AgWest FARM CREDIT

Industry Perspectives

Cattle

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Industry overview

The U.S. beef industry is a leading global producer, operating through a multi-stage value chain that transforms cattle from pasture to plate. While production is largely segmented across seed-stock, cow-calf operations, and finishing, the industry benefits from some vertical integration. Key market drivers include consumer demand, export opportunities, and advancements in production efficiency, all contributing to its position as a top player in the global beef market.

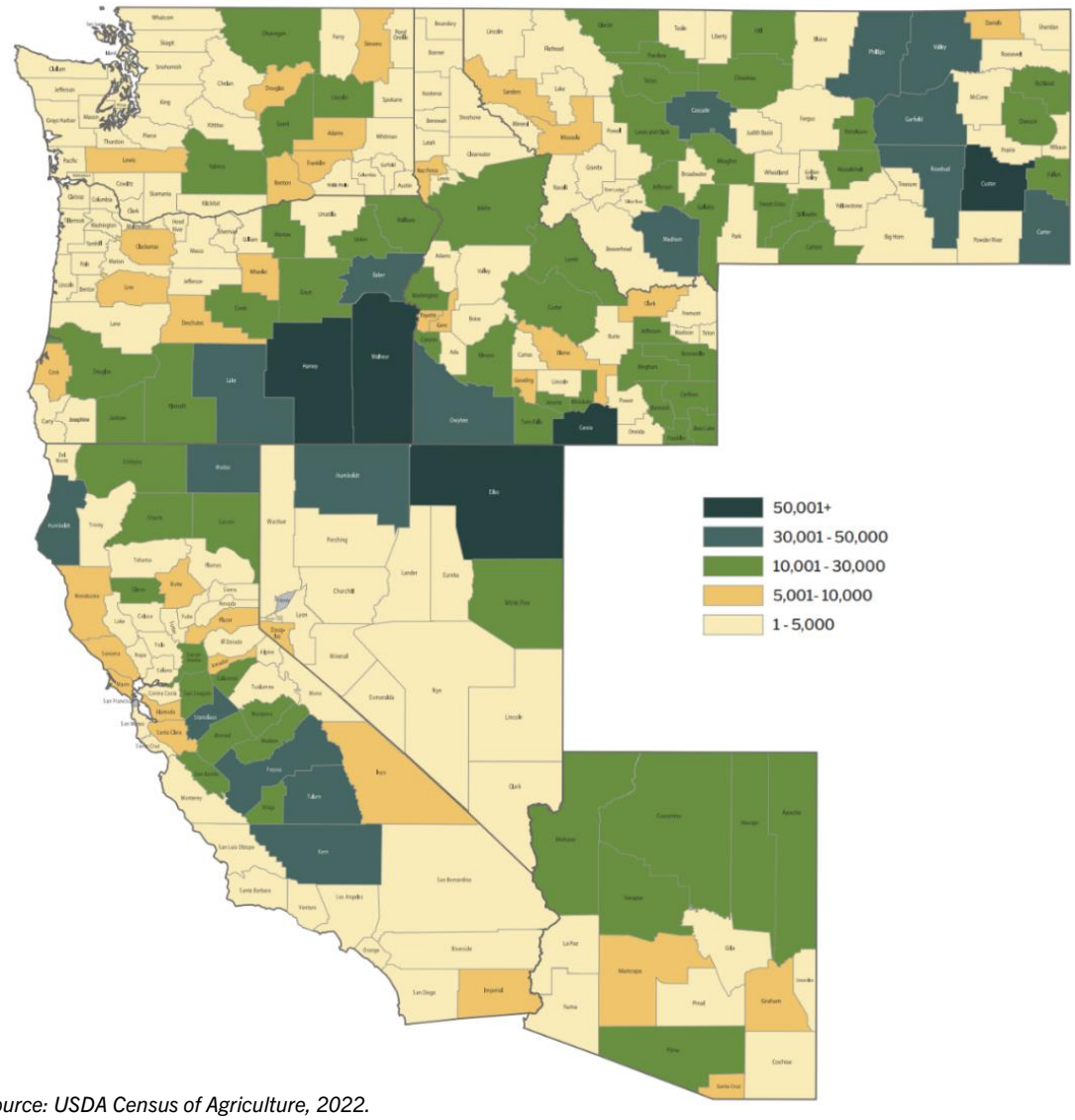
Production trends

The United States ranks third globally in cattle inventory, behind Brazil and India. Despite this, the U.S. leads the world in beef production. However, increasing beef production in Brazil could potentially push the U.S. out of the top spot in the near future. Ideal conditions for beef production include extensive pasture systems for grazing, while feedlot operations excel in regions with cost-effective access to grains.

Cattle production takes place in every U.S. state, though it is most heavily concentrated in the Southern Plains, Central Plains and Western regions. Within AgWest's territory, Montana's vast rangelands support numerous cow-calf operations, placing the state 6th nationally with 1.23 million beef cows. California ranks 15th with 640,000 head, followed by Oregon and Idaho at 19th and 21st with 500,000 and 435,000 head, respectively. Washington holds the 27th spot with 220,000 head, and Arizona ranks 29th with 160,000 head.

