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MINNESOTA farm business NOTES



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The Future Competitive Position of Minnesota's Egg Industry

Carroll V. Hess

Minnesota poultrymen ask: "Will egg prices and costs ever permit reasonable profits to be earned in this egg business?" Many feed and equipment dealers, hatcherymen, and egg handlers ask similar questions.

Minnesota's annual production of 3.5 billion eggs ranks third in the United States. While egg production has leveled off nationally, production in Minnesota has declined nearly 20 percent since reaching a high in 1955. Egg-feed price ratios have been unfavorable.

Minnesota's farm price for eggs has averaged 7 to 8 cents below the U. S. farm price. These low egg prices can be attributed to four factors:

1. Long distance to market for 70 percent of the state's production, about 7 million cases.
2. A generally poor reputation for the Minnesota egg.
3. Loss of earlier established markets in the Southeast.
4. Excessively high cost of assembling and processing eggs for shipment because of many small, scattered, inefficient handlers.

Distance to market—Nearby states are also surplus egg-producing areas. So the bulk of Minnesota eggs must travel from 1,000 to 1,500 miles to market. New York City and Chicago were the largest outlets in 1960; each received about 1 million cases. Minnesota also marketed more eggs in Los Angeles in 1960 than did any state except California.

These long hauls increase marketing costs. Furthermore, they require greater care in initial handling and processing to reduce "grade loss" enroute.

Quality reputation—Minnesota eggs have not generally received a price in the distant market equal to their quality. In spite of general improvements in

their quality, the low quality image of the past persists in some distant markets.

The Certified Quality Egg Program, supervised by the Minnesota State Department of Agriculture and the Minnesota Egg Law, represents commendable efforts to improve the quality of eggs at farm and country assembly points. Maintaining a reputation for a consistently high quality egg is extremely important in the existing period of intense price competition.

Loss of original market outlets—The southeastern part of the United States was once a prime market for Minnesota eggs. In 1958 Arkansas, Mississippi, Alabama, Georgia, and South Carolina were egg-deficit states. They imported nearly 4 million cases of eggs.

Two years later these states exported 2 million cases. They not only eliminated a market for Minnesota eggs, but they shipped two-thirds of a million cases to the New York, Boston, Philadelphia, and Baltimore markets. This increased competition for Minnesota.

Assembling and processing—The highly diversified farming in most of Minnesota contributes to a large number of small, scattered flocks. The 1959 Census disclosed that half of the Minnesota farms sold an average of two cases of eggs per week. Over 80 percent of these farms kept less than 400 hens. Only 45 flocks had over 3,200 layers, while only 33 flocks reported 10,000 or more hens.

This situation usually results in higher production costs and a lower quality egg. Of even greater importance to the industry of the state is the higher unit costs of assembling eggs because of frequent, scattered, small volume farm pickups and multiple handling. This multiple handling is inefficient and results in deterioration of egg quality.

Minnesota finds itself at the greatest disadvantage on these two factors—egg quality and costly, inefficient marketing procedures. Greater volume of a higher quality egg per handler improves the likelihood of finding a good market. It also improves the bargaining position in negotiating a sale.

Disregarding the painful impact on small producers and handlers, the future competitive position of Minnesota's egg industry depends upon the speed with which it adjusts towards an industry of fewer but larger flocks and handlers.

In 1960, 1,250 wholesale dealers in Minnesota were licensed to handle eggs and poultry. This was an average of 14 per county, omitting dealers in the Twin Cities and Duluth. There were eight principal types of egg handlers in the state. The most numerous were produce stations which numbered 714.

The typical Minnesota egg handler is small and operates over a limited, local area. In April 1961 more than a fourth of these dealers handled less than 25 cases per week and 81 percent handled less than 250 cases per week. Only 4 percent (55 dealers) handled 1,000 cases or more per week.

A study of 23 cooperative associations in 16 states handling eggs and poultry was made.¹ Some results follow.

Collecting Eggs

Cost of collecting eggs is the second highest cost in the egg-handling operation. It is exceeded only by the candling and cartoning operation. The average association in the Western area handled over 17,000 cases in each 2-week period. This compares with about 4,100 cases for the Northeast and 2,800 cases for the North-central area of which Minnesota is a part (see table 1).

Note the direct relationship between increased volume and increased output per man hour resulting in reduced actual direct labor costs per case. Truck

¹ Harry Ratcliffe, *Why Egg Handling Costs Vary in Selected Cooperatives*, Marketing Research Report 552, Farmer Cooperative Service, USDA, July 1962.

