the region, the response amounted to 0.68 of the universe.

adequate as was desired[1] and a discussion of their practices is largely confined to the section beginning on page 25.

The data were assembled by representatives of the experiment stations in the thirteen cooperating states, as well as by representatives of the Poultry Branch of the Production and Marketing Administration and the Farmer Cooperative Service of the U.S. Department of Agriculture.

It was assumed, in using the data provided by the farmers, that the 1950 U.S. Census was reliable in its enumeration of farms, chickens on farms, and eggs sold. The statistics given by the farmers in each crop-reporting district were extrapolated to correspond to the figures reported in the Census, and summaries were made from those adjusted statistics to show the important characteristics of the region as well as of areas within the region.

Representativeness of the Sample

Crop-reporting districts (Fig. 1) were used as the basic geographical units from which larger supply and marketing areas were built up. These districts were the smallest units that could be used to obtain adequately large and fairly reliable data. It was recognized, however, that the data may not reflect a local situation within a given homogeneous area because any or all of the factors selected can vary from one crop-reporting district to another, or even within a single district.

Because the number of farmer respondents varied so widely from one crop-reporting district to another, the sample was deprived of its purely random character. This raised the question as to whether and to what degree self-selectivity had impaired the representativeness of the sample. The statistics that were submitted on five factors were therefore checked against the statistics given in the 1950 Census and in independent studies and reports to determine the bias of the sample.

The five factors checked were: (1) the number of layers per egg-selling farm; (2) the frequency distribution of farms by size of flock; (3) the breeds of chickens; (4) the average price per dozen eggs; and (5) the average number of eggs sold per layer.

(1) The survey showed an average regional flock of 143.8 layers; the average shown in the 1950 Census was 134.5.

(2) Comparison of the frequency distribution of farms by size of flock with the Census showed that the survey had an upward bias but

[1] More than 8,500 questionnaires were mailed to dealers on March 15, 1952. Only 2,457 of the 3,102 records were usable, and in some states there was no response from the larger dealers.

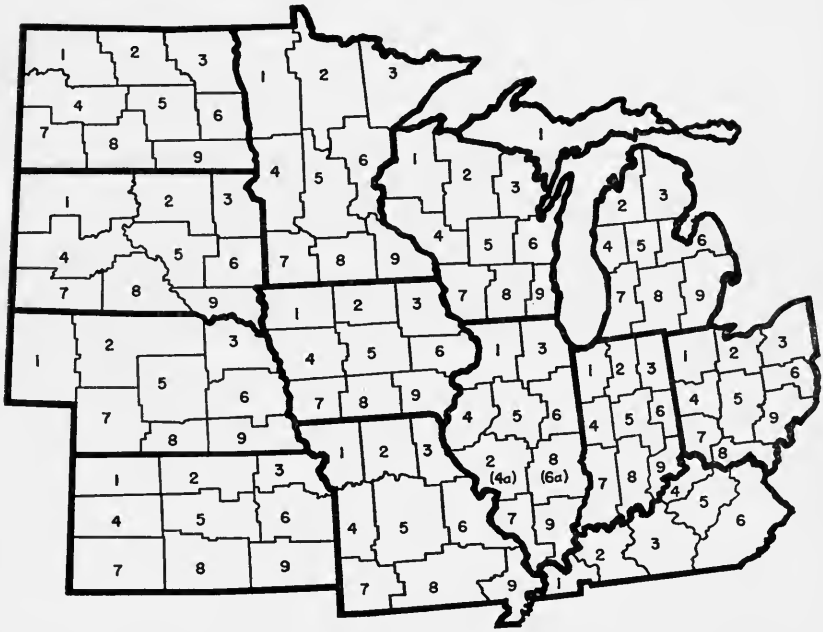

Fig. 1. — Identification of Crop-Reporting Districts

that nevertheless flocks of all sizes were well represented and that the general characteristics of the frequency distribution were maintained.

(3) The relative importance of the various breeds of chickens that were reported by the survey was about the same as that shown by an Illinois study conducted in 1951 and 1952 for each Illinois crop-reporting district.[1]

(4) The average price per dozen eggs in each crop-reporting district closely followed the prices reported by the Crop-Reporting Services of the thirteen cooperating states. The survey showed that prices paid for current-receipt eggs average about 2 cents less in each district than those listed by the Services.

(5) To check the average number of eggs sold per layer, a paired sample of crop-reporting districts was used to compare the findings of the survey with those of the Census. The survey showed that an average of 12.9 dozen eggs were sold per layer in the region — 5.2 dozen or 68 percent more than the average shown in the Census, which reported 7.7 dozen eggs sold per hen.

[1] Unpublished data from Illinois Agricultural Experiment Station, Agricultural Economics Research Project 472.

For each district, the figures of the survey were higher than those of the Census. This difference may be due to the fact that the smaller producers failed to respond to the questionnaires. Yet, although this bias is recognized, it is also recognized that the data tend to depict the regional egg situation more correctly than if they had been biased downward, because the greatest volume of eggs is sold by larger producers. For this reason, the assumption was made that the response from the producers represented the egg supply and marketing conditions that prevailed in each crop-reporting district.

The Egg Situation in the Region

The North Central Region produces more than half the eggs of the United States. This production exceeds the local needs of the region by about 40 percent, and the surplus[1] is marketed from coast to coast.

From 1950 to 1952 the region produced an average annual surplus of over 30 million cases of eggs. The area that produced the largest surplus in the region includes the upper two-thirds of Iowa and the lower half of Minnesota, and eggs from this area accounted for more than half the surplus exported from the region. The largest deficits occurred in metropolitan districts near greater Chicago, Detroit, and Cleveland. Small deficits occurred in districts near St. Louis, Minneapolis, Indianapolis, and Cincinnati, while still smaller deficits occurred in districts in the northern lake states and in eastern Kentucky where egg production was generally on a subsistence basis. The extreme northwestern parts of the region, while they showed a slight surplus, had seasonal deficits. Surplus and deficit egg production per square mile is shown in Fig. 2, and the general direction of market flow can be inferred from that illustration.

External Egg Markets

Eggs flowed from the region in three major directions. The first in importance was east to Boston, New York, and Philadelphia; the second, south to Atlanta, New Orleans, and Memphis; and the third to San Francisco and Los Angeles. The chief sources of eggs for Chicago were, in order of importance, Wisconsin, Iowa, Illinois, and Min-

[1] Surplus and deficit egg supplies were estimated by multiplying the average per-capita egg consumption in the United States by the total population and subtracting this sum from reported figures for egg production. For uniform comparison, these surpluses and deficits were reduced to a square-mile basis.

nesota. With decentralization of the Chicago egg-marketing system since the war, the terminal wholesale market has become considerably less important than it used to be. This is illustrated by the fact that egg receipts at Chicago decreased from an average of 5.1 million cases a year during 1940-1945 to 4.0 million cases in 1950, to 3.0 million cases in 1953.

Delineation of Supply Areas

The method used to delineate supply areas (as well as marketing areas) was a departure from the conventional method of summary and analysis. Instead of delineating areas on the basis of civil boundaries, certain sections of the region were grouped into "areas" on the basis of common characteristics. These characteristics were determined by certain factors. The method adopted involved:

1. Selecting pertinent factors — eggs sold per square mile; the number of chickens per square mile; the average size of the laying flock; the relative importance of specialization as indicated by the percentage of eggs sold by large and small producers; and the predominant breed of chickens.

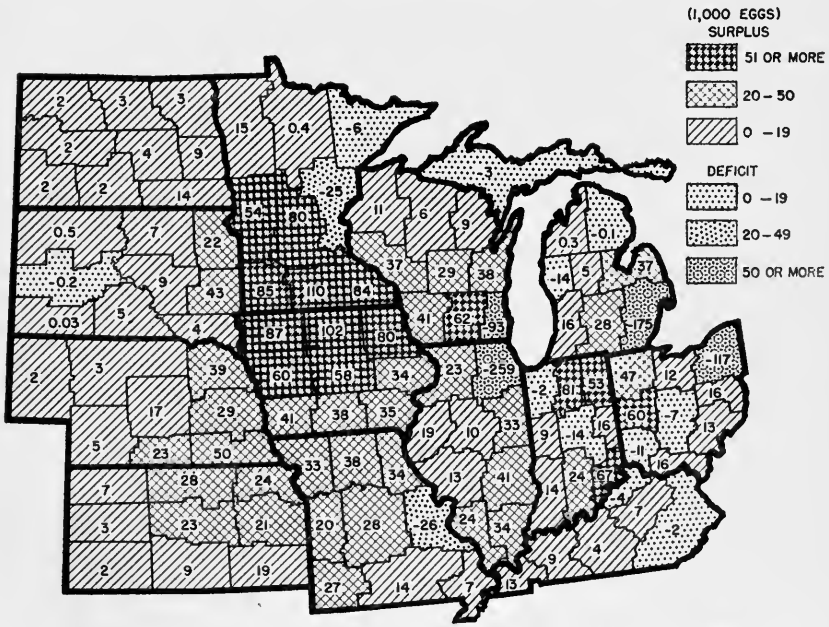

Fig. 2. — Surplus and Deficit Egg Production per Square Mile
(Based on 1950 Census)

2. Expressing the statistics on these factors in simple numerical form for each crop-reporting district.

3. Transferring the data on these factors to maps of the region and examining the data to note intraregional differentiation (see Figs. 2 and 16 to 20 in the Appendix beginning on page 33).

4. Comparing the maps to integrate the results in a summary map of supply areas, each composed of crop-reporting districts displaying similar features, yet each distinctly different from any other area in at least one important respect (Fig. 3).

Analysis of Supply Areas

Fig. 3 shows the eight supply areas into which the region was divided. Detailed summaries of supply areas appear in the Appendix, Tables 10 to 17.

The most intensive supply areas were found where there was a favorable combination of abundant feed, relatively moderate climate, and proximity to markets. However, the greatest surplus of eggs occurred in areas at a moderate distance from main consuming centers rather than in areas immediately adjacent to them. The average number of eggs sold per square mile in districts having the nine largest cities[1] was 2,200 dozen per year — only about half the number reported in Areas 1 and 2, the two areas having the most intensive supply. In the suburban districts of these nine largest cities there were small, medium, and very large flocks, but these districts had not been combined into a separate supply area. The outstanding feature of supply in these districts was regularity. Fall sales were equal to spring sales. Only in districts around Indianapolis and Kansas City were fall sales below 90 percent of spring sales.