Cattle feeding is also a major component of the Western beef industry. California, Idaho, and Washington all rank among the top 10 cattle-feeding states. The region is further supported by two long-established commercial packing plants in Washington and newer facilities operating in Idaho.

Beef cow inventory by county within AgWest territory



Source: USDA Census of Agriculture, 2022.

Cattle on Feed, January 1, 2026

State	Cattle on Feed
Arizona	210,000
California	500,000
Idaho	345,000
Washington	270,000
Montana	USDA data not available
Oregon	USDA data not available

Source: USDA.

Value and supply chain

The first stage of beef production lies in the genetic make-up of the cattle herd. Purebred cattle producers, also known as seed-stock producers, are responsible for engineering the genetic traits that are bred into U.S. cattle herds. These ranchers raise breeding stock, which are sold to the second segment of the value chain – the commercial cow-calf operation. Commercial cow-calf operations maintain a herd that produces calves for consumption. Calves are weaned between 6 and 8 months of age and weigh between 450 and 600 pounds.

After weaning, calves enter the third stage of production, called backgrounding. Backgrounding, which can take place in a feedlot or on the range (an operation that backgrounds cattle on range or pasture is referred to as a "stocker" operation), is the time when weaned calves, or feeder calves, grow into yearlings. During this time, the calves usually gain 300 to 500 pounds over a period of 4 to 6 months. After the backgrounding process is complete, yearlings weigh between 800 and 950 pounds. At this point, they are ready to enter the fourth production segment, called finishing. Finishing is a process in which an energy rich ration is fed to the cattle until they reach a market weight of 1,200 to 1,400 pounds. Finishing usually occurs in a feedlot and takes between 3 and 5 months.

Once cattle have reached their market weight, they are ready for the fifth stage of production, known as processing. Beef processing occurs in large indoor facilities, known as packing plants. The beef carcass is segmented into eight primal cuts, known as the chuck, brisket, rib, plate, short-loin, flank, sirloin and round. Primal cuts are then reduced into sub-primal cuts. Individual portions derived from sub-primal cuts are segmented into individual steaks and roasts, as well as ground beef. The steaks, roasts and ground beef are packaged into boxes and shipped to retail outlets. Then, the boxed beef enters the sixth and final production stage. Retailing is the process in which the boxed beef is prepared for consumer purchase at either the grocery store or restaurant.

Many business alliances have developed linking the various stages of the production process. For example, operations that specialize in backgrounding may or may not own the cattle they are backgrounding. The cattle could be owned completely or in part by the cow-calf operation or feedlot. Other alliances come in the form of branded beef programs. Under these programs, operations in the early production stages can receive premiums (paid by operations in the later production stages) for producing cattle that meet certain quality criteria. Alliances continue to develop and can span the entire spectrum of the production chain.

Feedlot distribution

The United States' cattle feeding and packing industries are centered in the Midwest, with small regional centers in Southern Washington, Southern Idaho, Central California and Arizona. The commonality among these regions is access to high quality feed.

The Western cattle feeding industry is relatively small in comparison to the Midwest. The larger segment of the feeding industry in the west is the backgrounding and 'grow lot' segment. These operations feed both owned and custom cattle, and are usually part of a larger, more diversified cow-calf or yearling operation. Backgrounding and feedlots generally range from 1,000 to 6,000 head with some as large as 20,000 head. This segment of the feeding industry enjoys increased marketing options and can add less expensive pounds to lighter weight cattle. The following practices are typical of backgrounding and grow lot operations:

1. Background/grow feeder cattle from fall weaning (usually 450-600 pounds) and then fed to 800-900 pounds for sale into a finishing lot in February to April.
2. Maintain and grow light-weight calves (400-600 pounds) to return to summer grazing. These cattle are generally sold directly from pasture to a finishing lot between August and September and typically weigh 850 to 950 pounds.
3. Develop beef replacement heifers for sale or placement in the operation's breeding herd.

U.S. beef processing industry

The United States' beef processing industry is dominated by four primary players. The following table summarizes industry market share. Approximately 100,000 cattle are processed daily in the U.S., though this number can fluctuate due to seasonal changes and market conditions.

Estimated U.S. Beef Processing Industry Market Share

Feeding Company	Percent of Industry
JBS	25%
Tyson	22%
Cargill	22%
National Beef	18%
All Others	13%-15%

Source: Processing companies' websites and other sources.

JBS is the largest animal protein company in the world. JBS has its U.S. headquarters in Greeley, Colorado. However, the United States division is part of a larger, global company headquartered in Sao Paulo, Brazil. JBS is the world's largest meat processor and the company has a strong export market. JBS purchased the United States' largest cattle feeding company (Five Rivers Cattle Feeding) and several large American beef packing companies between 2007 and 2008. In doing so, JBS went from an unknown in the United States to the country's largest cattle feeder and beef packer.

