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Markets for Michigan Cattle

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Markets for Michigan Cattle

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An integral part of the fed cattle industry is the availability of markets for finished cattle. This report focuses on the markets serving Michigan feedlots. Included are a brief history and the results of a 1987 survey of slaughterers of Michigan cattle.

Overview

Total Michigan cattle slaughter (excluding veal) peaked in 1976 at 827 million pounds per year and subsequently declined annually to a low of 545.4 million pounds in 1980. Output returned to a higher level, fluctuating between 600 and 700 million pounds per year until 1985. Another sharp decline to 519.7 million pounds occurred in 1985 (Michigan Agricultural Statistics).

As the volume of slaughter declined, the type of cattle being slaughtered changed. Steer and heifer slaughter accounted for 81.5 percent of the total kill by weight in 1962, declined to 59 percent in 1982 and increased slightly to 64 percent in 1985 (Michigan Agricultural Statistics). The remainder of the total kill was composed of cows and bulls. The decline in Michigan cattle slaughter volume can be attributed primarily to the decrease in fed steers and heifers. Increasingly,

cattle fed in Michigan are slaughtered out of state, while in-state cow slaughter has remained relatively constant. This trend contrasts with the national composition of cattle marketings, shown in Table 1.

the prospects for investment in a large modern facility. A recent study (see MSU Extension bulletins E-1557, "Michigan's Competitive Position in Cattle Slaughtering and Processing," and E-1797, "The Beef

Table 1. Annual marketings of all cattle and fed cattle in the United States (1961-1986)

Year	Fed Cattle Thousands	All Cattle	Fed Cattle as % of all Cattle
1961	13,747	35,175	39.1
1966	19,774	45,038	43.9
1971	25,281	49,248	51.3
1976	24,170	55,348	43.7
1981	23,818	34,953	68.1
1986	25,957	37,290	69.6

Source: U.S. Department of Agriculture

The number of federally inspected plants slaughtering cattle in Michigan has declined. In 1981, the USDA reported 121 federally inspected plants in Michigan, but by January 1, 1987, that number had decreased to 80.

Many of the packing plants that served the Detroit area in the 1950s and '60s closed because the cost of renovations to upgrade and modernize was economically unfeasible. Profit potential and the limited supply of fed cattle have limited

Industry in Michigan and the Eastern Corn Belt: Changing Competitive Positions"), found that existing supplies were insufficient to provide the slaughter volume necessary to realize the economies of scale necessary to support another plant. The study recommended that existing facilities be encouraged to investigate opportunities for expansion to provide local, competitive markets for Michigan cattle.

Michigan's remaining plants tend to seek out and orient themselves toward specialized markets. Specialization has followed the lines of product differentiation and added service to establish local clientele loyalty. The emphasis of product differentiation is away from the main-line Choice boxed beef that competes for markets with other major Midwestern packers.

The decline in local slaughter volume has caused wholesalers and retail chains to purchase beef from larger Midwestern suppliers.

The Survey

Because of the diversity of markets for fed cattle in Michigan, a survey was undertaken to identify and describe plants engaged in the purchase and slaughter of Michigan-fed cattle. Analysis of the markets for Michigan cattle provides valuable information to cattle feeders on near- and long-term aspects of the beef industry.

The objective of the survey, conducted in 1987, was to collect data that would identify and describe:

1. Basic characteristics of the plants, including age, capacity and classes of cattle being slaughtered.
2. Methods of procurement and sources of cattle.
3. Type of cattle in demand, and preference for Michigan cattle.
4. Marketing methods.
5. Competitiveness of packers slaughtering Michigan cattle.
6. Labor costs in slaughter plants.

7. Attitudes of packers toward the outlook for the future.

Target Population

The intent of the survey was to interview all slaughterers of Michigan fed cattle with annual fed beef slaughter in excess of 1,000 head. Twenty-nine firms were contacted. Of the 19 responding firms, 10 were from Michigan, three were from Canada, and six were from elsewhere in the United States.

