



Iowa Cattle Feeding - Beyond the Margins

Cattle Feeding in Iowa

Over the past decade, Iowa's market share of cattle on feed has increased from 8.2% to 9.3%. Iowa, in combination with Nebraska, South Dakota, Minnesota, Wisconsin, Illinois, and Missouri, accounted for nearly 40% of the U.S. cattle on feed as of January 1, 2016, compared to less than 35% a decade earlier. Iowa and the upper Midwest have quietly been regaining market share in recent years due to many factors, including competitively priced corn and corn coproducts, improved production efficiencies as compared to other regions, and expanded value-added market opportunities including two new beef packing plants. Additionally, due to several comparative advantages, Iowa cattle feedlots have a better opportunity to navigate through market challenges.

The Cattle Market

Cattle feeding is a competitive industry, which means that total economic profits (not accounting profits) will be close to zero in the long run. That is, market participants can expect an average return for their resources (i.e., capital, labor, and management) where the average returns reflect the risks in the particular industry or enterprise. For example, average returns on money invested in cattle finishing are considerably higher than average returns on money invested in certificates of deposit, but the risk is also much higher.

Cattle feeding enterprises are characterized by having a tremendous variance in profitability across producers and

over time. Generally, this is true regardless of any type of agricultural enterprise (i.e., beef, dairy, swine, and crops). In all Iowa cattle feeding enterprises, profit opportunity can often reveal itself through key management styles. By effectively managing risk in an operation, and capitalizing on the distinctive benefits to feeding cattle in Iowa, producers can increase profitability and business survival.

Managing Risk

Price risk management will play a major role in cattle feeding in the future. The reality of increasingly volatile markets sets the stage for very dynamic and challenging conditions as cattle feeders are exposed to increasing amounts of both input and output price risk. Producers have many factors to consider in attempting to reduce price risk and uncertainty, including enterprise combination, cash flow needs, financial situation, and attitude toward risk. To reduce the variability of income over time, or at least guarantee a minimum level of cash flow, producers can consider locking in input and output price points. This can be achieved through forward contracting, utilizing internal inputs, or purchasing contracts through the Chicago Mercantile Exchange. This allows more accurate planning for items such as debt payment, replacing capital assets, and operation growth. One way to establish price-risk management objectives is to start with the cost of production and the amount of risk the operation can withstand.

Feedlot Systems in Iowa

Cattle feeding adds economic value to Iowa's corn and forage production, while allowing the efficient recycling of manure nutrients to reduce the cost of production for those crops. To improve manure quality and cattle efficiency, new technologies are being used to grow or expand cattle feeding operations. In fact, according to a **2014 Feedlot Operator Survey** conducted by the Iowa Beef Center, 75% of Iowa feedlots are open lots and of those, two-thirds have shelter available. The remaining 25% of feedlots are considered confinements. However, half of Iowa's cattle feeding sector expansion over the past five years has occurred in confined housing. **Summaries of research suggest that access to shelter improves efficiency 5% to 6% year-round due to improved cattle comfort in the Iowa environment.**

Source: Beef Feedlot Systems Manual-PM 1867; <http://store.extension.iastate.edu/Product/Beef-Feedlot-Systems-Manual>

2014 Feedlot Operator Survey

Full report

<http://store.extension.iastate.edu/Product/lowa-Beef-Center-2014-Feedlot-Operator-Survey>

Summary

<http://store.extension.iastate.edu/Product/lowa-Beef-Producer-Profile-A-2014-Survey-of-Iowa-Feedlot-Operators-Summary>

A good place to learn more about price risk management is the *Ag Decision Maker* website (*Livestock—Markets*) <http://www.extension.iastate.edu/agdm/ldmarkets.html>

Performance and Cost Competitiveness

Table 1 summarizes benchmark data prepared by Elanco Animal Health. Midwest region feedlots have the lowest cost of gain despite slightly poorer feed conversion compared to the other regions. This advantage is due to competitive grain and corn coproduct costs and access.