Tyson Foods originated in the poultry industry but expanded into the beef packing industry with the acquisition of IBP Inc. in late 2001, then the largest beef processor in the world. That acquisition positioned Tyson as the largest beef packer in the United States at the time. Today, Tyson remains JBS's primary competitor in the U.S. beef market and is the largest beef packer in Canada.

Cargill is a privately held, multi-national company specializing in food, agricultural and industrial products/services. Cargill has a long history in the protein industries, and its beef packing division rivals the size of JBS and Tyson.

National Beef Packing Company is a farmer-rancher owned business specializing in the beef industry. It is the fourth largest beef packer in the United States. While the company is headquartered in Kansas City, Missouri, a majority ownership stake is held by a Brazilian multinational company.

Consolidation among the four largest beef packers has prompted heightened regulatory scrutiny. In 2021, the U.S. Department of Justice (DOJ) launched a broad antitrust investigation into the meatpacking industry following concerns over reduced competition for fed cattle. As part of that action, JBS USA agreed to a $52.5 million settlement related to allegations of cattle price suppression, without admitting wrongdoing, while litigation against other packers continued. Scrutiny intensified again in 2025, when the DOJ, with White House support, expanded investigations into these meat packers amid renewed concerns about market power and foreign ownership.

Industry drivers

The size of the domestic beef cattle herd and the financial health of the American consumer underpin the current dynamics of the U.S. beef industry. Over the past 40 years, U.S. beef cattle herd numbers have declined as beef production has become more efficient and consumer demand for beef has generally eroded. In 1999, Americans consumed an average of 97 pounds of beef per capita; by 2025, that figure had fallen to 56.1 pounds. Export markets and environmental conditions also play a key role in cattle and beef markets.

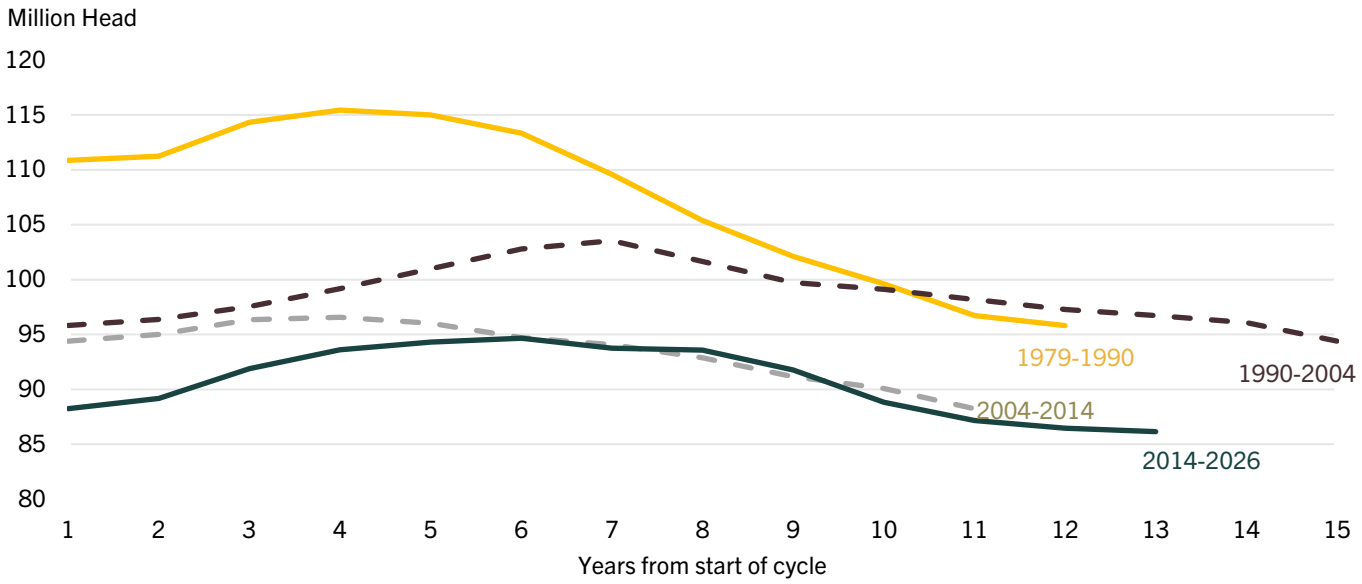
Cow-calf segment

Cow herd cycle

The national beef cattle herd has been trending downward since peaking in the 1970s. This decline was driven in part by herd reduction programs in the 1980s, as well as ongoing improvements in productivity that increased carcass weights and beef output per animal. The cattle industry follows a cyclical pattern, characterized by periods of herd liquidation, followed by rebuilding phases, and then a transition back toward liquidation. These cattle cycles typically span 10 to 15 years.

Between 1987 and 2007, the national beef cattle herd declined by nearly 4%. From 2007 through 2014, inventories fell an additional 11%. Strong cattle prices following the U.S. economic recovery in 2014 encouraged cow-calf producers to begin rebuilding their herds, marking the start of the current cattle cycle. By 2026, however, national cattle numbers have fallen to a 70-year low. Looking ahead, producers are expected to retain more cattle to rebuild herds, signaling the early stages of a new cattle cycle.