Survey Results

Analyses were performed on the responses collected. Some bias may exist in the results because a few of the large out-of-state slaughterers refused to participate. Annual slaughter levels varied among the responding firms from approximately 1,000 to more than 200,000 head, so the figures reported have been weighted by the volume estimates of the responding firms to reflect the reported data in terms of relative cattle volume.

Characteristics and Operation of the Plants

More than 70 percent of the responding plants were constructed before 1960. However, the same percent have undergone major renovations within the past 10 years. All but one of the plants had maintained or increased capacity since 1960. In the single case in which capacity was reduced, management had reduced the labor force because of reduced sales.

Only four of the responding plants indicated a change in management, either through ownership

or personnel changes, within the past 10 years. Many of the plants have been owned and managed by the same families for two or three generations.

Retail markets and availability of cattle were reported as the most important factors limiting current production levels, followed by kill floor capacity and cooler space as limitations to increased production.

Capacity and Volume

The respondents (19 firms) reported a total annual capacity in excess of 3.5 million head (for all cattle). The responding Michigan plants reported an annual slaughter capacity of 738,658 head of fed cattle, cows and bulls. During 1986, 50 percent of the slaughter capacity was used (367,380 head), of which 179,504 head (49 percent) were fed steers and heifers. Sixty-three percent of the fed cattle slaughter originated in Michigan feedlots.

Despite the excess slaughter capacity, nearly 40 percent of the plants reported plans to expand facilities within the next three years. Expansion plans were most common among the newer plants.

Modern Techniques

One-third of the respondents utilize electronic stimulation of the carcasses to enhance muscle relaxation and improve tenderness. Only one plant had experimented with hot processing. Several of the contacts inquired about the hot processing procedure and the potential advantages.

Most of the plants reported on-the-rail systems for hide removal

and evisceration. However, one-third of the slaughter facilities used skinning cradles or beds. These plants accounted for only 3 percent of the total volume of fed cattle slaughtered.

Cattle Types

Table 2 compares the distribution or mix of cattle slaughtered by the responding packers during 1983 and 1986. Cow slaughter is 50 to 60 percent higher than national averages; the prominence of the dairy industry in Michigan and surrounding states may explain this. Heifer slaughter was lower than the national average.

Nationally, the portion of slaughter cows is approximately 20 per-

Table 2. Mix of cattle slaughtered in 1983 and 1987 as reported by responding firms.

Cattle type	1983	1987
Beef steers	28.8%	41.0%
Beef heifers	24.8%	17.2%
Holstein steers	8.5%	8.2%
Cows	36.5%	32.0%
Bulls	1.4%	1.6%

Source: American Meat Institute

cent of the total kill, and steers and heifers combined account for approximately 75 percent (American Meat Institute, 1987). (It should be noted that plants that claimed to be strictly cow slaughterers were not included in this survey).

Survey results shown in Table 3 indicate that yield grades for cattle

Table 3. Yield and quality grade distribution for carcasses graded by the responding firms.

Quality grade	Survey	U.S. avg*
Prime	3.2%	3.1%
Choice	84.0%	94.0%
Select	12.7%	2.9%
Standard	0.0%	0.0%
Yield grade	Survey	U.S. avg*
1	5.0%	3.9%
2	33.9%	41.8%
3	54.9%	49.0%
4	6.0%	4.8%
5	.3%	.4%

*Source: American Meat Institute

slaughtered by the responding packers were similar to the national averages. With respect to quality grades, however, the responding packers reported a significantly higher number of carcasses classified as Select. (Nationally, 48 percent of all carcasses are marketed without a quality or yield grade [no-roll]).

The higher percentage of cattle classified Select quality grade reflects the high percentage of Holstein cattle being slaughtered. Plant managers commented that well-fed Holsteins consistently have a greater percentage of USDA Select grade carcasses than beef cattle. The quality, however, is quite acceptable. Many of the responding firms have developed specific markets for Holstein beef.