Valuing Manure Nutrients

One advantage to cattle feeding that is often overlooked is the value of manure as a crop nutrient. Often the manure value exceeds the projected feeding margin for cattle feeding. Confined housing systems capture more manure value because the manure is contained and protected from environmental elements. This, along with improved feed efficiency, is likely a main driver for the increased popularity of these systems, despite increased construction costs. Table 2 demonstrates that manure nutrient value can range from approximately \$50-\$100 per head space per year depending on the housing system. Of course, this value is dependent on proper manure nutrient management through a cropping system.

The Iowa Beef Center through research and education and Iowa Cattlemen's Association through advocacy, work together to improve the profitability and vitality of Iowa's beef industry. In any competitive market a cyclical nature of high and low price points exist. The cattle industry is no exception. However, due to lower cost of gain, animal performance and the value of beef manure, Iowa cattle feeders have an opportunity to recover from financial losses over time. The Iowa Beef Center and Iowa Cattlemen's Association offer this resource, among others, to assist navigating lending and refinancing options. For more information on the services we provide to Iowa cattle feeders, please visit our websites: Iowa Beef Center – <http://www.iowabeefcenter.org/>; Iowa Cattlemen's Association – <http://www.iacattlemen.org/>.

Table 1. Regional benchmark steer data, 2009-2013

Region	ADG ¹ lbs.	F/G ² ratio	COG ³ \$/lbs.	VM ⁴ \$/head	PR+CAB ⁵ %	Choice %	Outs ⁶ %
Central Plains	3.46	6.18	0.96	16.55	13.89	53.82	15.36
High Plains	3.26	6.25	0.99	14.48	10.84	49.77	15.42
Midwest	3.41	7.02	0.90	17.45	14.56	63.22	22.64
North Plains	3.45	6.49	0.93	17.40	20.85	62.11	16.71

Source: Elanco Animal Health Benchmark program.

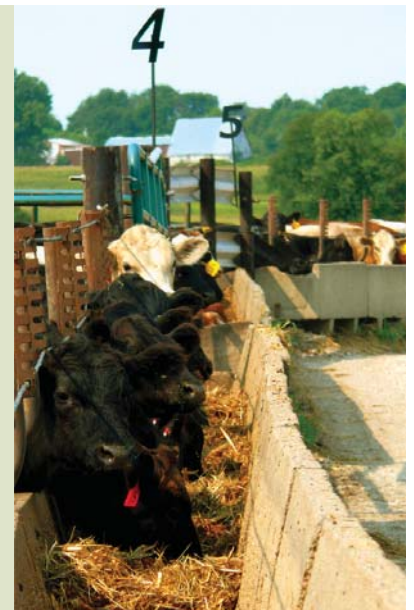
Notes: ¹Average daily gain. ²Feed to gain. ³Cost of gain. ⁴Veterinary/medicine. ⁵Prime and Certified Angus Beef. ⁶Outs include YG 4&5, light and heavy carcasses.

Table 2. Estimated manure value per head space per year¹

	N value	P ₂ O ₅ value	K ₂ O value	Total value
Solid manure from open lots	\$ 11.25	\$ 13.20	\$ 16.50	\$ 40.95
Liquid manure from open lots	\$ 1.25	\$ 1.10	\$ 5.50	\$ 7.85
Manure from bedded confinement	\$ 22.50	\$ 30.25	\$ 35.00	\$ 87.75
Deep pit manure	\$ 28.25	\$ 33.00	\$ 45.00	\$ 106.25

Source: Beef Feedlot Systems Manual - PM 1867 - <http://store.extension.iastate.edu/Product/Beef-Feedlot-Systems-Manual>.

Note: ¹Based on 50% N availability, 100% P₂O₅ and K₂O availability, \$0.50 per lb. N, \$0.55 per lb. P₂O₅, \$0.50 per lb. K₂O. Application cost not included.



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Photos: Iowa Beef Center, ISU Extension and Outreach

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