Jan. 1 Inventory, U.S. Cattle Cycles



Source: USDA NASS.

Availability of feeder cattle

Canada and Mexico are an important source of feeder cattle for the U.S., particularly for feedlots near the international borders including those in the Northwest and Texas. Imports of Canadian and Mexican feeder cattle reached record levels in 2014. This cross-border trade is vital for maintaining the supply chain and supporting the U.S. cattle industry. On average, the U.S. imports around 1.9 million head of cattle annually, with a significant portion coming from Canada and Mexico. These imports are essential for U.S. feedlots, which rely on a steady supply of feeder cattle to meet demand.

From Canada, the U.S. imports a diverse mix of cattle, including slaughter steers and heifers, slaughter cows and bulls, feeder cattle, and breeding cattle. Over the past decade, cattle imports from Canada have averaged about 790,000 head per year. Mexico, on the other hand, primarily supplies feeder cattle and imports more than 1.1 million head on average annually. This steady flow of feeder cattle from Mexico is crucial for feedlots in states like Arizona, Texas, and New Mexico, which depend on these imports to maintain their operations. In late 2024, the U.S. temporarily banned the import of feeder cattle due to the detection of New World Screwworm (NWS) in a southern Mexican state. Mexico and the U.S. are collaborating to establish quarantine protocols and lift the ban. Once these measures are in place, the regular flow of feeder cattle from Mexico to the U.S. is expected to resume.

Beef trade

The health of the global economy affects demand for U.S. beef exports. As foreign consumers' standard of living improves, their diets include more protein. Since 2010, exports have been a significant demand driver for U.S. beef. Top export destinations include Japan, South Korea, China, Mexico and Canada. Exports not only provide new markets for U.S. beef, but also support the value of beef byproducts including variety meats (e.g., tongue, cheek meat and hearts), tallow and hide. Increased sales and higher prices for these items result in stronger overall live cattle values and help to improve packers' margins.

U.S. beef imports primarily consist of lean beef trimmings used in ground beef production, reflecting strong domestic consumer demand for ground beef. Over the past decade, imports of fresh and chilled beef have more than doubled as processors have relied on foreign supplies to supplement tight domestic production. In 2025, Australia supplied approximately 25% of U.S. beef imports, while Canada and Brazil each accounted for about 18%. As the U.S. beef cow herd begins to rebuild and domestic beef production increases, reliance on imported beef is expected to decline, particularly for lean trimmings used in ground beef.

Environment

Weather conditions significantly influence the quality of pasture and feed, often acting as a major driver for the cattle industry. Widespread drought was a key factor in herd liquidations during 2011-2013 and 2019-2023. Many Western producers depend heavily on grazing permits and natural pasturelands to feed their cattle. When drought conditions, combined with severe wildfires, reduce pasture availability or diminish pasture quality, it creates significant challenges for cattle producers.

Consumers

Domestic demand for beef has remained strong despite elevated prices, indicating that consumers continue to view beef as a premium protein that is not easily substituted by other meats. Retail beef prices reached record levels in 2025, driven by inflation and tighter supplies, yet domestic demand remained resilient. Beef sales totaled a record $45.1 billion in 2025, accounting for approximately 55 percent of all fresh meat sales.

Direct to consumer beef sales through nontraditional marketing channels have also increased, as the price gap between these outlets and conventional grocery stores has narrowed, making alternative purchasing options more competitive for consumers.

Slaughter capacity

Slaughter capacity has become an increasing concern for beef producers as tight cattle supplies and logistical challenges have slowed the supply chain. Many processors are booking slaughter slots months in advance, complicating timely market access for producers. Utilization rates have fallen below long-term averages, with effective operational capacity at large packing plants reduced by roughly 20% at times. To manage lower throughput, some facilities have curtailed Saturday slaughter schedules. Looking ahead, continued supply constraints and pressure on packer margins may prompt further capacity rationalization, including the closure or consolidation of older, less efficient plants.

Appendix A: **Best practices**

Successful Western cattle producers and cattle feeders understand that consumers are the main demand driver in the beef industry. Cattle operations need to observe trends throughout the protein complex, especially supply and demand drivers for protein on a regional, national and global scale.

The primary goal of a cattle operation is to consistently provide beef with characteristics consumers demand – mainly consistent taste and quality at a fair price. Additionally, the successful operator understands his or her target market and attempts to position his or her operation to take advantage of multiple opportunities within that market.

Successful operations focus on the factors in their immediate control such as input costs, feed availability, resource control, cattle genetics and herd health, and welfare to meet consumers' expectations. Effective marketing plans and margin management are supported by implementing appropriate risk management strategies. In addressing these factors, Western producers and feeders employ 'best practices,' which fall into four primary areas:

1. General management
2. Financial management
3. Production management
4. Marketing management

General and financial management

Continuing education

Successful producers routinely seek out and attend industry conferences and educational seminars to enhance their understanding of the industry, support issues they cannot influence individually, broaden their local and regional networks and improve management skills.

