

The Potential For Exporting North Dakota Beef to Asian Pacific Markets

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Cattle are an important source of income to North Dakota agricultural producers, ranking second only to wheat in generation of cash receipts from farm marketings. Cash receipts from cattle accounted for 16 percent, or \$497 million in 1991, of total crop and livestock producers' cash receipts. On January 1, 1994, the state had 1,900,000 head of cattle on 14,500 farms. Income from cattle exceeds income from crops in counties in the West Central, South Central, and Southwest districts in North Dakota.

Rural economic development has emerged as a high priority public policy issue in North Dakota. Policymakers have sought to increase value-added livestock enterprises in the state as a way to increase economic activity. Livestock production has the highest multiplier effect of any sector in the North Dakota economy, generating \$4.49 in gross business volume for each dollar of sales in the livestock sector.

North Dakota feedlots may want to explore niche markets for beef to enhance revenue from cattle feeding. The recent liberalization of Japanese import restrictions on beef products has created a desire for North Dakota cattle feedlot operators to produce animals that would meet the specifications of the Japanese beef market.

Since per capita consumption of beef is increasing in Japan and other Asian Pacific countries, a potential market for North Dakota grown beef exists. Instead of shipping feed and feeder cattle out of state, increased economic activity could be generated by feeding cattle for the

export market. A specialty beef slaughter plant to process beef to meet the specifications of the export market would create additional jobs and generate additional economic activity if enough cattle were ultimately fed for the export market.

The Departments of Animal and Range Science and Agricultural Economics at NDSU initiated a project in 1991 to determine the potential for exporting North Dakota beef to Asian Pacific markets. Results of that project, including the production and actual slaughtering of fed steers and shipment of selected beef cuts to Japan and Taiwan, follow.

Market Potential

Japan is one of the largest foreign markets for U.S. agricultural products and the largest export market for U.S. beef products. U.S. negotiations with Japanese officials have reduced trade barriers for U.S. agricultural products. The Beef Market Access Agreement (BMAA), approved in 1988, turned quotas restricting beef imports into tariffs that were systematically lowered over five years. Liberalization of the Japanese beef market has increased U.S. beef exports to Japan.

Taiwan is also an important and fast-growing market for agricultural goods. It is one of the world's highest ranking net import markets for agricultural products and was the sixth most important U.S. overseas farm product market in 1992. Opportunities for meat exporters stem from consumers' changing tastes and demand for high-quality food.

South Korea is the world's sixth largest net import market for agricultural products and fourth-largest export destination for U.S. agricultural goods. Koreans prefer beef to other meats and many households view beef as a health food. A joint study of the Korean beef market by major beef-exporting nations estimated that beef imports in Korea could reach 400,000 tons by early in the next decade, making the Korean market the rough equivalent of the Japanese market today.

China, with a population of 1.17 billion and a real per-capita income growth rate averaging 6 percent since the late 1970s, could have a major impact on global markets. A net population increase of 13.5 million in 1992 alone indicate the market's size. Future prospects in China for beef imports will advance with China's entry into the General Agreement on Tariffs and Trade.

Hong Kong is Asia's second largest agricultural importer and the fourth largest U.S. market in the region mainly because it serves as a transshipment center for the Asian Pacific. It has grown substantially as a market for U.S. farm products during the last two decades. The U.S. share of Hong Kong's beef imports has grown since the mid 1980s and was 11.4 percent in 1991. U.S. beef is mostly restricted to high-quality cuts for the hotel and restaurant trade, because it is generally higher priced than beef from other sources.

North Dakota Steer Feeding, Slaughter, and Beef Exporting Experiment

Feeding cattle for export to Asian Pacific countries requires unique management considerations. These include expenses for an extended feeding period, packaging, grading and inspection, shipping, insurance, and increased paperwork. Cattle should be fed to heavier weights, 1400 to 1600 lbs, which increases time on feed (Table 1). Shipping charges are greater for meat shipped to Asian Pacific countries. Chilled beef

shipped to Japan by air-freight costs approximately \$1.00 per pound, while containers of frozen beef trucked to Seattle and shipped to Taiwan cost approximately \$0.22 per pound for an 11-metric-ton container. Personal visits to Asian Pacific meat buyers may also be necessary before shipping to these markets.