Table 1. Collecting eggs: average direct labor cost and truck expense, 16 cooperative associations, 2-week period

	Northeast	North-central	West
		cases	
Volume	4,135	2,776	17,336
Output per man	9.8	7.0	38.8
Cost per case		cents	
Direct labor	19.9	22.3	9.0
Truck expense	15.6	13.9	6.2
Total direct cost	35.9	36.2	15.2
Adjusted labor*	13.0	17.1	3.5
Total adjusted cost	28.6	31.0	9.7
		dollars	
Hourly labor rate	\$1.84	\$1.53	\$2.94

* Calculated by adjusting the actual labor cost of collecting a case of eggs to the lowest hourly wage of all associations. In this case the rate was \$1.14 per hour. This permits comparing labor efficiencies between associations with different hourly wage rates.

expense per case reflected the same general relationship between volume and output per man hour and unit cost of collection.

If Minnesota is to compete with other areas, steps must be taken to organize production patterns to reduce collection costs. Several large handlers in the state are already providing volume incentives to their producers. They set higher minimum flock size standards, raised quality standards, and offered premiums of several cents per dozen for larger volume farm pickups.

Candling, Cartoning, and Packing

The highest cost operation reported by the Farmer Cooperative Service was the candling and cartoning operation. The average actual direct labor cost per case for all 23 associations for candling and cartoning was 54.8 cents. This compares with 18.9 cents per case for collecting eggs. Total material costs (cases, filler flats, and cartons) averaged 76.8 cents per case.

Differences in output per man hour explained most of the variations between associations in adjusted direct labor unit costs of candling and cartoning. However, remember that increased labor efficiency can be offset by the additional investment, lease, or rental cost of automatic packaging equipment. This is especially true in areas where wage rates are low or where competent labor for hand candling, cartoning, and packaging is available.

Analysis of adjusted unit labor cost figures for the North-central area discloses the glaring inefficiency in labor use for the major handling operations, namely collecting, candling, and cartoning. The Western area, with its larger volume per farm stop and per plant,

had total adjusted direct labor costs of 36 cents per case. This compares to 61.2 cents for the North-central area and 52 cents for the Northeast. These costs include all operations except delivering.

Greater Coordination Needed

With the highly inelastic demand for eggs, and a contracting domestic and foreign demand, market supplies must be watched carefully to avoid overproduction and depressed prices. Surpluses are a symptom of an industry lacking proper coordination between the productive machine and the consuming segment.

The only safe way to engage in producing eggs is to be reasonably certain of a satisfactory market. In short, we must emphasize "marketing" our eggs in advance of production rather than producing first and hoping a good market will be available.

Before capital investments are made in feed mills, hatcheries, supply stores, laying houses, egg pickup trucks, egg

processing plants, and delivery equipment, some assurance of a satisfactory market outlet should be provided. Assurance of a good market improves the likelihood of developing an industry structured with the proper number, size, and location of suppliers, producers, and processors. This maximizes resource efficiency and returns to all involved.

Twenty-five privately initiated coordinated egg production and marketing programs were studied recently in Minnesota. These programs represent 1½ million hens. Judging by their success, as evaluated by the activators of the programs, it appears that this represents one important route toward a more competitive Minnesota egg industry.

Although limited opportunities exist for direct market outlets for producers, these should be explored. A recent study of nearly 200 Minnesota producers who are marketing their eggs directly suggests that this constitutes a desirable premium market for some producers.

Profit Motive in Farm Program Participation

Paul R. Hasbargen

In each of the past 3 years farmers had to decide whether to participate in the feed grain program. This decision will have to be made again in 1964.

Last winter 133 farmers in southwestern Minnesota were interviewed to determine the relative importance of different factors in deciding about participation. Three basic motivations—the profit motive, risk consideration, and attitude toward the program—were studied. This article presents some findings on the profit motive.

Importance of the Profit Motive

Current farm programs are designed to appeal to the farmer's desire for profit in order to obtain his participation. Therefore, a relevant question is to what extent profit maximization is the major force in determining farmers' decisions to participate in voluntary farm programs.

Minnesota Corn Belt farmers feel that profit is an important consideration but not necessarily the major one. Each farmer was asked what he expected to gain or lose by participating in the feed grain program (see table 1).

Expected effect on size of income was

mentioned by 48 percent of the farmers. Of these, 39 expected income to increase and 25 expected it to decrease if they participated.

The only category of answers to appear more frequently than income was that of "production and conservation." This was mentioned by 59 percent of the respondents.

These farmers also ranked four considerations by order of importance (see table 2). Only 25 percent (32 farmers) said that expected effect on size of income was the most important factor affecting their choice.

In contrast, "your attitude toward the program" received 34 percent of the first place rankings, and "your desire for a more certain income" received 31 percent. The fourth consideration, receiving only 10 percent of the first place rankings, was "the desires of others (landlords, friends)."