Record keeping

Good financial and herd record keeping are essential to the successful producer. Well-maintained financial records help operators track profitability and operating costs, provide a basis to make effective budgeting decisions and support better access to credit. Successful producers also use key financial ratios and metrics in business planning. This includes calculating break-evens, completing a sensitivity analysis of all projections and using benchmarking as an analysis tool. Keeping these records by enterprise (calves, heifers, stockers and fats) will help managers understand where there are inefficiencies and opportunities. Business operating plans are a useful tool to provide a whole-operation view and outline current and future management actions.

Production records assist in making marketing and herd health decisions. Documenting genetic, nutrition and herd health management practices is the cornerstone of higher bids at sale time. Nationally and internationally, food safety and traceability issues have come to the forefront. Electronic identification (EID), which is now required for most live cattle moving across state lines, enhances traceability and may also generate marketing premiums. Well maintained management records, combined with EID or Radio Frequency identification (RFID) technologies, support food safety, traceability and transparency throughout the beef supply chain.

Profitability and cost control

Profitability in the cattle industry is a function of both maximizing revenues and controlling costs. Operations with low breakeven prices are better positioned to withstand volatile markets. However, successful producers understand that low-cost production is not equivalent to keeping all fixed and variable costs to a minimum. Ultimately, net profit will determine the profitability of an operation. Successful operators produce the highest number of quality calves or feeders possible while aggressively managing fixed costs and variable costs with a long-term outlook in mind.

Cost control strategies involve monitoring variables in the input and output markets that have the largest effect on profitability and managing the ones the operation can impact the most. This may involve prepaying or forward contracting for inputs or participating with other producers in bulk input purchases. These practices should be employed as part of a three-aspect risk management approach incorporating inputs, interest rates and marketing outputs. For example, locking in input costs without considering sales price creates market risk.

When considering expansion and planning for the associated costs, cow-calf and feeder operators must consider that operational growth more often occurs in a stair-step fashion. Increasing herd size typically requires additional land, labor or both. To justify these added fixed costs, producers must expand the production herd enough to fully utilize new resources and improve overall profitability.

Risk

Successful producers actively manage risk within their operations, recognizing that risk exposure differs across segments of the cattle industry. Cattle feeders face price risk when purchasing feeder cattle and selling finished cattle. Cow-calf producers, by contrast, retain breeding stock and bear price and depreciation risk on marketable calves, replacement heifers and cull animals. Despite these differences, several risk management practices are beneficial across all segments. Sound financial planning and responsible debt structuring are essential to managing interest rate and cost risk. The use of tools such as forward contracts, futures, options and insurance strengthens price risk management programs. While these tools may limit upside potential in strong markets, they also reduce losses during downturns. Most importantly, these tools guard against catastrophic losses that can result from extraordinary events such as changes in public policy, bad press, drought, input cost fluctuations and sudden loss of markets.

Successful cow-calf producers and feeders also view their relationships with buyers as long term partnerships. Packers and feedlots value a consistent, reliable and uniform supply of cattle. Feeder and packer partnerships sometimes use profit/loss sharing agreements to incentivize both parties in the relationship towards a common goal. In the current market, many feedlot operators and processors also view the known history of cattle on feed as a tool to manage risk, determine marketing options and predict performance and retail value of cattle. It is important for the cow-calf operator to have a strong relationship with their feeder, so the feeder is informed about the cow-calf operator's management practices. The added value of this information is often bid into the price of the cattle when marketed.

Due diligence analysis of suppliers and buyers is another crucial best practice for all producers. Many operations prepay or forward contract for inputs and use standard or forward contracts for cattle purchases and sales. Evaluating the financial stability and reliability of business partners helps control costs and reduces counterparty risk, ensuring that contractual obligations can be met as expected.

Production management

Efficient calving season

For the cow-calf producer, managing the cow herd to calve within a predetermined range (typically 60-80 days) is a crucial step toward increasing efficiency and profitability. Good nutrition, ensuring bull prolificacy and culling unproductive cows will shorten the calving season. Calving can be labor intensive so reducing the calving window reduces labor costs. Time and labor are important and expensive commodities for a cow-calf producer. A calf crop born in a short window results in more uniform calves for buyers. Considering changes to management and season of calving may make calving more efficient given a producer's unique land, labor and management resources.

Calving and weaning rates and weights

Healthier cow-calf herds will have better calving and weaning rates. Calving and weaning rates refer to the number of calves born and ultimately weaned versus the number of cows exposed to breeding. Based on CattleFax data, industry benchmarks are 91% for calving and 88% or better for weaning, with most successful operators reaching a 90% weaning ratio. Calving and weaning rates have a significant effect on profitability. Spreading costs over more calves lowers cattle producers' overall cost of production. Successful producers employ measures to maximize the number of calves weaned per cow, and thereby the number of pounds sold per cow.