Area 1 (north and west of Chicago to the western boundaries of Minnesota and Iowa) and **Area 2** (between Chicago and Detroit and Toledo and Cleveland) were the most intensive supply areas. Regionally, Area 1 had the largest average flock (180 layers), as well as the highest egg sales per square mile (4,671 dozen). Area 2, which lies closer to the larger cities, had more specialized production, and over half its supply came from producers who sold more than 83 dozen eggs a week. The average sales per layer in this area were highest for

[1] In alphabetical order they are Chicago, Cincinnati, Cleveland, Detroit, Indianapolis, Kansas City (an average of three districts taken for this city), Milwaukee, Minneapolis-St. Paul, and St. Louis. Populations in the metropolitan areas of these cities in 1950 ranged from 552,000 for Indianapolis to 5,495,000 for Chicago.

the region (118 eggs per hen), with fall sales being even higher than spring sales. In both these areas, more than 50 percent of the hens were Leghorns.

Area 3, which is south of Chicago and south of Areas 1 and 2, was a fairly intensive supply area. Sales per square mile averaged 2,712 dozen a year, which was well above the regional average of 1,699. Other characteristics of this area approximated the regional averages, although the area had greater seasonality of supply than Areas 1 and 2. Because this area includes Chicago and the outlying districts of South Dakota, Nebraska, and Missouri, it was the most heterogeneous of all the areas.

Areas 4 and 5, both of which are widespread, one lying north and the other south of the first three areas, were moderately intensive. Sales of eggs per square mile were just a little below the regional average. Area 4 had slightly larger flocks and higher sales per layer than Area 5, and where three-fourths of the birds in Area 5 were heavy breeds, over half of the chickens in Area 4 were Leghorns. Both areas contain some large metropolitan as well as rural districts, but intensive egg production was prevented by their having less favorable climate and by their being at a greater distance from main markets than Areas 1, 2, and 3.

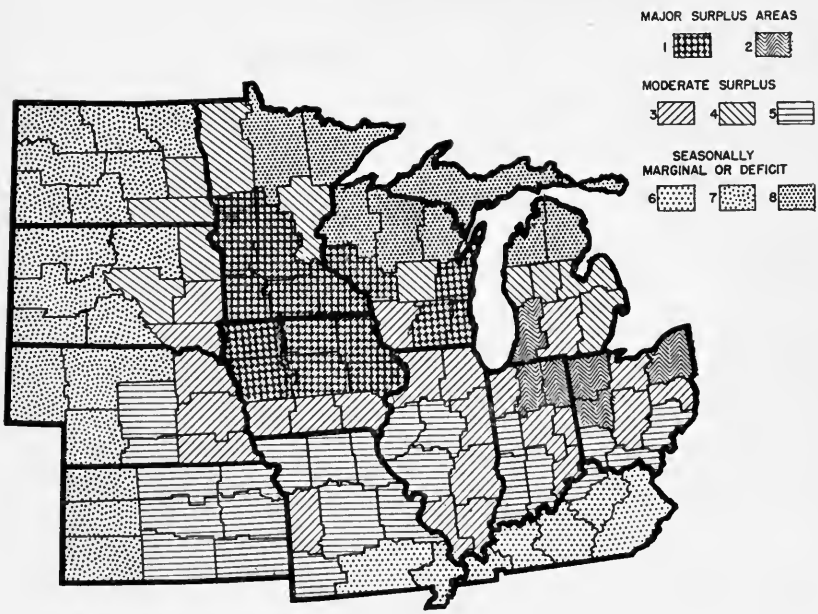

Fig. 3. — Egg Supply Areas in the North Central Region, 1951

Areas 6, 7, and 8 were marginal in that their low production primarily served local needs. The difference between supply and local needs was negligible: many of the districts in these areas had a small surplus in the spring and a small deficit in the fall.

In Area 6, which is composed of five districts in Kentucky and two southern districts in Missouri, the number of chickens per square mile was fairly high, but small flocks of predominantly heavy breeds and a low rate of lay combined to give this area the lowest sales per flock as well as per square mile for the region.

Areas 7 and 8, which lie in the extreme western part and in most of the northern territory of the region, had marginal egg production because of rather unfavorable climate and the fact that they were a long distance from main markets. Area 8, however, besides having the fair-sized city of Duluth, attracts many tourists during the summer and fall. This has brought some degree of specialization to egg production in the area. About 17 percent of the sales in Area 8 were made by producers selling 83 dozen or more eggs a week (less than 5 percent of the sales in Area 7). Fall sales amounted to 82 percent of spring sales (19 percent more than in Area 7). Sales per hen were larger in Area 8, where the Leghorn breed predominated, than in Area 7, where Leghorns constituted less than one-third of all breeds.

Marketing Patterns in Supply Areas

Differences in marketing patterns *within* some of the supply areas, particularly in Areas 3, 4, and 5, were at least as great as those *between* any two areas. The greatest variations among areas were in amount of grading (Fig. 4), extent of farm pickup (Fig. 5), types and number of outlets used (Figs. 6 to 9), and in price of eggs (Figs. 10 and 11).

Amount of grading

The percentage of eggs sold on a graded basis did not rise proportionately with greater intensity of supply. In Areas 1 and 2 where supply was most intensive, about 60 percent of the eggs were sold on grade. In Areas 6 and 7, where supply was marginal, little more than 10 percent were graded by size and quality at the first sales level.[1] Selling on grade was more common in Area 4 than in Area 3, though both were moderately intensive supply areas. Grading was also more

[1] Dealers buying less than 400 cases of eggs a week were classified as first receivers or first sales level.

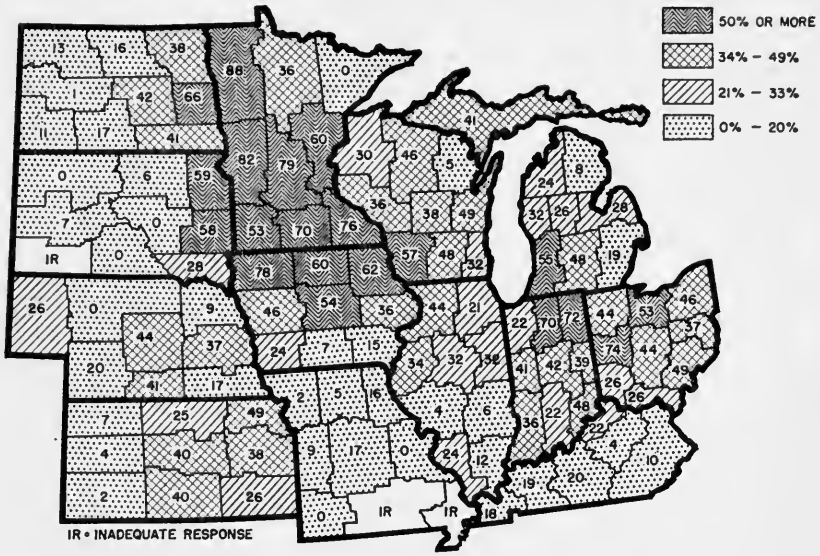

Fig. 4. — Percent of Farmers' Eggs Sold on Grade, 1951
(Simple average of spring and fall data)

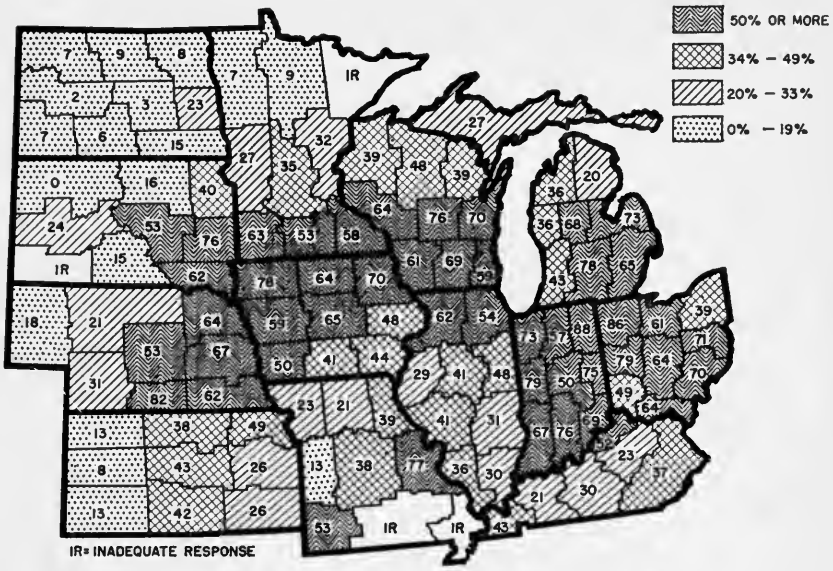

Fig. 5. — Percent of Farmers' Eggs Picked Up at the Farm, 1951
(Simple average of spring and fall data)

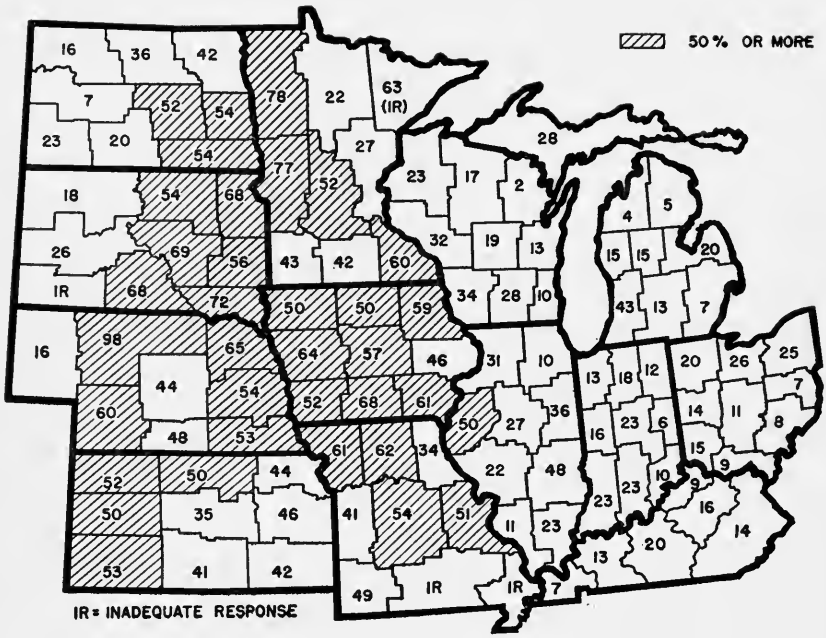

Fig. 6. — Percent of Farmers' Eggs Sold to Local Produce Stations, 1951
(Simple average of spring and fall data)