Income considerations appear second in importance to security considerations when the complete rankings (table 2) are examined. ("Attitude" received fewer second place and more fourth place rankings.) Perhaps some respondents did not see a clear distinction between the two economic considerations—size of income and certainty of income.

Economic Analysis by Farmers

Many farmers did not attempt to estimate the effect of participation on their net incomes. In answer to the question, "What effect did you expect participation would have on your net income in 1962?" 35 respondents said they "didn't consider" the income effect. Another 41 expected "no effect" upon income, 30 expected participation to increase their income, and 27 expected it to decrease their income.

Separate calculations were made for each respondent to determine the profitability of participation. Data were obtained from each operator on his corn production costs and expected corn yields. Expected income effects then could be calculated precisely.

A labor cost of \$5 per acre was included. A price advantage of 10 cents a bushel was assumed for corn sales under participation. The price differential assumed by individual operators may have varied somewhat from this,

Table 1. Gains and losses expected from participation in the 1962 Feed Grain Program as expressed by 133 farmers in southwestern Minnesota

Consideration	Number of farmers		Percent of all farmers	
	Gains	Losses	Gains	Losses
Production and conservation	47	31	78	59
Income	39	25	64	48
Policy	21	11	32	24
Local treatment	6	20	26	20
Security	21	4	25	19
Labor	24	1	25	19
Decision was forced ..	17	3	20	15

Table 2. Number of respondents ranking each consideration first, second, third, and fourth in importance in their decision on the 1962 Feed Grain Program*

Consideration	Rank			
	First	Second	Third	Fourth
Security	40	47	34	6
Income	32	44	39	14
Attitude	43	22	37	26
Landlord	13	17	16	86

* A few respondents volunteered other considerations which were more important than the four listed.

Table 3. Number of "correct" and "incorrect" expectations as to income effect of participation

Answer given	Total number	Number "correct"	Number "incorrect"
Increase income	30	10	20
Decrease income	27	24	3
No effect	41	8	33
Total	98	42	56

thereby affecting their expectations. With this limitation in mind the responses were graded "correct" or "incorrect" (see table 3).

The "no effect" answer was considered correct if the difference in expected income was within 10 percent of the gross return from participation.

Table 3 shows that 57 percent of those who considered the income effect of participation arrived at an "incorrect" expectation. This may partly be due to different price expectations on the part of respondents than assumed.

However, further calculations were made based on actual yields in 1962. These were then compared with responses to the question, "Now that the crop year is over, what was (would have been) the actual effect of participation on your 1962 net income?" Again, all variables could not be taken fully into account but similar results were obtained—60 percent were incorrect when allowing the same margin of error for a "no effect" answer.

One reason for such "poor" economic analysis was that most respondents apparently did not look at both costs and returns from participating. An open-end question was asked to determine how the economic analysis was made (table 4). Only 26 percent of those answering indicated that they considered both costs and returns.

Another major source of error in analysis was imperfect knowledge about corn production costs. The question was asked, "How much did you save (could you have saved) in cash operat-

Table 4. How respondent arrived at the expected effect of participation on income

Response	Number	Percent
Considered both costs and returns	21	26
Considered gross returns only	20	24
Considered costs only	15	18
Security was chief consideration	18	32
Answer was not related to income	8	10
Total reporting	82	100

Table 5. Cash cost saved per acre diverted as reported by farmers and as calculated from data reported on the survey

Cash cost saved per acre diverted	Reported		Calculated	
	Number farms	Percent	Number farms	Percent
\$ 0 - \$ 4.99	29	24	20	15
5.00- 9.99	18	15	55	41
10.00- 14.99	15	12	42	32
15.00- 19.99	20	17	11	8
20.00- 24.99	13	11	5	4
25.00- 29.99	11	9	0	0
30.00 and over	14	12	0	0
Total	120	100	133	100

ing expenses for each acre of corn retired?" Responses were compared with calculated answers based upon a detailed itemization of corn production and cropland diversion expenses. About 63 percent of the operators made estimates which were in error by more than \$6 per acre.

Calculations indicated that 88 percent of the operators saved (could have saved) less than \$15 per acre but only 41 percent estimated their savings in this range (see table 5). This overestimate is probably due to three factors: (1) Farmers may have been thinking of total production expenses including fixed costs. (2) They may have been influenced by the higher figures used by some people when explaining the program. (3) They may not have considered cash expenses of caring for diverted acres (interviewers were asked to point this out to them).