Calving rate, or breed up, is most influenced by cow health, nutrition and reproductive soundness. If a cow does not readily breed up due to poor health, condition or physical deformities, she is less likely to produce a calf. Such a cow should be reviewed for cull annually. Good records are needed to make those decisions. Paying special attention to cow and heifer condition just prior to breeding ensures high conception rates. Maintaining adequate vaccination protocols and limiting stress during pregnancy reduces abortions. Ensuring cows are in good condition, especially just prior to calving and early in lactation, will ensure the cow has the energy to maintain herself while providing for a growing calf. Bull selection to manage calf birth weights can reduce both cow and calf mortality during birthing. More cows bred and fewer dead calves result in higher calving rates.

Weaning rates are primarily influenced by maintaining good herd health. In regions where predation occurs, though, weaning rates may be reduced due to factors largely outside of the producer's control. Working with local and state trappers and USDA Animal & Plant Health Inspection Service (APHIS) can help reduce predation. Frequent monitoring of cattle while on the range and rapid carcass removal can reduce predator attractants.

Weaning weights can also be affected by several factors, including weather, genetics, feed availability and health. Successful cow-calf operators purchase quality bulls to improve the genetics and performance of calves. The use of growth implants to increase weaning weights in calves often depends on their marketing program. Natural and organic beef are marketed through contract arrangements that prohibit the use of growth implants in calves, further limiting the

use of medicines and feed additives. Natural and organic programs often wean lighter calves but may receive marketing premiums.

Preconditioning, weaned, backgrounding, and stocker programs

Preconditioning refers to the kind of vaccination protocol a ranch implements; there are two kinds. PreCon 1 means calves have received vaccinations at branding. PreCon 2 means calves received vaccination at weaning. Cow-calf operators may implement additional measures to prepare their calves for sale. Weaned calves have been fully weaned and contained to a feed bunk in the 45-60 days prior to sale as well as received PreCon 2 vaccinations. Weaned calves have a lower mortality rate and perform better in feedlots. Feedlots want cattle that have been weaned and preconditioned with an identified health program. They are willing to pay cattle producers a premium averaging between $4.00 and $8.00 per cwt for calves properly preconditioned and accompanied by good records. Cow-calf producers may also incorporate a stocker or backgrounding component into their operation by retaining marketable cattle for 4-6 months following weaning. Stocker cattle are on diets to produce slower gains than cattle of the same age in feedlots, but by retaining cattle, a producer can supply cattle to feedlots out of the normal market cycle.

Feed availability

Successful operations monitor feed quantity and availability for the cow herd. In drought conditions, herd numbers should be reduced to match available forage. In situations or seasons where feed quality or availability is poor, supplements should be provided in the most cost-effective manner.

Some of the best practices employed by successful producers include:

- Matching the cow production cycle to the most efficient use of available land, labor and feed resources
- Matching cow breed and size to the feed available
- Maximizing the use of crop residue for fall forage
- Testing the quality of forages and winter feed supplies to only supplementing deficiencies
- Matching feed quality and quantity to the different stages of production (e.g., lower quality forage for dry cows)
- Implementing range management practices which may improve carrying capacity like improved water infrastructure, cross fencing and grazing systems
- Sorting cows into smaller groups based on production stage to manage for their specific nutritional needs

Feed availability and forage quality also involve several land use and control issues. Land available for grazing continues to decrease through increased regulation of public lands, increased wildlife and endangered species regulations, and the sale of private lands to non-agricultural interests. Successful producers seek to control forage resources through least-cost combinations of land ownership, long-term leases and share-cattle agreements.

Feedlot production management

Bringing new cattle into the feedlot

Depending on the feedlot manager's relationship with the cattle supplier, they may have some or no knowledge of the preconditioning or weaned status of new cattle. Clear communication will help determine what processing may need to occur when cattle arrive. Weaned calves, for example, will already be bunk broke and adjusted to a higher nutritional profile. If not, the feedlot manager must take steps to adjust cattle to a feed yard environment. Frequent monitoring is critical when bringing new cattle into the feedlot as the stress of travel and facility change can increase illness.

Feeding and pen management

Because the business of feedlots is growth performance, good managers have a detailed plan for selecting, securing and distributing feed. Supplying high-quality, adequate quantity feed each day ensures that management's time and facility investment receives the maximum return. Balancing cattle nutritional needs, intake preferences, supply and the equipment to distribute is the challenge managers face. Good practices may include working with a livestock nutritionist, having feed sampled, forward contracting feed and improving technologies for distributing feed. Successful managers also know that environmental factors play a strong role in cattle performance. Extreme heat or cold can reduce gains without adequate shelter and adjustments to feed. If animals are penned with too little bunk or pen space, stress from competition will reduce gains. Lastly, feedlots must have a strong program for managing manure. Too much manure buildup, especially during wet weather, will result in a poor environment for producing positive gains. Good cattle feedlot managers will develop facilities conducive to frequent manure removal as well as plan for the sale or utilization of manure.