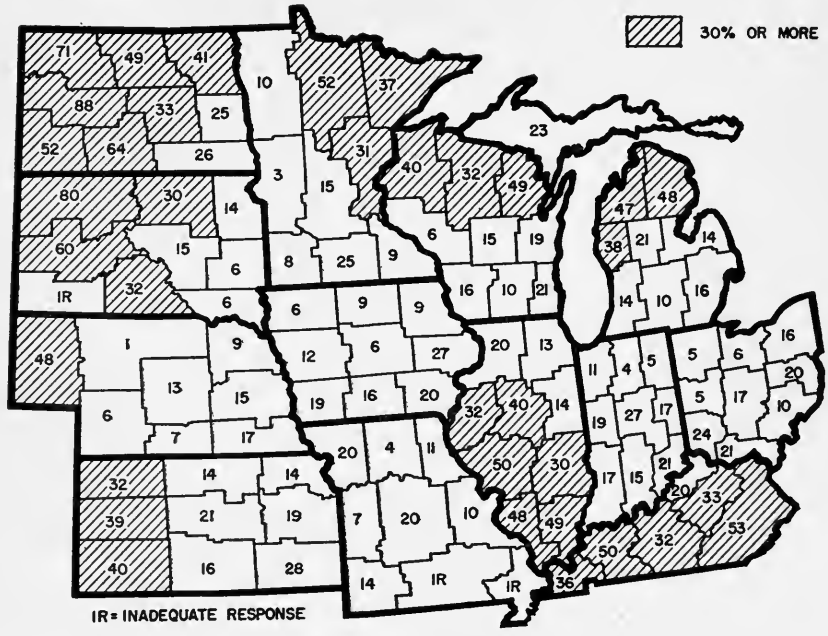

Fig. 7. — Percent of Farmers' Eggs Sold to Retail Stores
(Simple average of spring and fall data)

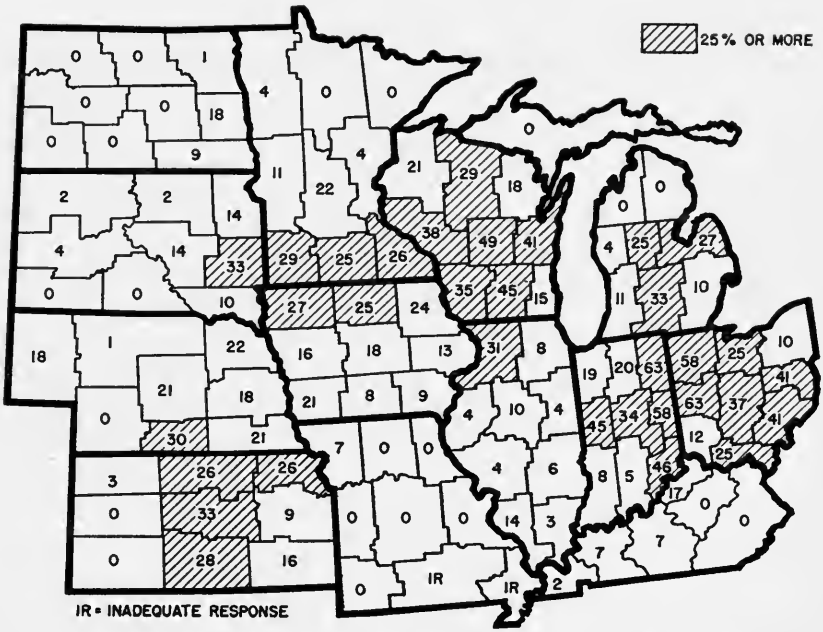

Fig. 8. — Percent of Farmers' Eggs Sold to Truck Routes From Assembly Plants, 1951
(Simple average of spring and fall data)

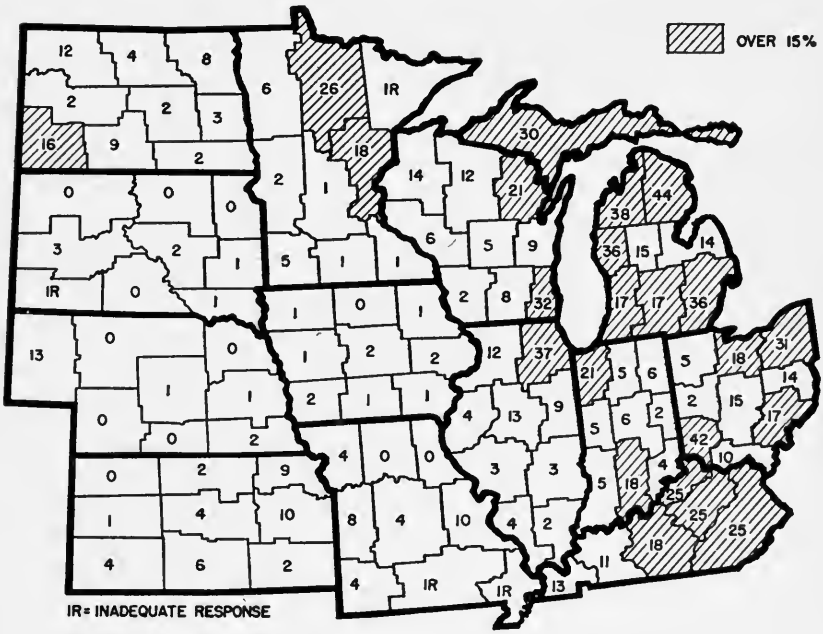

Fig. 9. — Percent of Farmers' Eggs Sold to Institutions and Direct to Consumers, 1951
(Simple average of spring and fall data)

common in Area 8 than in Area 5, which was moderately intensive, or in Area 6, which did not have enough eggs to supply local needs all the year round. As will be observed from looking at Fig. 4, a higher percentage of eggs was sold on grade in the northern part of the region than elsewhere.

Farm pickup

Here again the percentage of eggs picked up at the farm did not rise proportionately with greater intensity of supply. Farm pickup was most important[1] in Area 2 (about 61 percent), which is an eastern area of intensive supply, and least important in Area 7 (less than 10 percent), a western area of marginal supply. If the general section in which farm pickup was important were depicted on a map, the lines would extend across the center of the region from eastern Michigan and Ohio to the middle of South Dakota and Nebraska (Fig. 5). The lines, moreover, would take in most of the districts where the majority of eggs were sold on grade (compare Figs. 4 and 5).

Types of outlets used

The outlets used by farmers in the various supply areas were affected by type and number of outlets available, the prices paid for eggs, and the distance to consuming centers. The percentage of eggs sold to different types of outlets therefore was even less related to intensity of supply than were amount of grading and farm pickup.

Local produce stations. Local produce stations bought about 40 percent of the farm eggs in the region, and were about equally important in Area 7, a marginal supply area, as in Area 1, an intensive supply area. At the first sales level, the percentage was more than twice as high west of the Mississippi river as east of it.

Retail stores. Retail stores were the most important type of outlet in Areas 6 and 8; in the northern part of Area 7, where low production and small flocks predominated; and in southern and central Illinois, where supply ranged from moderately to fairly intensive.

Truck routes. Truck routes from assembly plants, because they need a minimum volume to operate efficiently, were more important in areas having an intensive rather than an extensive supply. However, the percentage of eggs going to this type of outlet was a little higher in central Kansas (located in Area 5, which was moderately inten-

[1] Farm pickup was considered important when more than half the eggs produced in an area were picked up at the farm.

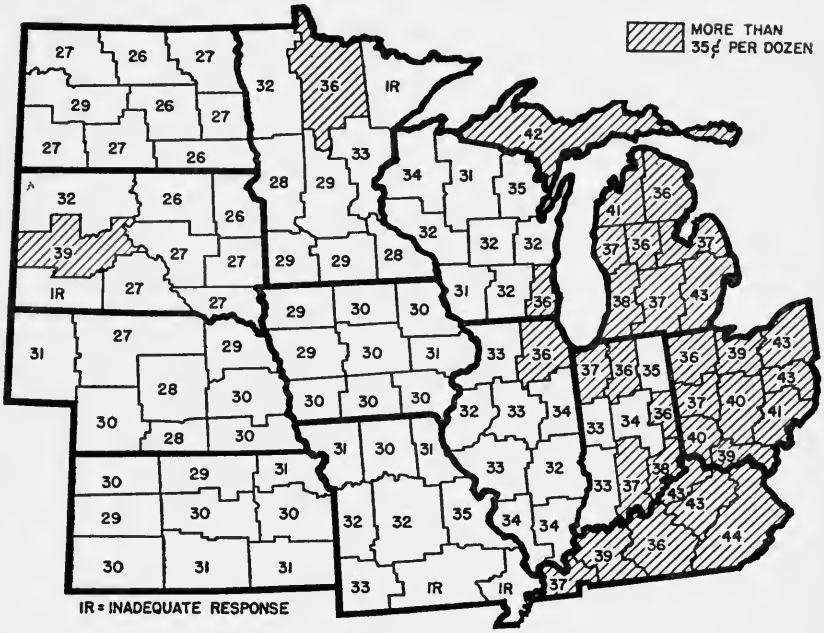

Fig. 10. — Prices Received by Farmers for Current-Receipt Eggs, January 14-19, 1952

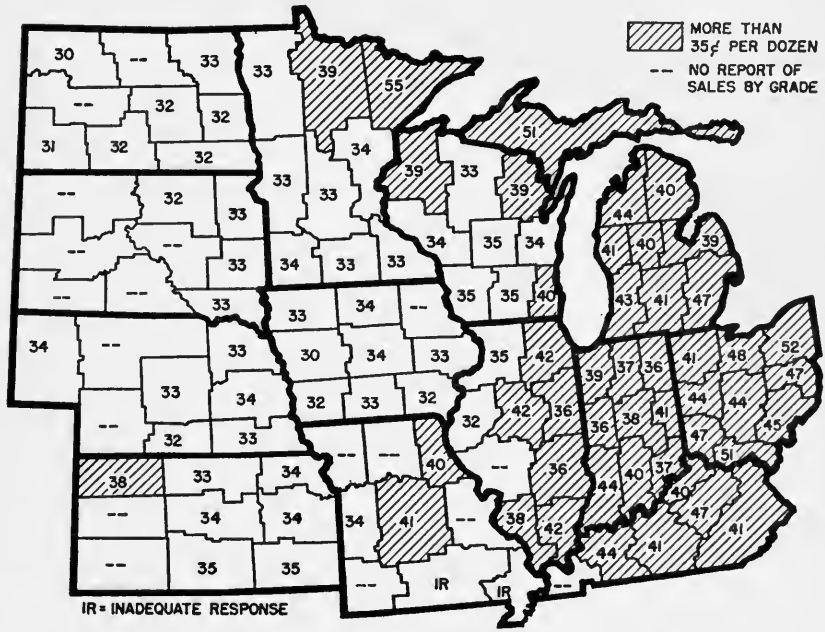

Fig. 11. — Prices Received by Farmers for Grade A Large Eggs, January 14-19, 1952

sive)[1] than in southern Minnesota or in southern Wisconsin, which were in the most intensive supply areas.

Number of outlets used. Seventy percent of the producers used only one outlet for their eggs; 26 percent used two outlets; and 4 percent used more than two. The number of outlets used, like the types of outlets used, failed to show any correlation with intensity of supply. Selling to several outlets was slightly more common in the eastern, more urbanized parts of the region than in the western, rural parts. In the more densely populated parts of the region, consumers, institutions, and hucksters buying directly from producers offered alternative outlets.