A producer will incur additional expenses when shipping to international markets compared to normal slaughter and shipping costs (Table 2). USDA meat inspection by the Food Safety and Inspection Service (FSIS), is mandatory for meat sold in domestic and export markets. USDA meat inspectors are located at all meat plants operating under federal inspection (located in approximately 24 cities across North Dakota). USDA beef grading performed by the Agricultural Marketing Service (AMS) is optional, but highly recommended for the export market. USDA graded beef is assessed a lower tariff than non-graded beef in Japan, and top-quality grades receive higher prices.

In December, 1991, Dr. Martin J. Marchello, NDSU Animal and Range Sciences Department, and Bob Sinner, Sinner Bros. & Bresnahan cattle feedlot, traveled to Japan and Taiwan to make direct contact with potential customers as a case study for this report. In preparation for the trip, Marchello and Sinner studied Japanese business culture to gain insights into the proper approach to Japanese businesses and to better understand and operate within their culture. They learned that business contacts are best when made through a network of contacts that had been established earlier. A "cold" call is not appropriate in Japan. During discussions with a meat products distribution company in Japan, they were able to reassure this company that North Dakota beef producers could meet box size specifications, shipping requirements, quality controlled workmanship and deadlines.

Following this trip, it was determined that there was potential for shipping beef to Japan and Taiwan. Therefore, 15 beef steers were fed by Sinner Bros. and Bresnahan feedlot and slaughtered

Table 1. Comparison of estimated North Dakota cattle feeding costs with estimated costs of feeding cattle for the Japanese market, 1993 (hypothetical data).

Feedlot Expenses	Beef Fed For		
	U.S. Market	Japanese Market	
Feeder calf	\$ 534.00	\$ 534.00	562 lbs. @\$95.00/cwt.
Trucking	9.06	9.06	
Veterinary costs	11.50	11.50	
Feed costs ¹	165.39	246.16	
Operating interest	34.72	52.65	8% interest on cost of calf, trucking in and out, veterinary costs, and 1/2 of feed costs.
Death loss	5.34	5.34	1% of cost of calf
Yardage cost	52.14	71.10	\$0.24 per day
Total costs	\$ 812.14	\$ 929.81	
Days on feed	220	300	
Starting weight (lbs.)	562	562	
Finished weight (lbs.)	1,232	1,464	
Gain (3.01 lbs/day)			
Cost/lb. of gain	\$0.4151	\$0.4447	
Breakeven price	\$65.92/cwt.	\$63.51/cwt.	

¹Feed costs: 1992 average feed prices.

(North Dakota Agricultural Statistics Service, 1993)

Corn \$1.90/bu Barley \$1.75/bu. Alfalfa \$56/ton Straw \$20/ton Min. supp. \$0.05/lb

Table 2. Summary of expenses for shipping beef to Japan and Taiwan, 1993.

Category	Range of Costs
Slaughtering	\$20 to \$40 per head, depending on offal arrangements.
Grading	\$35 per hour plus \$.28 per mile. About \$0.01 per lb. (carcass weight).
Processing and packaging	\$.14 to .23 per lb., \$.16 to \$.17 per lb. common (carcass weight).
Insurance	1 percent of the value of the meat.
Shipping	Air freight to Japan – \$1.00 per lb. Trucking to Seattle; boat to Taiwan – \$4.22 per lb. for 11-mt container.

at the NDSU Meats Laboratory over a period of several months and selected cuts were shipped to Japanese and Taiwanese markets. Both liveweight and dressed weight data were collected on each steer to determine yields of carcasses and individual cuts from steers fed to heavier slaughter weights than current industry standards.