Efficiency measures

There are several industry measures related to production efficiency that feedlot managers use to evaluate performance and profitability. The following terms and related formulas are the most common efficiency measures.

- Cost of Gain, calculated as: (total variable costs – feeder cost) / pounds of gain
- Average Daily Gain, calculated as: pounds of gain / days on feed
- Feed Conversion, calculated as: pounds of feed (dry) / pounds of gain
- Break-even, defined as the sale price ($ per cwt) at which the owner of the cattle does not make or lose money

The benchmark measurement for cost analysis is cost of gain, which simply states how much it costs a feedlot to grow an animal by one pound. Average daily gain is a measure of how quickly an animal is grown to market weight. The higher the average daily gain, the fewer fixed costs required for finishing. Two and a half pounds to 4 pounds per day is a general range of average daily gain, with 4 pounds per day being very good and 2.5 pounds per day being low. The cost of a bushel of corn has the largest influence on the cost of gain in feedlots.

Feed conversion, also known as the feed-to-gain ratio, is a measure of how efficiently an animal converts the feed ration into pounds of beef. This ratio can vary widely depending on several factors including age, breed, diet, implants, management and environmental conditions. The most important factor is probably age. In general, younger animals consume less feed per unit of weight gain than older animals. Heavier weight cattle are typically less efficient at utilizing feed, so feed conversions decrease as placement weights rise. Feed conversions average anywhere from 5 to 9 pounds of feed per pound of gain.

Break-even analysis allows the feedlot operator an estimate of how much they can pay for their calves. Breakeven prices can be calculated for the entire feeding period or only a certain part of the feeding program. By looking at different parts of the feeding program (e.g., growing versus finishing), a producer can determine where the most returns can be obtained. All successful operations employ some type of analysis of input variables as well as output price risk management when making production decisions.

General production management

Herd health

Managing herd health is an important part of maintaining a strong herd while maximizing revenues and reducing costs. Good producers shift herd health expenditures to preventative measures rather than treatment. Preventative measures may include reducing stress during handling and transport, maintaining a closed herd or ensuring quarantine and disease testing prior to incorporating new stock, a strong vaccination and parasite control protocol, providing clean water, ensuring adequate nutrition based on physiological status, and separating livestock from repeat feeding areas via bunks or frequently rotating feeding grounds. Healthier herds experience fewer death losses and have greater gains increasing weaning percentages, weaning weights, average daily gain and returns.

One way for producers to learn about better herd health, well-being and quality management is the Beef Quality Assurance (BQA) program. Completing the BQA program also results in certification improving marketing potential. Cutting corners when it comes to herd health is not recommended for cow-calf or feedlot producers.

Low death loss

Death loss in cow-calf operations refers to the number of calves born compared to calves weaned. Target death loss is approximately a 3% death loss or less. Some operators may calculate death loss as the number of cows confirmed as bred during pregnancy testing versus calves weaned which would include death losses due to abortions or dead-on-arrival. Target death loss would be higher in this instance. For feeders, it refers to the number of cattle purchased versus the number sold out of the feedlot. Most feeding operations strive for 1% death loss or less. For both kinds of operations, death loss increases breakeven costs for the remaining animals and reduces profit potential. Successful producers employ good herd health practices, understanding the immediate costs to improve herd health support long-term gains. While proactive measures are ideal, preventing death loss also relies on reactive measures which usually include regular inspections of the herd or feedlot pens and rapid treatment of sick or lame animals.

Marketing planning

Understanding and planning for volatile market cycles, marketing options and quality requirements is a best practice for producers. With increased market volatility, margin management is critical. If producers understand their own margins, they can limit the decision-making influence of market predictions or opinions and maximize profitable opportunities. In addition, it will be critical for producers to bridge the gap between knowing what should be done and executing. Disciplined planning and risk management are critical to success.

Good marketing managers understand available risk management tools and employ them appropriately. A comprehensive marketing plan designed to obtain maximum value will include several of the following best practices:

- Analyze and track seasonal market cycles for the classes of cattle sold by the producer
- Complete breakeven and sensitivity analysis of all marketing options to take advantage of buying and selling opportunities
- Utilize forward contracting, hedging, or options as a price risk management tool
- Obtain livestock revenue insurance as a price risk management tool
- Develop alliances with feedlots, packers and/or retailers who participate in marketing labeled products like Certified Black Angus
- Engage in profit and loss sharing agreements with packers to manage risk and volatility
- Participate in special seasonal sales featuring specific traits such as age and source verified calves
- Participate in video, local auction and/or private treaty sales and plan for a 2-3% commission
- Enlist the assistance of seed stock providers to promote genetics
- Make copies of production records to promote the genetics, past performance, nutrition management, and health and welfare management of the cattle
- Maintain age and source verification records
- Sort and sell cattle in uniform groups to match market demand (plan sale groups based on truck loads)
- Diversify by managing a portion of the calf crop through the stocker or finishing phase (specific to cow-calf and yearling operations)
- Maintain partial retained ownership through the finish phase (specific to cow-calf and yearling operations)

Other practices can also be beneficial to a comprehensive marketing plan. Alliances in certified beef and natural beef programs are popular. Overall, certification programs vary widely in evaluating quality. Although cattle breed and/or carcass characteristics may be certified by the USDA, certification of these characteristics is beyond requirements for USDA grades.