Price of eggs

Egg prices for the region were generally below the national average. There was a gradual west-to-east increase in prices — the influence of the larger eastern consuming centers — that could be observed east and southeast of Chicago. The only exceptions to this trend were the prices that prevailed in three extreme western crop-reporting districts. Prices there were higher than in adjacent districts, largely as a result of seasonal shortages.

Prices were lowest in the western districts that were in the Dakotas and Nebraska. Only in the eastern districts that were in Michigan, Ohio, and Kentucky were prices above the national average. Producers who sold Grade A Large eggs in general received 4 to 6 cents over current-receipt prices. Districts where producers received the same or lower prices for Grade A Large eggs than for current receipts were Illinois 4, Indiana 9, and Kentucky 4 and 6. Comparative prices are shown in Figs. 10 and 11.

Delineation of Marketing Areas

To delineate homogeneous egg marketing areas in the region, a new division of the North Central Region was made. This division was based on interdistrict differences in three marketing factors: (1) intensity of supply, (2) basis of payment, and (3) delivery from or pickup at the farm. The twelve areas that were delineated in this way are shown in Fig. 12. Detailed summaries of marketing areas appear in the Appendix, Tables 18, 19, and 20.

Area 1 includes districts adjacent to seven of the largest cities in

[1] The fact that cream and egg routes in Area 5 were integrated may account for the importance of truck routes in central Kansas.

the region. Regionally, the largest volume of eggs was handled in these districts and the highest prices prevailed. Local produce stations and truck routes from assembly plants were important first receivers in these districts. Producers in these districts took advantage of their proximity to customers: they sold one-third of their eggs to institutions and directly to consumers, one-third to retail stores, and one-third to hucksters. Hucksters in these districts, catering to consumers who desired "quality" eggs, had direct personal contact with large producers, who sorted their eggs for size only and sold them as "producer pack eggs." The prices producers received by selling eggs under this system were probably greater than they would have been had they sold eggs on grade.

The suburban marketing areas of Minneapolis-St. Paul (adjacent to great surplus-producing areas) and those of St. Louis were exceptions to the suburban marketing pattern of the region. In Minneapolis and St. Paul, most of the eggs were sold on grade at the first sales level, and pickup at the farm was less common than in other cities in the region. Near St. Louis, producers as well as dealers sold most of their eggs on a farm-run basis.

Area 2 includes the northern half of Iowa, the southern half of

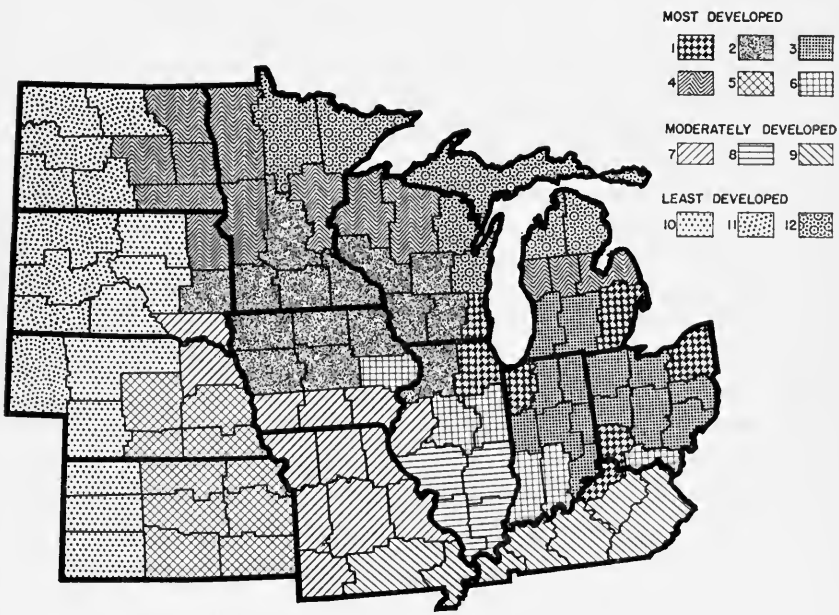

Fig. 12. — Egg-Marketing Areas in the North Central Region, 1951

Minnesota, and parts of Wisconsin, sections which had the most intensive egg supply in the region. The greatest difference in marketing between the north and south of the region occurred in areas contiguous to this area. Here a high percentage of eggs were picked up at the farm and sold on grade. Local produce stations were the most important outlet, and truck routes from assembly plants were next in importance. Large consuming centers were not so important for direct sales as they were, for example, in Area 1. Prices producers received reflected an abundant supply of eggs.

Area 3, which includes Ohio, Michigan, and Indiana, had, in general, the highest prices for eggs bought and sold. Producers sold on a one-price as well as on a graded basis, and dealers sold eggs chiefly on grade. For the region as a whole, this area had the highest percentage of eggs picked up at the farm. Truck routes from assembly plants picked up twice as many eggs as produce stations received. Sales made directly to institutions and consumers were also above the regional average, and the average prices producers received for eggs were the highest for the region.[1]

Area 4, lying north of Areas 2 and 3, had essentially the same marketing system in its southern sections as Areas 2 and 3. Area 4, however, was the most heterogeneous area in the entire region, for the marketing system varied considerably, largely owing to varying intensity of production and to varying distance from high-priced outlets. The two western crop-reporting districts in Minnesota sold over 80 percent of their eggs on grade and less than 20 percent were picked up at the farm. In districts 5 and 6 in Michigan, on the other hand, slightly more than 25 percent of the eggs were sold on grade and over 65 percent were picked up at the farm. There was also considerable variation in the relative importance of outlets within each of the various districts of this area. The farther north one moved in the western part of the area (northwestern Minnesota), the more important direct delivery to outlets became.

Areas 5 and 6 had small production and light seasonal deficits and surpluses, largely as a result of small flocks. In Area 5, over 60 percent of the eggs were sold on a current-receipt basis; in Area 6, 46 percent. Area 5, which includes districts in western Nebraska and Kansas, sold less than 35 percent of the eggs on grade and over 40 percent were picked up at the farm. Area 6, though closer to major markets, sold a slightly smaller percentage of eggs on grade, and nearly 50 percent were picked up at the farm. In Area 5, about 45

[1] Cooperatives were important in the development of egg marketing in this area as well as in some others.

percent of the eggs were bought by local produce stations and nearly 25 percent by truck routes from assembly plants. In Area 6, produce stations bought less than 30 percent of the eggs, and truck routes from assembly plants, 17 percent. In Area 6, two other outlets alternated by season as the second most important outlet. In the spring, hatcheries bought 25 percent of the eggs; in the fall, retail stores bought over 25 percent. The average price paid for eggs was 4 to 7 cents higher in Area 6 than in Area 5.

Areas 7, 8, and 9 differed from the other areas in that producers as well as dealers appeared to insist less on high quality. Only a low percentage of the eggs was bought on a quality basis — about 15 percent in Areas 7 and 8 and about 10 percent in Area 9.

In Area 7, which lies almost entirely west of the Mississippi river, 50 percent of the eggs were picked up at the farm, which is close to the regional average, but in Areas 8 and 9 (southern Illinois and Kentucky) only 35 percent were picked up at the farm. In Area 7, local produce stations bought 60 percent of the eggs and were by far the most important outlet. In Area 8, retail stores and produce stations were the most important outlets. In Area 9 (Kentucky and southeast Missouri), retail stores were the most important outlet. They bought 40 percent of the eggs, whereas local produce stations bought only 15 percent. While hatcheries in this area were an important outlet in the spring, direct sales to institutions and consumers were important all year round. Prices in Area 7 were among the lowest in the region; those in Area 9, among the highest.

Areas 10 and 11 had few eggs picked up at the farm and sold on a graded basis. Most of the eggs were delivered to outlets by the producers themselves. Low production aimed at satisfying only the local needs of a sparse population may account for this situation. Regionally, Area 10 sold the smallest percentage of eggs on grade (2 percent in spring and 5 percent in fall), and Area 11 had the lowest percentage of eggs picked up at the farm (12 percent in the spring and 11 percent in fall). The main difference between these two areas was in the type of outlet that predominated. In Area 10, local produce stations were by far the most important first receivers, buying nearly 58 percent of the eggs, and retail stores were second, buying about 30 percent of the eggs. In Area 11, only about 22 percent of the eggs went to local produce stations and over 60 percent to retail stores. In both areas, most of the eggs purchased by retail stores were taken in trade, and there is little doubt that local produce stations picked up most of the surplus eggs from the retail stores. The lowest average price paid for eggs in the region occurred in these two areas.

Area 12, which consists of the major part of Supply Area 8, reported more than 25 percent of its eggs sold on a size basis. The percentage sold on a current-receipt basis was smaller in this area than in Areas 5 and 6. About 30 percent of the eggs were picked up at the farm. The most important outlets were retail stores, institutions, and direct sales to consumers. Only 15 percent of the eggs went to local produce stations — a smaller proportion than for any other area in the region.

Some General Relationships Between Supply and Marketing Factors

To establish certain relationships between supply and marketing factors, tabulations were made on two bases: (1) dozens of eggs sold per week by producers, and (2) sales per square mile by producers. The tabulations made on the first basis served to indicate intensity of supply for supply areas; tabulations made on the second basis served to indicate intensity of supply for the region as a whole. These figures were cross-tabulated to show relationships between grading, form of delivery, and the relative importance of types of outlets.

Intensity of supply in relation to farm pickup and grading

Areas having a high percentage of eggs picked up at the farm and graded coincided roughly with areas that had intensive egg supplies (Tables 1, 2, and 3). In some supply areas, this relationship varied somewhat by season and by form of delivery. Supply Areas 1, 2, and 4, which were areas of intensive supply (Supply Area 3 was an exception), had in both spring and fall more eggs picked up at the farm and graded than delivered by farmers and graded. Only in fall did Areas 7 and 8 have more eggs picked up at the farm and graded than delivered by farmers and graded.

The percentage of eggs picked up at the farm and the percentage of grading were substantially affected by intensity of supply. Both these percentages increased as the volume of producers' egg sales increased. The greatest increase occurred when the volume of sales mounted from 5 dozen eggs per week to 55 dozen eggs per week. Beyond this volume, the percentage of eggs picked up at the farm and the percentage of eggs graded tended to decrease.