Average carcass weights of Institutional Meat Purchase Specifications (IMPS) cuts, trim, and waste for the steers slaughtered for the Asian Pacific markets were collected. The rib cuts for 15 steers averaged 9.1 percent of carcass

weight; chuck, 27.5; round, 22.0; and loin, 14.9, compared with current industry averages of 9.0, 29.0, 22.0, and 16.0 percent. Percent yields for different cuts of meat from cattle finished to higher weights in this study were comparable to cattle marketed at lighter market weights (1100 to 1200 lbs.). The shipments of beef cuts sent to Japan and Taiwan were well accepted in both countries. However, Taiwan seemed to be the most receptive market to penetrate and was considered to hold the most potential of the two countries.

Profit Potential

An example of potential profitability for shipping meat products to Japan is shown in Table 3. Additional profits for exported beef range from $-.01$ to $$.28$ per pound for selected IMPS cuts. The shoulder clod, boneless brisket, beef round knuckle, beef top round, and beef bottom round showed the lowest additional profit the week of July 15, 1993, while the ribeye roll and strip loin showed the largest profit potential. These could vary with changes in domestic and Japanese meat prices. In addition, individuals may be able to capture more (or less) in individual negotiations with Japanese firms.

Meat wholesalers in Asian Pacific countries may purchase only selected IMPS cuts of meat. When a beef producer considers the meat export market, it should be realized that only certain cuts can be exported for a premium. A domestic market must be found to merchandise trim and remaining cuts of meat.

Table 3. Meat product costs and potential profitability in Japan of selected beef cuts, 1993.

IMPS Cuts	Omaha	Freight	C&F Port	Japan Potential		Margin
	Wholesale	to Japan	C&F	U.S. Frozen		
	7/17/93			low	high	
112A Ribeye Roll	3.72	.22	3.92	3.96	4.20	.04 to .28
114 Shoulder Clod	1.12	.22	1.34	1.33	1.49	-.01 to .15
116A Inside Roll	1.32	.22	1.54	1.63	1.70	.09 to .16
116B Chuck Tender	—	.22	—	1.56	1.83	
120 Boneless Brisket	1.02	.22	1.24	1.26	1.38	.02 to .14
167 Beef Round Knuckle	1.33	.22	1.55	1.58	1.68	.03 to .13
168 Beef Top Round	1.57	.22	1.79	1.80	1.90	.01 to .11
170 Beef Bottom Round	1.17	.22	1.39	1.43	1.49	.04 to .10
180 Strip Loin	3.26	.22	3.48	3.63	3.75	.15 to .27
184 Top Sirloin Butt	1.87	.22	2.09	2.16	2.28	.07 to .19
189 Full Tenderloin	—	.22	—	4.96	5.08	

Column one: The Institutional Meat Purchase Specification (IMPS) number and description of wholesale cut of meat.

Column two: The wholesale price of meat cuts for the week ending July 17, 1993.

Column three: The freight cost.

Column four: (C&F) is the sum of columns two and three.

The next two columns are the low and high prices for U.S. meat at a Japanese port for the week of July 15, 1993.

The remaining two columns show the range of profit potential for each cut of meat.

Source: Meat Export Research Center, August 1993.

Summary

A 25-minute VHS tape, *International Marketing of North Dakota Beef*, provides information on North Dakota cattle production, slaughtering, cutting, packaging, and logistics necessary to market beef to Asian Pacific countries. Contact Dr. Martin Marchello, Department of Animal and Range Sciences, NDSU (701) 237-7641 for a copy. A more in-depth analysis of exporting beef was published in Agricultural Economics Report No. 309, *The Economics of Exporting North Dakota Beef to Pacific Rim Markets*, and is available from the Department of Agricultural Economics, NDSU, (701) 237-7441.

The Asian Pacific markets for beef will expand in future years and offer a potential niche market for cattle fed and slaughtered in North Dakota. However, the market is not easy to penetrate. A great deal of time is necessary to identify potential buyers and the specialized products that they require. Cattle must be fed specifically to meet Asian Pacific market specifications, and a domestic market must be maintained for the beef cuts that are not used in the export market. Hiring professional export market consultants may be advised, particularly if the beef producer has limited knowledge of Asian Pacific markets, customs, and product characteristics.

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