The carcass quality, type and size most in demand by the re-

sponding packers was a Choice, yield grade 2 carcass with a weight between 580 and 670 pounds. Holstein steers were preferred at dressed weights between 650 and 750 pounds.

More than 70 percent of the packers indicated difficulty in procuring cattle. Eighteen percent cited consistent quality as a major concern. Properly finished Holsteins of consistent quality were the most difficult to purchase, followed by top quality, grain-fed beef cattle.

Seventeen percent of the cattle slaughtered by the responding packers came from within a radius of 50 miles of the plant. Twenty-nine percent were transported 50 to 100 miles, and 34 percent were transported more than 100 miles to the plant. The remaining 20 percent came from distances greater than 200 miles. A few of the largest packers reported some cattle traveled distances in excess of 500 miles.

Sources of cattle for the responding plants are shown in Table 4. Michigan feedlots were the primary source of cattle for all of the plants located in Michigan. However, 27 percent of the total volume of fed cattle slaughtered by Michigan packing plants came from outside the state.

All but one of the responding packers reported Michigan cattle exhibited "fewer" or "no difference" in the number of bruises compared with cattle from other sources. The survey results indicate Michigan cattle feeders and transporters are careful during shipment of fed cattle.

Table 4. Origin of cattle slaughtered by responding packers

State or Country	Percent
Michigan	15.3%
Ohio	7.4%
Indiana	5.5%
Illinois	9.9%
Wisconsin	3.8%
Iowa	27.9%
Pennsylvania	6.3%
Canada	18.2%
Other	5.3%

Table 5 shows the relative extent of the various purchasing methods used by the responding packers.

Fifty-three percent of the cattle were shipped directly from the feedlot to the slaughter plant. This is in contrast to practice in other areas of the United States (the Midwest and the Southwest), where 80 to 90 percent of the fed cattle are marketed directly to the slaughter plant. Thirty-three percent of the cattle slaughtered by the respond-

ing packers were purchased at auction. The differences in marketing methods between Michigan and other cattle-feeding regions may result from the smaller sizes of feedlots here.

Sixty-nine percent of the cattle purchased by the responding packers were bought on a live-weight basis, 18.2 percent on a grade and yield basis, and 12.8 percent "in the beef" or on a hot dressed-weight basis (without grading). Occasionally, the seller or feedlot operator is required to guarantee minimum standards for quality and cutability or dressing percent for cattle sold on a live-weight basis. Packers were reluctant to use this approach and tended to utilize this method only on cattle of questionable quality. Packers preferred to buy beef elsewhere rather than stipulate requirements in the agreement. Packers preferred to purchase cattle from feedlots with an established history of producing high quality cattle.

Most of the volume reported under "other" in direct purchases was due to an electronic marketing

system used by Canadian packers. The system is a tele-auction in which packers bid on cattle displayed in the feedlot via video camera. Prospective buyers viewed groups of cattle with a local terminal. The bid process works like a "Dutch auction" — the price is allowed to fall at time intervals until a bid is received. The producer is contacted and allowed several minutes to refuse or accept the offer. The producer has a tremendous advantage through increased exposure of his cattle to potential buyers, reduced transaction costs, and the assurance of a definite price before the cattle leave the feedlot. The Canadian packers seemed pleased with this service and the concomitant arrangements.

Only one of the responding meat packing firms was engaged in forward contracting of cattle, and even in that case, such contracts were only occasional. Three of the packers were having cattle custom fed in commercial feedlots, but the numbers involved were insignificant in relation to each plant's total volume.

Another form of vertical integration involves partial ownership in a feedlot and/or cattle by packing firms. Four of the smaller slaughter plants each reported feeding from 25 to 200 head of cattle annually. Again, this amount is an insignificant part of the total reported volume.

Information that responding packers are willing to make available to producers is displayed in Table 6.

Table 5. Methods used by responding packers to purchase fed cattle.