In crop-reporting districts where the sales of eggs per square mile ranged from 500 to 1,500 dozen, the percentage of eggs picked up at the farm was more than twice as high as in districts where sales were

Table 1. — Basis of Payment for Eggs Picked Up at Farm and for Eggs Delivered by Farmers in Supply Areas, North Central Region, 1951

Supply area	Percent picked up at farm	Percent of those picked up at farm that were—			Percent of those delivered by farmers that were—		
		Ungraded	Sorted for size	Graded	Ungraded	Sorted for size	Graded
			Spring				
1	56	27	13	60	24	17	59
2	65	16	26	58	29	18	53
3	60	61	14	25	47	16	37
4	46	36	17	47	53	18	29
5	45	70	10	20	50	11	39
6	28	79	7	14	68	6	26
7	9	76	8	16	78	3	19
8	34	46	25	29	49	19	32
Weighted regional average	48	48	14	38	39	16	45
			Fall				
1	59	16	16	68	16	23	61
2	60	7	27	66	10	33	57
3	65	44	24	32	26	31	43
4	53	23	24	53	29	37	34
5	52	58	20	22	34	21	45
6	30	67	21	12	67	21	12
7	11	70	14	16	80	6	14
8	31	29	35	36	31	36	33
Weighted regional average	45	34	22	44	23	28	49

Table 2. — Percent of Eggs Picked Up at the Farm According to Volume of Farmers' Weekly Sales in Supply Areas, North Central Region, Spring, 1951

Dozen eggs sold per week	Average weekly sales	Percent picked up in supply areas—								Simple average	Rate of change
		1	2	3	4	5	6	7	8		
1–7	5	20	42	27	34	23	22	2	32	25	.65
8–37	22	44	62	45	42	35	22	7	29	36	.24
38–82	55	56	70	60	48	45	22	10	42	44	.05
83 and over	132	59	59	69	45	52	56	16	32	48	

Table 3. — Percent of Eggs Graded According to Volume of Farmers' Weekly Sales in Supply Areas, North Central Region, Spring, 1951

Dozen eggs sold per week	Average weekly sales	Percent graded in supply areas—								Simple average	Rate of change
		1	2	3	4	5	6	7	8		
1–7	5	17	15	14	13	9	7	5	5	11	.71
8–37	22	45	29	19	31	20	8	15	17	23	.33
38–82	55	61	42	30	36	25	35	20	26	34	.14
83 and over	132	61	68	45	51	40	28	12	56	45	

less than 500 dozen per square mile. Regionally, as the sales of eggs per square mile exceeded 4,500 dozen, the proportion of eggs picked up rose to 63 percent of the total volume of farm eggs sold.

Sales per square mile in relation to grading

The relation of sales per square mile to the percentage of eggs sold on grade by producers followed a slightly different pattern. A difference of a few hundred dozen eggs (from less than 500 to 500-1,500 dozen per square mile) raised the percentage of eggs graded from 16 to 30 percent. The largest rise in the relation of sales per square mile to percentage of eggs graded occurred when sales per square mile increased from 2,501-3,500 dozen to 3,501-4,500 dozen. The proportion of eggs sold on grade when the volume rose that high increased from 37 to 62 percent. When, however, sales per square mile exceeded 4,501 dozen, the percentage of eggs picked up and sold on a graded basis did not increase proportionately (Table 4).

Although not shown in Table 4, it should be pointed out that when districts having the highest sales per square mile were subdivided into two groups — one having sales ranging from 4,501 to 5,500 dozen eggs and the other having more than 5,500 dozen — the districts with the higher sales per square mile showed a slight decrease in the percentage of eggs picked up at the farm as well as in the percentage of eggs graded. These decreases did not occur in all districts; they only reflected the well-known trend of large producers shifting to a one-price sales program.

Intensity of supply in relation to weekly volume and type of outlet

The most important type of outlet for egg producers selling more than 7 dozen eggs per week was the local produce stations. For farmers selling less than 7 dozen eggs per week, retail stores were the most important type of outlet. Farmers in that category sold 32 percent of their total volume to retail stores on a "trade" basis and an additional 16 percent on a cash basis — a total of 48 percent as compared with the 23 percent they sold directly to consumers.

In general, as the volume of producers' eggs sold per week increased, retail stores and direct sales became relatively less important, and hatcheries, local produce stations, and, particularly, truck routes from assembly plants became relatively more important. While farmers whose volume of sales ranged from 1 to 7 dozen eggs per week sold only 3 percent of that volume to truck routes from assembly plants,

Table 4. — Relation of Eggs Sold per Square Mile to Percent of Eggs Sold on Grade and to Percent of Eggs Picked Up at the Farm in the North Central Region, Spring, 1951

Dozens sold per sq. mile	Number of districts	Average sales per sq. mile	Percent of eggs graded	Percent of eggs picked up	Rate of change in percent graded	Rate of change in percent picked up
0– 500	24	190	16	14		
					+1.7	+3.1
501–1,500	23	1,030	30	40		
					+ .2	+1.2
1,501–2,500	34	2,000	32	52		
					+ .6	+ .8
2,501–3,500	14	2,850	37	59		
					+2.1	+ .2
3,501–4,500	7	4,050	62	61		
					+ .3	+ .1
4,501–8,000	9	5,790	68	63		

farmers whose volume of sales exceeded 83 dozen eggs per week sold 25 percent of that volume to truck routes from assembly plants (Table 5). Hatcheries, it should be noted, became an important outlet for the larger producers only in spring. In fall, they were far less important.

Marketing Practices of Dealers

The response of dealers to the questionnaires was far less adequate than that of farmers (see footnote on page 6), and data from the two surveys are not wholly comparable. Nevertheless, some general statements can be made.

Buying ungraded eggs

The most significant fact is that most dealers throughout the region bought some eggs on a current-receipt basis, re–sorted and rehandled

Table 5. — Percent of Eggs Sold to Different Outlets According to Volume of Farmers' Weekly Sales, North Central Region, Spring, 1951

Dozen eggs sold per week	Local produce stations	Truck routes from assembly plants	Huck-sters	Retail stores (cash)	Retail stores (trade)	Hatch-eries	Insti-tutions	Direct to con-sumers	Other	Total
1– 7	20	3	3	16	32	2	1	23	(*)	100
8–37	32	12	6	13	19	5	1	11	1	100
38–82	36	22	7	9	8	10	1	6	1	100
83 and over	34	25	8	7	3	14	2	4	3	100
Simple average	31	16	6	11	15	8	1	11	1	100

* Less than 0.5 percent.

them, and sold most of them on a graded basis. Dealers reported buying a much higher percentage of eggs on grade than farmers reported selling eggs on grade (compare Figs. 4 and 13). This difference was especially notable near large cities where dealers bought eggs from other dealers and from farmers in high surplus-producing areas, as well as in districts where farmers sold ungraded eggs to institutions and directly to consumers. Where dealers sold more shell eggs on grade than they purchased on grade, other dealers rather than retail stores were the predominant outlet.

Buying and selling eggs on grade

Dealers who reported buying most of their eggs on grade were in that part of the region extending from eastern North Dakota to eastern Ohio, which includes a large part of Marketing Areas 1 to 4. The section in which dealers reported selling most of their eggs on grade covered a larger territory and was located farther north. The area with the darkest shading in Fig. 13 represents districts where dealers bought 50 percent or more of their eggs on grade. The area with the darkest shading in Fig. 14 shows where dealers sold two-thirds or more of their volume on grade. The proportion of shell eggs sold by dealers on a graded basis in the region as a whole was quite high, about two-thirds of the total volume in spring and three-fourths of the total volume in fall. In certain districts, the range was from zero to about 90 percent.

Sale of liquid, frozen, and shell eggs

The reporting dealers sold less than 3 percent of their eggs in liquid or frozen form, but they sold 11 percent of their spring volume and 3 percent of their fall volume to breakers and dryers. The data indicated that egg breaking and drying were particularly important in Missouri and in the two southern districts in Illinois. There dealers froze or dried more than half the volume of eggs they bought in the spring months. In southwestern Indiana, in parts of Kentucky, in southwestern Iowa, and in the eastern parts of Kansas, Nebraska, and South Dakota, breaking was also relatively important. Most of the dealers in these areas candled the eggs before breaking them, but they "just bought eggs," paying one price for eggs of any quality whatever.

Volume of eggs purchased

Poultry-and-egg buyers, representing 25 percent of the dealer respondents, handled about one-third of the reported volume of eggs

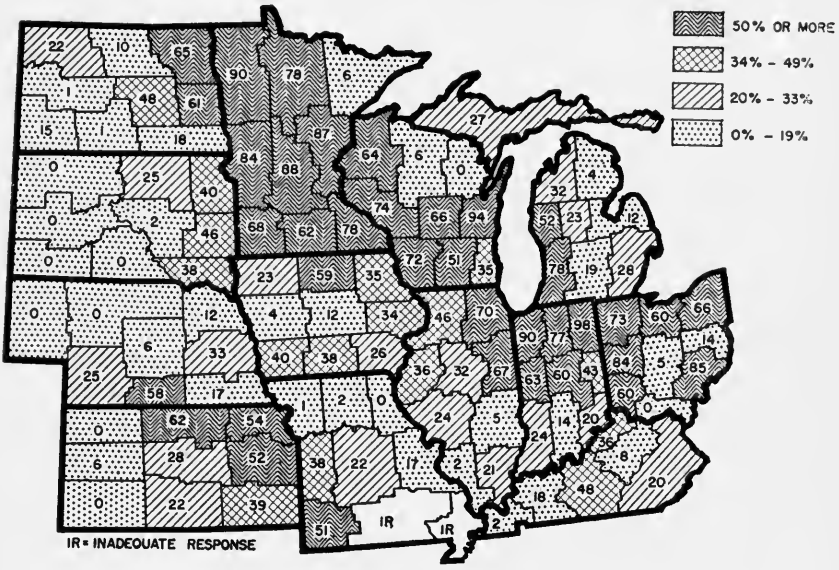

Fig. 13. — Percent of Eggs That Dealers Reported Buying on Grade, 1951
(Simple average of spring and fall data)

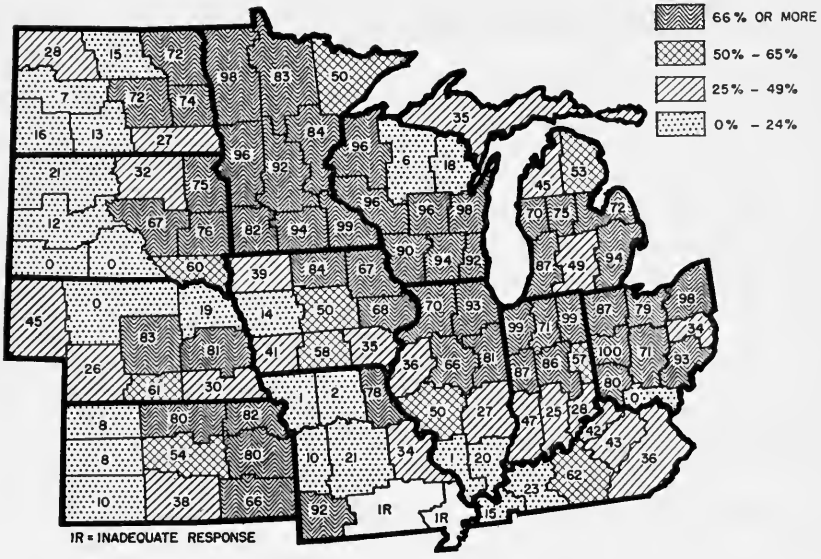

Fig. 14. — Percent of Shell Eggs That Dealers Reported Selling on Grade, 1951
(Simple average of spring and fall data)

bought. Retail stores were relatively most important in the extreme western and northern areas as well as in Kentucky.