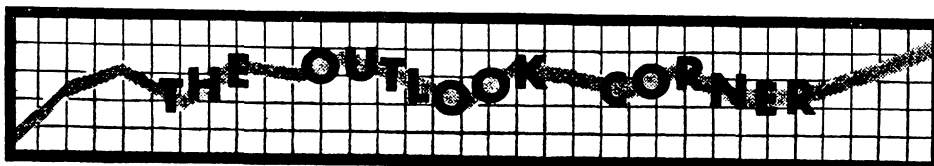
Implications of the Study

This study's findings have implications for policymakers, researchers, and extension workers.

For policymakers an important finding is that other considerations may be as important as the profit motive to farmers examining alternatives in government programs. Rather than by making it more financially attractive, a voluntary program might be more effectively "sold" by: (1) improving farmer attitude toward it, and (2) stressing its security aspects.

For researchers studying decision making, this study indicates that many different values affect decision making. The economist must more fully appreciate the fact that profit maximization is not always the major force, even in decisions that seem mainly economic.

For extension workers and other educators this study delineates areas in need of more intensive educational efforts. The typical farm operator is production oriented and is not well schooled in economic analysis. He is in need of analytical tools to aid him in improving his decision making.



Agricultural Outlook 1964

K. Egertson and P. Hasbargen

Due to increasing population and rising incomes, the total demand for farm products increased slightly during the first half of 1963. This increased demand was matched by increased supply, so average farm prices in 1963 changed little from the preceding year. Lower livestock prices were just about offset by higher crop prices. A 2.5-percent increase in cash receipts largely resulted from increased farm marketings.

Cash receipts for 1963 as a whole will probably be close to the 1962 total of \$35.9 billion. However, increased production expenses will result in a net income of less than the \$12.6 billion realized last year. Little change is now indicated for crop production and average prices in the 1963-64 season.

What's ahead for 1964? The answer depends partially on the outlook for individual farm enterprises. Here is a review of a few important enterprises in Minnesota.

Hogs—U.S. hog production is increasing moderately, but it continues to show the stability which has characterized the industry for the past 3½ years.

If the projected 1-percent increase in the 1963 fall pig crop materializes, the total 1963 crop will be 94.5 million head—about the same as 1962. Good prices during the fall-breeding season, along with average to better profits through 1963, will likely encourage about a 2-

to 5-percent increase in 1964 spring farrowings.

Total pork supplies in 1964 will be higher. Demand increase will probably not keep pace. So the projection is for a 4- to 7-percent lower price level through much of 1964.

Profit prospects still look good for the efficient hog producer.

Beef Cattle—The total increase during this cattle expansion phase has been about 15 million head, moving from 91.2 million in 1958 to an expected record high of 106.5 million on January 1, 1964.

Supplies of calves to Corn Belt feeders should be about the same as a year earlier. Feeder steer and heifer supplies will be up 3 to 6 percent.

Feeder cattle prices will be slightly lower this fall. Fed cattle prices should average about the same in 1964 as in 1963. Therefore, profit prospects appear better than through much of the 1962-63 feeding season.

Sheep and Lambs—Sheep and lamb numbers declined again in 1963. The January 1, 1964 sheep inventory will be about 2 to 4 percent under the 30.2 million head inventory of a year earlier. Some slight increase can be expected in 1964.

Slaughter in 1964 should be less and demand slightly improved. Prices on spring lambs should show some improvement over 1963. Profit prospects look good for the well managed native ewe flock.

With a projected strong feeder lamb price situation this fall and a slightly lower slaughter price expected early in 1964, labor returns in the lamb-feeding enterprise will be less favorable than in 1963.

Feed Grains—Feed grains available for the coming year are expected to total 7 million tons more than last year. More high protein feeds will be available due to the expected record soybean crop.

A further reduction in surplus feed grain stocks is anticipated. Carryover feed supplies at the end of the 1963-64 feeding year may equal only 25 percent of the beginning year stocks.

Total requirements of feed concentrates are likely to increase next year due mainly to an increased number of animal units.

Dairy—Total U. S. milk production in 1963 will be below 1962. The continued decline in cow numbers, together with a rate of gain in production per cow, accounts for the decrease.

With little or no increase in supports expected, and with only slim prospects for new dairy legislation, prices for milk and milk products in the year ahead should average about the same as in 1963.

Poultry—The hatch of egg-type chicks was down from 1962 levels by 1 percent during the first half of 1963. The January-June hatch of 1964 is expected to be down about 4 percent from 1963 in response to continued prices at recent relatively low prices.

There will be 3 to 5 percent more broilers produced in 1964 than in 1963.

Turkey supplies will be about the same during the remainder of this year as in fall 1962. Supplies of live birds are up but storage stocks are down.

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NOTES

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