Source of service	Percent
House cattle buyer, direct	31.9%
Independent order or commission buyer, direct	17.5%
Other purchases, direct	4.1%
TOTAL DIRECT	53.5%
Auction sale	32.5%
Independent order or commission buyer, indirect	12.5%
Other indirect	1.5%
TOTAL INDIRECT	46.5%

Table 6. Information available to producers from slaughter plants.

Information	Lot basis			Animal basis		
	Routine	On Request	N/A*	Routine	On request	N/A*
	Percent of respondents			Percent of respondents		
Carcass weight	76.5%	17.6%	5.9%	11.8%	47.1%	41.2%
Quality grade	64.7%	11.8%	23.5%	11.8%	41.2%	47.1%
Yield grade	58.8%	23.5%	17.6%	11.8%	41.2%	47.1%
Back fat	0.0 %	23.5%	76.5%	0.0%	23.5%	76.5%
Rib eye area	0.0 %	17.6%	82.4%	0.0%	17.6%	82.4%
KPH fat	0.0 %	17.6%	82.4%	0.0%	17.6%	82.4%
Liver abscesses	5.9%	29.4%	64.7%	0.0%	29.4%	70.6%
Liver flukes	5.9%	23.5%	70.6%	0.0%	29.4%	70.6%
Trim loss	5.9%	5.9%	88.2%	0.0%	17.6%	82.4%

*N/A—Information is not made available to producers.

Upon request, approximately 50 percent of the packers were willing to provide carcass weights, quality and yield grades on individual animals. Cattle feeders should take advantage of this service. When asked what Michigan cattle feeders could do to make improvements, the most common answer was “feed more cattle.” This comment was often qualified by requests for a supply more consistent in both quality and quantity at all times of the year.

Sales

Forty-one percent of the responding packers reported using the National Provisioner’s “yellow sheet” to establish a formula to price live cattle, while 12 percent use the “blue sheet” published by the National Association of Meat Purveyors. Forty-seven percent use other sources of information. Several of the larger packers make use

of in-house computer-generated information to price products according to inventory and product movement.

Canadian packers market beef products extensively through private brand names. Two of the responding packers in the United States market a small amount of their total volume under a private brand name or label. The packers were hesitant to reveal details about grades of beef used in specific products, saying only that they were very selective in the quality of the meat used in house-named products.

The responding packers shipped 71.5 percent of fed beef volume as boxed beef and 20.6 percent as intact sides or quarters. The remaining 7.9 percent was processed further into portion fresh cuts, chipped and formed cured meats, or other processed and cured products.

Table 7 shows that 46 percent of the beef sold by responding packers was sold to retail markets. Sixteen percent of the beef slaughtered went to hotel, restaurant and institutional outlets, and more than 36 percent was shipped to wholesale distributors.

Table 7. Distribution of product shipments by responding packers.

Destination	Percent
Supermarket chains	35.7%
Other retailers	10.7%
HRI (hotel, restaurant and institutional outlets)	16.5%
Other packers	21.3%
Purveyors	15.2%
Plant’s own retail outlet	.4%
Other	.2%

Ethnic Kill

Four of the responding packers performed some kosher slaughter. These packers commented that the slightly higher prices received for kosher slaughtered cattle were barely sufficient to compensate for the added time and effort involved. No reports were received for other types of ethnic slaughter, such as Muslim.

Costs and Competitiveness

Labor

One-third of the responding plants had labor unions representing workers. Average starting wages were \$7.08 per hour, compared with state or national average wages of \$9.95 per hour. By comparison, the U.S. overall average wages for meat packing and processing firms are \$8.24 and \$8.74 per hour, respectively.

Compared with averages for all manufacturing, meat packing employees received almost \$1.50 per hour less than other workers. This is a significant change from 1980, when workers in meat packing plants were paid an average of \$1.22 per hour more than the national average for manufacturing workers (American Meat Institute, 1987). Technological advances that have changed the types of skills required to work in meat packing plants may have influenced the pay scale. The availability of employees to work for these lower wages will affect the ability of the packing plants in the eastern Corn Belt to compete with Western slaughter plants.