The weekly volume of eggs purchased by dealers in general varied from a few cases to several thousand cases. Most retail stores did not buy more than 25 cases a week, while most of the poultry-and-egg dealers bought several hundred. The bulk of the volume purchased by buyers in a spring week was made by dealers who combined the handling of eggs with some other kind of business. Table 6 shows that 82 percent of the dealers handled less than 400 cases a week and 18 percent of the volume.

Table 6. — Volume of Eggs That Dealers Reported Buying, North Central Region, Spring, 1951

Cases of eggs purchased per week	Number of dealers	Percent of total	Cases of eggs	Percent of total
1– 9	367	15	1,599	(*)
10– 24	365	15	5,458	1
25– 49	283	11	9,589	1
50– 99	298	12	19,961	2
100– 199	416	17	54,473	6
200– 399	311	12	82,074	8
400– 799	197	8	101,457	11
800–1,599	126	5	139,410	14
1,600 and over	130	5	548,346	57
Total	2,493	100	962,367	100

* Less than 0.5 percent.

Volume of eggs bought and graded

There was a definite relationship between the volume of eggs bought by dealers and the amount of grading they did (Table 7). Dealers who bought 100 to 399 cases a week reported buying at least four times as high a percentage of eggs on a graded basis as those dealers who bought 1 to 24 cases a week. Among dealers who bought less than 100 cases of eggs a week, those specializing in handling eggs and poultry bought a higher percentage of eggs on a graded basis than dealers handling eggs along with other kinds of business. Among the larger dealers, those who bought more than 100 cases a week, no clear-cut difference existed with respect to grading. To each of these statements hatcheries were an exception.

Volume of eggs sold and graded

The percentage of shell eggs sold on grade was also definitely related to the volume that dealers sold. Buying eggs on a current-receipt basis and selling them on grade was more common among small dealers than among large dealers (Table 7).

Table 7. — Eggs Bought and Sold on Grade by Different Types of Dealers in Supply Areas, North Central Region, Spring, 1951

Main type of business	Cases of eggs per week				
	1-24	25-99	100-399	400-1,599	1,600 and over
Percent bought on grade					
Egg and poultry dealer	11	28	45	48	52
Retail grocer	7	12	40	70	..
Hatchery	38	50	64	66	100
Feed dealer and cream station	9	12	45	44	67
General (2 or more types)	9	21	35	48	45
Percent sold on grade					
Egg and poultry dealer	49	66	65	74	82
Retail grocer	18	24	48	78	..
Hatchery	4	37	67	..	..
Feed dealer and cream station	11	12	45	77	..
General (2 or more types)	9	25	43	50	69

Outlets for dealers

Wholesalers or jobbers represented the most important type of outlet for dealers. They bought about 38 percent of the dealers' eggs. Central assemblers represented the second most important type of outlet, and chain stores the third. In all districts having large cities, and generally in Ohio and southern Michigan, chain stores and independent retailers represented the most important outlets (Table 8). The basis for buying and selling eggs in each state is shown in Table 9.

Summary

The primary purpose of this study was to describe and analyze the egg supply and marketing situation in the North Central Region. For this purpose, questionnaires were sent to egg producers and dealers. The data provided by the respondents, based for the most part on 1951

Table 8. — Percent of Eggs Reported Sold in Spring and in Fall by Different Types of Dealers, North Central Region, 1951

Type of outlet	Percent of spring sales	Percent of fall sales
Central assembler	14	18
Poultry-processing plant	8	6
Wholesaler or jobber	38	39
Chain store	11	16
Independent retailer	4	6
Direct to consumer	3	3
Egg breaker and dryer	11	3
Institution	2	3
Huckster	2	2
Other	7	4
Total	100	100

Table 9. — Basis of Payment for Eggs Bought and Sold as Reported by Dealers in the North Central States, 1951

	Ill.	Ind.	Iowa	Kan.	Ky.	Mich.	Minn.	Mo.	Neb.	N. Dak.	Ohio	S. Dak.	Wis.
Percent of eggs bought													
Spring													
Ungraded	57	33	57	66	88	37	27	87	71	72	28	68	35
Sorted for size	3	3	13	0	1	25	(*)	1	(*)	(*)	8	1	10
Graded for size and quality	40	64	30	34	11	38	73	12	29	28	64	31	55
Fall													
Ungraded	38	25	28	50	45	25	20	54	76	61	18	57	24
Sorted for size	6	2	26	2	2	32	(*)	4	(*)	(*)	10	2	13
Graded for size and quality	56	73	46	48	53	43	80	42	24	39	72	41	63
Percent of eggs sold													
Spring													
Ungraded	38	17	32	35	38	12	7	32	41	46	9	25	6
Sorted for size	1	(*)	10	1	1	8	(*)	(*)	(*)	(*)	6	(*)	3
Graded for size and quality	39	67	38	49	14	80	88	12	41	38	85	41	88
Liquid or dried	22	16	20	15	47	(*)	5	56	18	16	(*)	34	3
Fall													
Ungraded	25	15	12	30	32	5	6	29	32	47	6	31	2
Sorted for size	2	(*)	13	(*)	2	7	2	2	(*)	1	5	(*)	3
Graded for size and quality	66	83	75	70	66	88	90	58	66	52	89	69	94
Liquid or dried	7	2	(*)	0	0	(*)	2	11	2	0	(*)	0	1

* Less than 0.5 percent.

records, and supplementary information furnished by the Poultry Branch of the Production and Marketing Administration of the U.S. Department of Agriculture were used to delineate eight supply areas and twelve marketing areas in the region. These areas were not delineated according to civil boundaries but according to supply and marketing factors. These factors included the number of layers per egg-selling farm; the frequency distribution of farms by size of flocks; the breeds of chickens; the average price per dozen eggs; and the average number of eggs sold per layer. The areas so delineated were then individually described and analyzed, and certain relationships established between supply and marketing factors. Particularly noted were the relationships between intensity of supply and farm pickup, grading, weekly volume, and types of outlet used.

In 1951 the North Central Region produced more than half the eggs of the United States. This production exceeded the local needs of these states by almost 40 percent. The two major supply areas in the region were located north and west of Chicago to the western boundaries of Minnesota and Iowa, and between Chicago, Detroit, Toledo, and Cleveland.

Despite this surplus, which was marketed far and wide across the United States, lack of specialization was characteristic of egg production in the region. Three-fourths of the eggs sold, for example, came from flocks of 100 to 300 hens, and the average size of flock was just over 100, which produced only about one case of eggs a week. Large flocks with a predominance of the light breeds of chickens tended to be located in the northern part of the region; small flocks with a predominance of the heavy breeds tended to be in the southern part.

The most important type of outlet for farmers in the region was the local produce station. These stations bought about 40 percent of the eggs sold by producers. At the first sales level, the percentage was more than twice as high west of the Mississippi river as east of it.

Prices varied considerably, both by geography and by basis of payment. From west to east there was a gradual rise in egg prices, and in all crop-reporting districts except four, producers received more for Grade A Large eggs than for current receipts. Producers in districts adjacent to large consuming centers received the highest prices for eggs, whether for current receipts or for Grade A Large, because they capitalized on their favorable location by selling to institutions and directly to consumers.

Areas having a high percentage of eggs picked up at the farm coincided roughly with those areas that had an intensive egg supply. About 60 percent of the eggs produced in the two major supply areas,

for example, were picked up at the farm. In all areas, large dealers, to ensure a uniform supply, relied heavily upon their own trucks to pick up eggs from farms, whereas small dealers relied heavily on farmers' delivering eggs to them.

Egg dealers reported buying a much higher percentage of eggs on grade than farmers reported selling on grade. Dealers likewise reported selling a greater percentage of their total volume on grade than they reported buying on grade. Large dealers graded a greater percentage of the eggs they bought than did small dealers. (The potential areas for marketing quality eggs are shown in Fig. 15.)

As producers' weekly egg sales increased, both the percentage of eggs picked up at the farm and the percentage of eggs graded increased. The greatest increase in grading and farm pickup in relation to weekly sales occurred when weekly sales rose from less than half a case of eggs to two cases of eggs per week.

Pickup and grading also had a certain relation to sales per square mile. As sales per square mile increased from less than 500 dozen to more than 4,500 dozen eggs per year, the proportion of eggs picked up at the farm increased from 14 to 63 percent, and the proportion of eggs sold by farmers on grade increased from 16 to 68 percent.

The percentage of eggs picked up at the farm was more than twice as high where sales ranged from 500 to 1,500 dozen eggs per square mile as where sales were less. Beyond 5,500 dozen, direct sales showed a definite increase in the proportion sold.

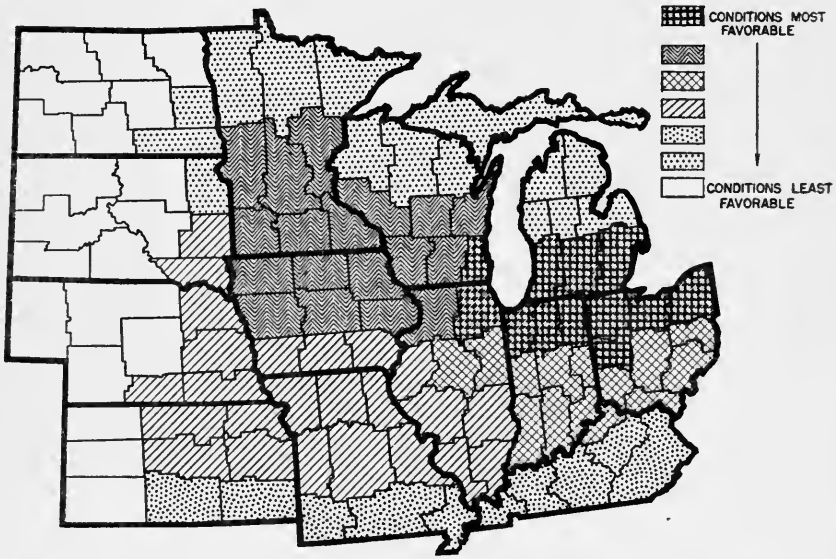

Fig. 15. — Potential Areas for Marketing Quality Eggs, 1951

Appendix

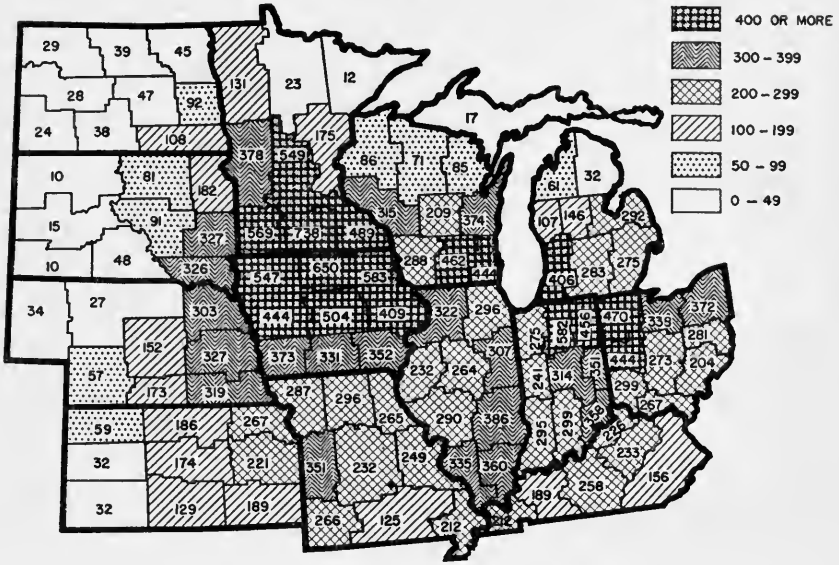

Fig. 16. — Number of Chickens per Square Mile
(Based on 1950 Census report of chickens 4 months and older)

