

# MICHIGAN BEEF PRODUCTION

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## Trends in the Michigan Beef Industry

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Michigan produces approximately one-third of the beef consumed in the State. Although beef cow herds and cattle feeding expanded during the 1960s and early 1970s, total beef output did not keep pace with the upward trend in beef consumption. Meanwhile, the declining competitive position of Michigan cattle slaughterers has resulted in a growing movement of Michigan fed cattle to markets in other states and in Canada.

This bulletin describes the trends in the Michigan beef industry and identifies concerns about the future. Extension Bulletin E-1557 "Michigan's Competitive Position in Cattle Slaughtering and Beef Processing" examines the cattle slaughtering situation in more detail and suggests alternative courses of action to strengthen this component of the industry.

### Growth of U.S. Beef Industry

Over the past two decades, an expanding demand for beef and abundant supplies of low-priced feed grains were major factors behind the rapid growth of the U.S. cattle and beef industry. Beef consumption increased from 85 pounds per person in 1960 to a peak of 129 pounds in 1976. The make-up of the beef supply shifted towards grain fed beef with large retail food chains featuring U.S. choice grade as their main line of fresh beef cuts. Meanwhile, ground beef consumption increased sharply with the spectacular growth of the fast-food industry. Large-scale cattle-feeding units and closely related slaughtering plants sprang up in the Central and Southern Great Plains areas. Beef cow-calf production units remained smaller scale and more geographically dispersed but the greatest expansion occurred in the Southeastern states.

A cyclical downturn in beef cattle numbers and in cattle feeding was triggered by the mid-1970s feed-grain shortages and the resulting financial losses that occurred in cattle feeding. The liquidation of beef herds that began in 1976 appears to have run its course and herd rebuilding was resumed by 1980. However, the expected cyclical expansion of beef production may be slowed by weakness in consumer demand and high prices for feed grains as a result of a strong export market.

### Michigan Beef Consumption Outruns Local Slaughter

Michigan has become increasingly dependent upon beef shipped in from other states. In 1960, Michigan slaughter plants provided over 60 percent of the State's total beef, but by 1980, this had slipped to only 33 percent (Figure 1). During this 20-year period, Michigan cattle slaughter trended irregularly downward, while

Fig. 1 MICHIGAN BEEF SLAUGHTER AS A PERCENT OF CONSUMPTION

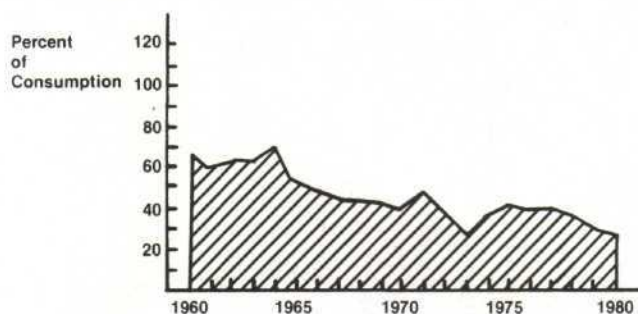
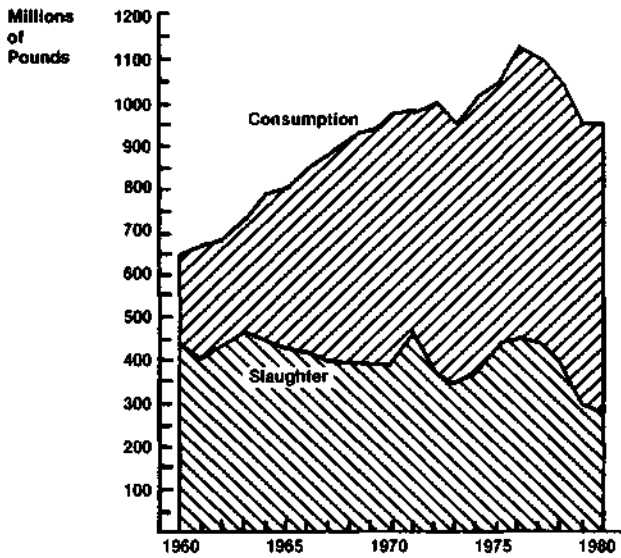