Five of the responding firms conducted some form of profit-sharing benefit program for their workers. Two of the firms offered volume bonuses for the shift as a group. Only one of the smaller firms paid kill floor workers on a piece-work basis.

Fifty percent of the firms guaranteed a weekly number of hours. All

but one of the responding packers offered time off with pay as part of the benefits package. All but two paid part or all of some type of health insurance. Only 57 percent of the U.S. firms offered employees retirement benefits (in Canada, contributions to the Canada Pension Plan are mandatory). Less than half participated in a dental program.

Kill Cost

Most of the slaughter plants indicated kill costs to be slightly greater than the drop value. The drop includes the head, hide, viscera, feet, and sometimes blood.

Many of the packers were unwilling to report a value for the drop. For those who did, the reported average was \$67.93. The value varied widely, particularly with the smaller plants. This can be attributed largely to the avenues of disposition available to each plant. Large plants have sufficient volume for on-site preparation of hides for tanning or export, rendering and processing the offal. The economics of scale in offal and hide salvage and processing are such that smaller plants must sell these by-products to independent firms. Hide value constitutes the largest single component of drop value. Hides are priced on size and quality. Large, relatively thin Holstein hides command a premium price from tanneries.

Of those packers who responded to the question "What is the key to remaining competitive?", most maintained that the quality of product was of primary importance. Cattle feeders should

recognize the emphasis placed on this factor by slaughter facility managers.

Competitive Position

Table 8 gives a breakdown of responding packers' view of their competitive position relative to that of major packers, particularly those of the Midwest and the Southwest. The major advantage cited by responding packers was the availability of and proximity to retail markets. Unfortunately, the proximity to urban areas also created a major disadvantage: higher taxes and permit costs. Slaughter costs were seen as a disadvantage for Eastern packers.

Outlook

Seven of the packers said they intended to expand operations within the next three years. The remaining 11 planned to maintain current levels of production. None of the packers expected to reduce business or close. Responding packers felt the Northeast would have difficulty regaining a major role in the national production and processing of beef. Many commented that serving specialized markets was the only means of securing a position.

Summary

Though the survey was unsuccessful in obtaining 100 percent participation by slaughterers of Michigan-fed cattle, all the packers located in Michigan responded. Consequently, the resulting data are highly representative of the cat-

Table 8. Responding packers' perception of relative competitive position.

Item	Advantage	Disadvantage	No difference
External costs—ex., taxes, permits	0.0	73.3	26.7
Labor costs	0.0	46.7	53.3
Plant size	14.3	42.9	42.9
Cattle availability	20.0	46.7	33.3
Cattle quality	46.7	13.3	40.0
Cattle consistency	26.7	33.3	40.0
Market access or availability	3.3	0.0	26.7
Market diversity	46.7	20.0	33.3
Fabrication ability	0.0	40.0	60.0
Kill cost	6.7	60.0	33.3

tle slaughtering industry in Michigan.

Most of the plants have undergone remodeling. This indicates a progressive attitude and the desire to adopt modern technology. The low number reporting changes in senior management suggests stability.

Given the large amount of underutilized capacity reported, Michigan cattle feeders could confidently double or triple annual output before slaughter capacity became limiting. As mentioned earlier, many of the packers have plans to expand and are anxious about cattle supply.

Michigan cattle seem to be well-received. Nearly 50 percent of the responding packers said the quality of available cattle provided an advantage over other packers. With an established foundation of confidence, Michigan producers may benefit from efforts to promote a quality image, not only to meat packing firms but also to the public. The key is to provide products and services in demand to limited-access markets to prevent exploitation by larger firms.

It seems that progress could be made in the area of forward contracts to reduce transaction costs. Producers and packers appear to be reluctant to establish relation-

ships to improve the consistency of fed cattle, assure a market, transfer risk and reduce marketing costs. Overall, the attitude of the slaughterers of Michigan cattle was progressive and positive.

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