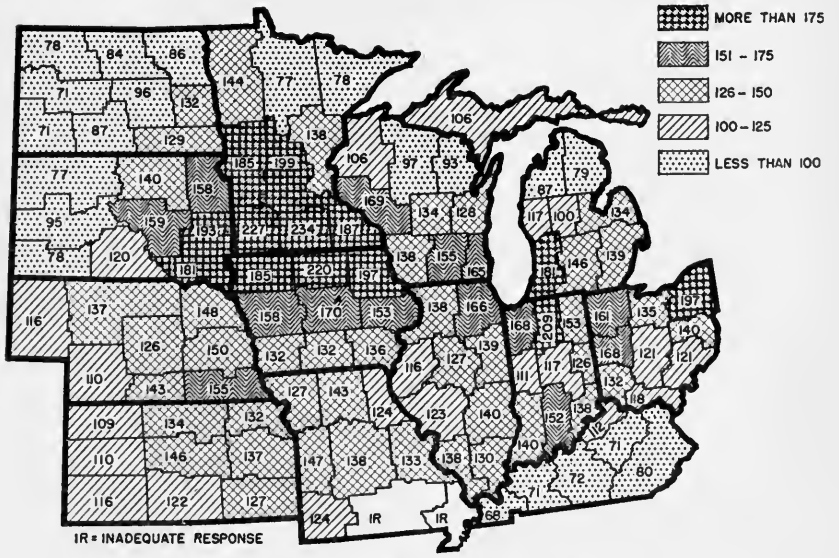

Fig. 17. — Average Size of Laying Flock
(Simple average of 1950 Census and spring, 1951, survey data)

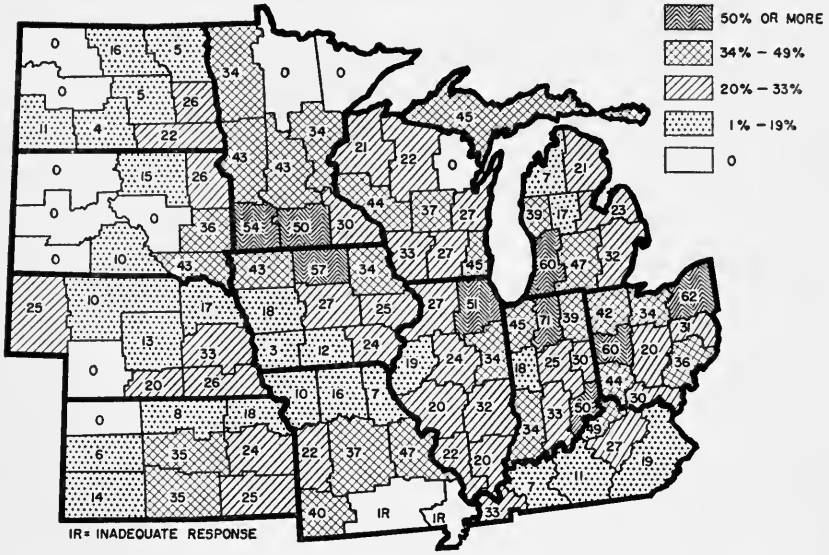

Fig. 18. — Percent of Eggs Sold in Crop-Reporting Districts by Producers Selling 83 or More Dozen Eggs per Week, 1951
(Simple average of spring and fall data)

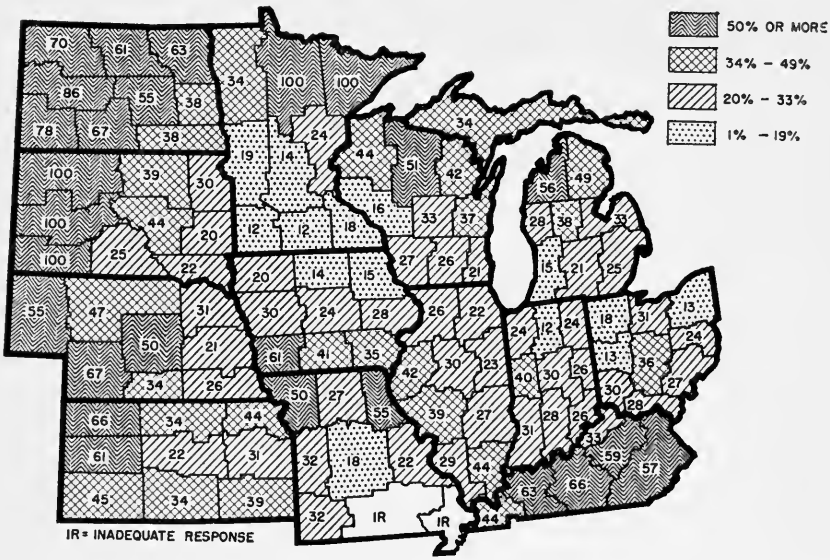

Fig. 19. — Percent of Eggs Sold in Crop-Reporting Districts by Producers Selling Less than 37 Dozen Eggs per Week, 1951
(Simple average of spring and fall data)

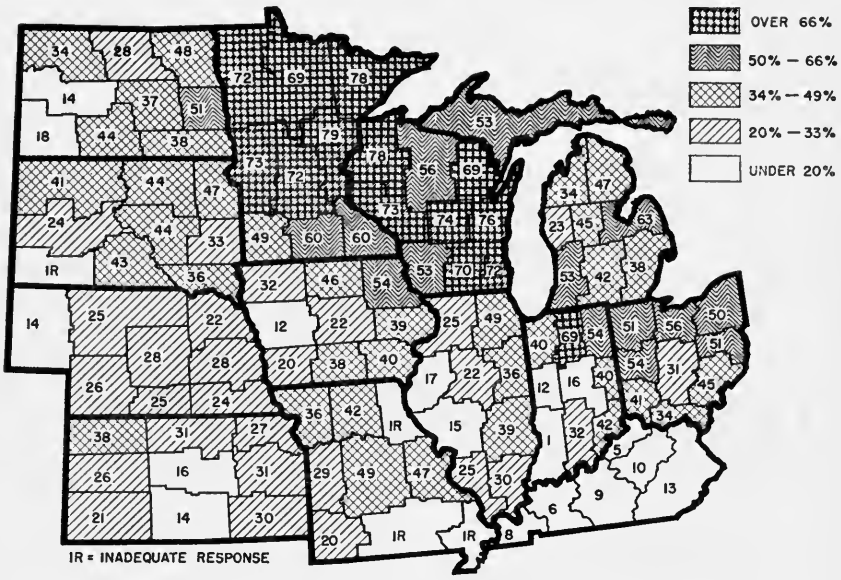

Fig. 20. — The Percent Leghorns Were of All Laying Hens, Spring, 1951

Table 10. — Breeds Used and Average Size of Flock in Supply Areas, North Central Region[a]

Breed	Supply areas								Region
	1	2	3	4	5	6	7	8	
Percent of layers									
Barred Rock	1	2	2	3	2	9	1	1	2
New Hampshire	5	9	15	7	24	31	13	5	13
Rhode Island Red	1	3	1	2	1	3	1	2	1
Leghorn	53	56	34	57	26	26	31	63	41
White Rock	5	14	13	10	12	15	18	10	11
Hybrid	12	4	11	3	5	1	2	1	8
Crossbreed	4	2	5	4	3	(b)	5	3	4
Two breeds	10	8	10	8	11	10	9	8	10
Others	9	2	9	6	16	5	20	7	10
Total	100	100	100	100	100	100	100	100	100
Number of laying hens per flock									
Barred Rock	151	108	96	103	109	68	46	51	92
New Hampshire	126	98	112	116	105	75	130	61	104
Rhode Island Red	(b)	119	171	123	98	58	53	81	76
Leghorn	181	189	171	150	146	94	112	112	160
White Rock	121	101	97	93	82	64	93	53	90
Hybrid	181	139	146	143	143	88	89	90	151
Crossbreed	163	116	151	121	113	67	130	157	141
Two breeds	202	153	146	127	134	109	108	99	149
Others	147	93	112	95	118	58	86	85	114
Simple average	196	124	134	119	116	76	94	88	144

[a] From survey data on number of farms and number of layers separately adjusted to 1950 Census data.
[b] Inadequate report.

Table 11. — Characteristics of Supply Areas, North Central Region

	Supply areas								Region
	1	2	3	4	5	6	7	8	
Number of crop-reporting districts	15	6	24	11	24	7	18	9	114
Land area (square miles)	95,507	26,691	134,236	72,225	159,978	54,072	176,708	75,358	794,775
Number of chickens* per square mile	498	448	323	159	229	187	35	43	215
Dozens of eggs* sold per square mile	4,671	4,389	2,712	1,151	1,576	648	184	269	1,699
Average size of flock*	180	150	136	134	121	79	103	100	135
Sales per layer* (eggs)	113	118	101	87	82	42	63	75	95
Sales per flock* (dozens)	1,695	1,475	1,060	972	827	276	541	625	1,069
Leghorns as percent of all chickens†	52.8	55.7	33.8	56.8	26.5	26.6	31.3	62.8	40.7
Fall weekly sales† as percent of spring sales	73.6	103.5	74.9	86.7	69.7	84.0	63.3	82.2	76.8

* Based on 1950 Census.
† Based on survey adjusted to Census data.