Fig. 2 MICHIGAN BEEF SLAUGHTER AND CONSUMPTION

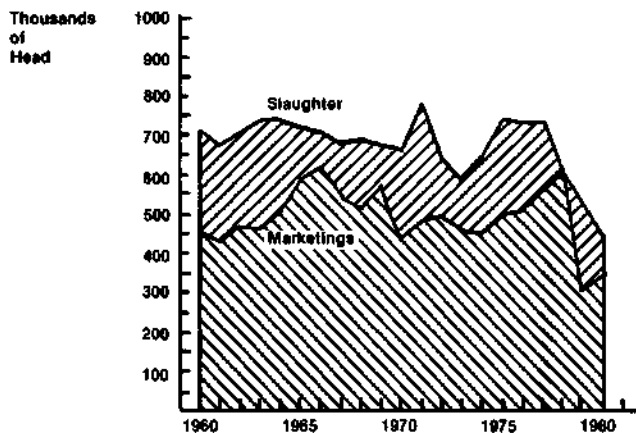


total consumption followed an upward path (Figure 2). The 1976 to 1979 reductions in Michigan slaughter and consumption were closely associated with similar cyclical declines in the U.S. beef market.

### Michigan Shifts to a Net Exporter of Live Cattle

For many years, Michigan was an importer of both dressed beef and live cattle for local slaughter. But this situation changed in 1979 when, for the first time in recent history, cattle marketings exceeded slaughter in Michigan plants (Figure 3). This followed two decades during which slaughter trended downward while cattle marketings were on a general upward trend. During this period, Michigan's share of total U.S. commercial cattle slaughter declined from 3 percent in 1960 to 1.51 percent in 1980.

Fig. 3 MICHIGAN CATTLE MARKETINGS AND SLAUGHTER



### Farm Production of Beef on Michigan Farms

Dairy herds have been the source of a substantial but declining portion of Michigan's farm production of beef. Dairy cow numbers declined rapidly during the 1960s (Figure 4). This has reduced the supply of cull cows and young dairy stock that move into veal-producing units and into steer and heifer growing and grain fattening operations. However, from 1960 to the mid-1970s, steady increases in beef cow numbers and in cattle feeding tended to offset the decline in dairy-based beef production. The decline in dairy cow numbers slowed down in the 1970s and appears to have leveled out at around 400,000 head. Meanwhile, beef cow numbers increased from 109,000 head in 1960 to 239,000 head in 1977 and then declined sharply to 138,000 head in 1979. Although this decline was part of a cyclical adjustment nationally, the downturn was proportionally greater in Michigan. The rebuilding of Michigan beef-cow herds was resumed in 1980, but the upturn had only increased total cow numbers to 155,000 head by January 1, 1981.

Cattle feeding increased rather steadily from the early 1960s until 1973 and then turned downward with the cyclical adjustment that occurred throughout the U.S. The number of cattle and calves on feed reached a peak of 245,000, January 1, 1973, and has declined to a low of 165,000 January 1, 1980 (Figure 5).

The Michigan Agricultural Reporting Service estimated that there were 1,500 cattle feedlots in Michigan in 1979, as compared to about 2,000 lots in 1965. Michigan feedlots are relatively small when compared with the major cattle feeding areas. Only 22 percent of Michigan fed cattle marketed in 1976 were from lots with a capacity of over 1,000 head. This compared with 67 percent from lots of over 1,000 head for 23 leading cattle feeding states.

### Cattle Marketing

Auctions have long been the principal market outlet for Michigan cattle. Nearly 90 percent of the cull dairy cows and a high percentage of the feeder cattle and calves are moved through auction markets.

Information from the U.S. Department of Agriculture Packers and Stockyards Program shows that in 1978 packers bought more than 60 percent of their Michigan steer and heifer purchases through auction markets. Direct sales from feedlots to packers accounted for only 14 percent of total steer and heifer purchases. This pattern of cattle marketing differs significantly from that observed in other nearby states where direct sales are much more important. For the U.S. as a whole, direct sales are the dominant method of packer buying of fed cattle (Table 1).