Table 12. — Egg Sales by Producers Having Different Sizes of Flocks, Supply Areas, North Central Region, Spring, 1951

Number of layers	Supply areas								Region
	1	2	3	4	5	6	7	8	
Percent of total producers									
Under 100	17.7	25.0	30.0	37.3	38.1	84.9	54.7	70.8	36.8
100–199	40.7	37.8	45.5	41.5	40.2	12.3	34.3	21.6	38.3
200–399	35.7	26.5	21.6	18.2	18.7	2.3	10.3	5.5	21.2
400–799	5.4	8.9	2.5	2.7	2.4	.2	.7	1.9	3.2
800 and over	.5	1.8	.4	.3	.6	.3	....	.2	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent of total sales									
Under 100	5.7	7.1	10.8	15.2	15.3	66.3	29.9	42.4	12.1
100–199	29.6	25.8	42.4	40.5	40.1	20.6	44.0	33.4	35.4
200–399	48.5	34.1	35.2	33.8	33.5	7.4	23.4	15.2	38.1
400–799	13.3	24.4	8.2	8.4	8.0	....	2.7	7.9	11.0
800 and over	2.9	8.6	3.4	2.1	3.1	5.7	....	1.1	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 13. — Percent of Eggs Sold by Small, Medium, and Large Producers in Supply Areas, North Central Region, 1951

Dozens of eggs per week	Percent of eggs sold in supply areas—								Percent in region
	1	2	3	4	5	6	7	8	
Spring									
1–37	14.7	15.1	23.2	30.3	27.9	71.7	49.9	55.5	23.3
38–82	42.3	31.8	48.0	43.8	45.9	17.1	37.4	30.4	42.5
83 and over	43.0	53.1	28.8	25.9	26.2	11.2	12.7	14.1	34.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fall									
1–37	23.1	15.1	32.6	31.0	38.0	72.3	63.6	55.5	30.6
38–82	40.5	24.2	34.4	35.4	33.8	13.4	31.6	27.3	34.2
83 and over	36.4	60.7	33.0	33.6	28.2	14.3	4.8	17.2	35.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 14. — Basis of Payment for Eggs Sold by Producers in Supply Areas, North Central Region, 1951[a]

Basis of payment	Supply areas								Region
	1	2	3	4	5	6	7	8	
Percent of farms									
Spring									
Ungraded	29.9	33.0	68.2	47.0	73.5	89.5	87.5	58.2	60.4
Sorted for size	15.3	24.3	10.9	17.1	10.1	3.4	2.8	23.6	12.1
Graded for size and quality	54.8	42.7	20.9	35.9	16.4	7.1	9.7	18.2	27.5
Fall									
Ungraded	24.1	17.9	55.9	36.1	65.5	88.1	81.7	41.8	51.3
Sorted for size	17.7	36.0	19.0	23.6	16.2	5.3	6.7	38.3	18.1
Graded for size and quality	58.2	46.1	25.1	40.3	18.3	6.6	11.6	19.9	30.6
Percent of eggs sold									
Spring									
Ungraded	25.9	23.4	62.8	40.2	67.2	83.0	85.6	48.5	46.9
Sorted for size	14.2	19.9	10.6	16.7	10.6	4.6	4.2	24.9	13.0
Graded for size and quality	59.9	56.7	26.6	43.1	22.2	12.4	10.2	26.6	40.1
Fall									
Ungraded	17.1	9.1	43.0	24.6	51.8	78.5	75.7	32.5	32.2
Sorted for size	19.0	27.9	23.6	25.7	21.6	12.4	10.5	39.0	22.1
Graded for size and quality	63.9	63.0	33.4	49.7	26.6	9.1	13.8	28.5	45.7

[a] Adjusted to Census data.

Table 15. — Percent of Farms Using 1, 2, 3, or More Types of Outlets in Supply Areas, North Central Region, Spring, 1951

Supply areas	Percent of farms using				
	1 outlet	2 outlets	3 outlets	4 or more	Total
1	79.8	17.8	2.1	.3	100
2	70.0	26.3	3.4	.3	100
3	69.0	26.6	4.0	.4	100
4	65.5	30.3	3.8	.4	100
5	69.4	26.1	4.1	.4	100
6	61.5	30.7	6.5	1.3	100
7	73.0	22.7	3.7	.6	100
8	60.2	35.5	3.8	.5	100
Region	69.9	25.8	3.8	.5	100

Table 16. — Percent of Eggs Sold to Different Outlets in Supply Areas, North Central Region, 1951[a]

Supply areas	Local produce stations	Truck routes from assembly plants	Huck-sters	Retail stores (cash)	Retail stores (trade)	Hatch-eries	Insti-tutions	Direct to con-sumers	Other
Spring									
1	47.4	22.4	3.2	7.5	4.9	10.6	.6	2.1	1.3
2	20.0	35.4	7.8	5.6	3.5	6.8	1.4	9.1	10.4
3	37.7	18.8	7.6	8.7	8.3	11.6	1.3	5.5	.5
4	39.4	13.9	8.5	9.8	9.9	4.6	1.1	10.6	2.2
5	37.7	12.8	6.5	8.8	10.8	17.0	.7	5.4	.3
6	15.4	4.5	5.8	18.0	21.3	19.9	3.7	11.3	.1
7	47.3	2.9	2.1	8.6	25.7	9.9	1.0	2.3	.2
8	19.2	16.5	2.7	17.4	22.3	4.4	2.5	14.7	.3
Region	39.3	19.3	5.7	8.4	8.1	11.4	1.0	5.1	1.7
Fall									
1	50.8	26.6	3.6	7.3	4.4	2.2	.5	2.7	1.9
2	23.3	36.4	7.0	4.7	2.0	2.3	1.3	8.9	14.1
3	35.1	22.8	10.6	10.7	7.4	4.0	1.0	7.7	.7
4	34.9	16.4	9.3	9.9	8.2	1.2	1.5	14.0	4.6
5	40.2	16.0	5.4	10.5	9.2	9.1	1.3	6.5	1.8
6	15.5	3.1	8.7	24.3	17.3	8.3	5.0	17.8	0
7	48.9	1.8	1.3	11.6	24.6	5.4	1.4	4.6	.4
8	18.6	13.0	4.7	18.3	22.9	1.0	5.5	16.0	0
Region	40.2	23.0	6.5	9.1	7.0	3.9	1.1	6.1	3.1

[a] Adjusted to Census data.

Table 17. — Eggs Sold by Size and Quality and by Size Only to Different Types of Outlets in Supply Areas, North Central Region, Spring, 1951

Supply areas	Local produce stations	Truck routes from assembly plants	Hucksters	Retail stores (cash)	Retail stores (trade)	Hatcheries	Institutions	Direct to consumers	Other	Weighted average[a]
					Percent sold by size and quality					
1.....	63	67	33	45	31	57	15	35	54	60
2.....	70	70	34	23	27	54	21	30	58	57
3.....	27	55	21	14	8	36	37	24	69	27
4.....	59	43	20	32	15	44	9	17	52	43
5.....	26	63	9	9	7	31	18	13	91	22
6.....	19	30	0	7	9	44	0	5	0	12
7.....	24	51	17	7	4	36	6	11	81	10
8.....	70	33	41	15	13	29	9	18	0	27
					Percent sold by size only					
1.....	12	14	33	18	14	15	16	40	17	16
2.....	11	12	28	46	19	25	61	33	30	19
3.....	11	12	23	17	6	14	38	32	9	14
4.....	12	13	23	10	13	29	30	40	15	16
5.....	6	5	12	13	8	23	97	26	0	11
6.....	4	3	0	5	18	16	1	13	0	7
7.....	7	0	1	4	4	18	18	10	10	6
8.....	10	24	42	32	22	32	10	22	0	20

[a] Weighted by the percent of eggs sold to each type of outlet in the region as a whole.

Table 18. — Basis of Payment for Eggs in Marketing Areas, North Central Region, 1951

Basis of payment	Marketing areas											
	1	2	3	4	5	6	7	8	9	10	11	12
						Percent of farms						
Spring												
Ungraded.....	48	31	43	48	71	62	84	87	87	96	88	66
Sorted for size.....	32	16	21	13	3	17	7	6	4	2	3	19
Graded for size and quality.....	20	53	36	39	26	21	9	7	9	2	9	15
Fall												
Ungraded.....	35	23	26	37	68	49	77	77	85	91	83	52
Sorted for size.....	42	20	34	21	5	26	9	11	7	6	7	28
Graded for size and quality.....	23	57	40	42	27	25	14	12	8	3	10	20
						Percent of eggs sold						
Spring												
Ungraded.....	33	28	32	38	65	54	81	83	76	95	83	54
Sorted for size.....	39	15	17	12	3	18	8	8	7	3	5	22
Graded for size and quality.....	28	57	51	50	32	28	11	9	17	2	12	24
Fall												
Ungraded.....	18	17	15	26	57	38	71	70	68	89	73	34
Sorted for size.....	46	21	30	24	7	28	11	18	20	6	11	35
Graded for size and quality.....	36	62	55	50	36	34	18	12	12	5	16	31

Table 19. — Percent of Eggs Sold to Different Types of Outlets in Marketing Areas, North Central Region, Spring, 1951

Marketing areas	Local produce stations	Truck routes from assembly plants	Hucksters	Retail stores (cash)	Retail stores (trade)	Hatcheries	Institutions	Direct to consumers	Other
Spring									
1	15	11	16	13	5	5	3	29	3
2	45	26	3	7	5	10	1	2	1
3	18	35	11	8	4	9	3	9	3
4	44	13	6	10	12	6	1	7	1
5	44	20	2	6	12	12	1	3	(*)
6	27	11	6	11	11	25	2	6	1
7	57	6	5	6	9	15	(*)	2	(*)
8	28	5	10	25	17	13	(*)	2	(*)
9	15	4	6	18	21	22	3	11	(*)
10	57	2	4	7	22	7	(*)	1	0
11	23	2	2	14	47	4	2	5	1
12	14	2	6	18	21	6	6	27	0
Fall									
1	17	13	16	10	5	2	3	30	4
2	47	31	4	7	5	2	(*)	2	2
3	21	40	13	7	2	2	2	9	4
4	42	15	7	10	10	2	2	11	1
5	46	25	2	8	11	4	1	3	0
6	32	13	8	16	8	14	2	6	1
7	61	11	6	5	8	7	0	2	(*)
8	32	8	10	30	13	3	0	3	1
9	15	3	10	24	18	8	5	17	(*)
10	59	2	2	9	22	3	1	1	1
11	21	1	2	20	42	3	2	8	1
12	16	1	9	21	16	3	7	27	..

* Less than 0.5 percent.

Table 20. — Average Prices Received for Eggs by Producers in Marketing Areas, North Central Region, January 14-19, 1952

(Cents per dozen)

Marketing areas	Prices for current receipts	Prices for Grade A Large
1	40¢	44¢
2	31	34
3	37	41
4	31	35
5	30	34
6	34	41
7	31	35
8	33	39
9	40	46
10	28	35
11	30	32
12	38	45

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