Fig. 4 BEEF AND DAIRY COW INVENTORIES IN MICHIGAN

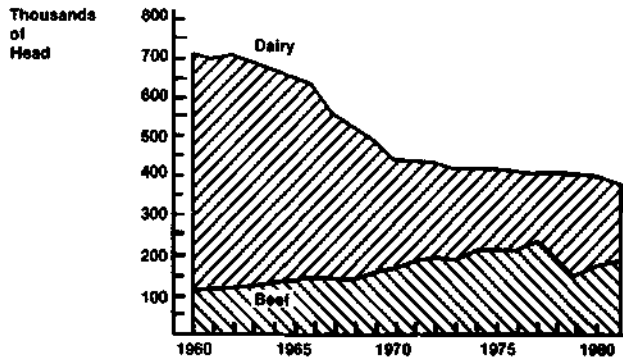
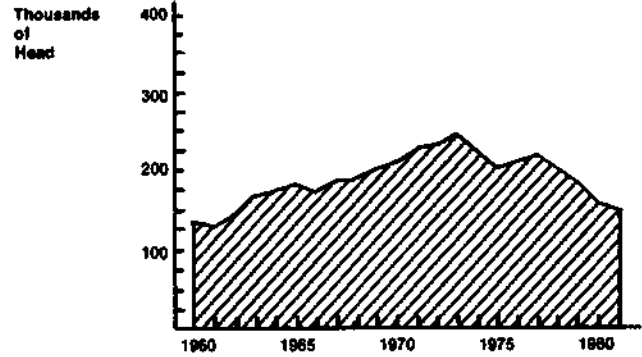


Fig. 5 CATTLE AND CALVES ON FEED IN MICHIGAN JANUARY 1



In recent years, a decline in the Michigan cattle slaughtering industry has weakened local packer demand for grain-fed steers and heifers. Contacts with cattle feeders indicate that increasing numbers of their cattle are moving out-of-state to packers in Canada and in states to the south and east of Michigan. This out-of-state movement of fat cattle is largely arranged through Michigan-based order buyers who purchase direct from feedlots and through auction markets.

### Cattle Slaughtering Firms Under Pressure

More than 60 percent of Michigan's 1977 cattle slaughter took place in 12 federally-inspected plants. The remaining 40 percent of the cattle were slaughtered by a large number of very small plants (approximately 160) many of which provide custom slaughtering and processing services.

With the exception of one relatively large plant that specializes in the slaughtering and processing of cows, the remaining federally-inspected plants are small compared with the newer, more modern beef plants in the Central and Southern Great Plains areas. Because of their larger volume and the adoption of a "boxed beef" system of processing and distribution, these "mid-western" plants have achieved cost and product advantages that have enabled them to take over an increasing share of the total U.S. beef market. This has been tough competition for smaller Michigan packers. As a result, some have gone out of business and others have reduced their volume.

TABLE 1. STEERS AND HEIFERS PURCHASED BY PACKERS THROUGH VARIOUS MARKET OUTLETS BY STATE, 1978.

	Auction Market	Terminal Market	Direct Sales	Total	
				1,000 head	Percent
Michigan	61.0	25.2	13.8	254	100
Ohio	36.4	21.2	42.4	645	100
Indiana	12.7	47.3	40.0	292	100
Illinois	17.1	29.9	53.0	1,121	100
Wisconsin	29.9	22.6	47.5	592	100
U.S.	6.4	9.9	83.7	28,330	100

Source: *Packers and Stockyards Program, U.S. Department of Agriculture.*

### Future Possibilities for the Michigan Beef Industry

Past trends suggest that the Michigan beef industry will expand rather slowly during the 1980s. Some of the forces which will limit growth:

- Total U.S. consumer demand for beef will increase much less during the 1980s than in the past two decades. Sluggish growth in consumer income is anticipated and population growth has slowed.
- Continued strength in export demand for feed grains is expected to keep pressure on domestic feed prices which in turn will discourage grain feeding of cattle.
- High feed grain prices will shift retail meat prices in favor of poultry and pork.

On the other hand, forces which may encourage expansion of the Michigan beef industry include the following:

- Rising transportation costs will increase the costs of beef imports from midwestern surplus producing areas and put upward pressure on cattle prices in Michigan.
- Michigan has surplus feed grains and the potential for greater utilization of roughage in beef production.

- Consumer demand for beef appears to be shifting toward somewhat leaner and less wasty carcasses that can be produced with rations composed of more roughage and less grain.

Finally, the lack of a strong slaughtering and processing capability is a deterrent to the future growth of Michigan's beef industry.

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