Natural beef programs are found throughout the U.S., with Western programs including Country Natural Beef, Painted Hills, Meyers Natural Angus and Montana Ranch Brand. Responding to consumer demand, natural beef can be purchased at all retail levels, including restaurants, specialty and natural markets, and grocery stores. Industry data shows participation in a premium program like Certified Angus Beef (CAB) or a natural program adds $3.00 to $5.00 per cwt to the sale prices. Similar premiums are paid for NHTC (non-hormone treated cattle), Wagyu, Beef CARE (Community of Agriculturalists who Respect the Earth), and GAP (Global Animal Partnership) certification.

Appendix B: Glossary

Antibiotic - Product produced by living organisms such as yeast or synthetically produced that destroys or inhibits the growth of bacteria.

Average daily gain (ADG) - Pounds of live weight gained per day.

Backgrounding - Growing program based on a forage-based ration for feeder cattle from time calves are weaned until they are on a finishing ration in the feedlot with the intent of adding frame but not fat to the cattle.

Basis - Difference between the cash market price and the futures market price.

Bovine spongiform encephalopathy (BSE) - A degenerative disease that affects the central nervous system of cattle.

Branded beef product - A specifically labeled product that is differentiated from commodity items by its brand name. Certified Angus Beef, Laura's Lean, or Cattlemen's Collection are examples.

Breakeven price - The price required for revenue to equal the total of fixed and variable expenses.

Volume of output required for revenue to equal the total of fixed and variable expenses.

Breeding stock - male and/or female bovine used to produce calves.

Calf - Young male or female bovine animal under 1 year of age.

Calve - Giving birth to a calf. Same as parturition.

CattleFax - Nonprofit marketing organization governed by cattle producers. Market analysis and information is provided to members by a staff of market analysts.

Choice - USDA carcass quality grade between Prime and Select. See quality grades.

Closed herd - Preventing biological contact of external animals (new purchases, wildlife, neighbor's cattle) with a herd.

Cost of gain - Total of all costs divided by the total pounds gained; usually expressed on a per-pound basis.

Cow-calf operation - Management unit that maintains a breeding herd and produces weaned calves.

Custom feeding - Cattle feeders who provide facilities, labor, feed, and care as a service, but they do not own the cattle.

Feed conversion - See "feed efficiency."

Feed efficiency - The amount of feed required to produce a unit of weight gain or milk, or alternatively the amount of gain made per unit of feed.

Fed cattle - Steers and heifers that have been fed high-energy concentrate diets, usually for 90-120 days in a feedlot or until they reach a desired slaughter weight.

Finished cattle - Fed cattle whose time in the feedlot is completed and are now ready for slaughter.

Forward contracting - Future delivery of a specified type and amount of product at a specified price.

Hedge - Risk management strategy that allows a producer to lock in a price for a given commodity at a specified time.

Heifer - Young female bovine cow prior to the time that she has produced her first calf.

National Cattlemen's Beef Association (NCBA) - National organization for cattle breeders, producers, feeders, and affiliated organizations with offices in Englewood, CO, and Washington, DC. Previously known as the National Cattlemen's Association or NCA.

National Cattlemen Magazine - Monthly magazine owned by the National Cattlemen's Beef Association (NCBA).

Natural beef - Beef from cattle that has been raised without added hormones or antibiotics and minimally processed, consistent with USDA Agricultural Marketing Service (AMS) program requirements.

Packing plant - Facility in which cattle are slaughtered and processed.

Parturition - Process of giving birth.

Preconditioning - Vaccination protocol to prepare feeder calves for marketing and shipment.

Prime - USDA highest carcass quality in terms of marbling. Ranks above grades such as Choice, Select, and Standard. See quality grades.

Processing - Vaccinations and implants given to new feedlot cattle as well as sorting into similar age, weight, and sex classes.

Purebred - Animal eligible for registry with a recognized breed association.

Quality grades - Grades such as Prime, Choice, Select, Standard and Utility that group slaughter cattle and carcasses into value- and palatability-based categories. Grades are determined primarily by marbling and age of animal.

Seed-stock - Breeding animals. Sometimes used interchangeably with purebred.

Select - USDA carcass quality grade between Choice and Standard See quality grades.

Steer - Bovine male castrated prior to puberty.

Stocker - Growing program based on grazing for feeder cattle from time calves are weaned until they are on a finishing ration in the feedlot with the intent of adding frame but not fat to the cattle.

Weaned calves - Calves that have been fully weaned and trained to a feed bunk in the 45-60 days prior to sale as well as received vaccinations.

Weaning (wean) - Separating young animals from their dams so that the offspring can no longer suckle.

Yield grades - USDA grades identifying differences in cutability – the boneless, fat trimmed retail cuts from the round, loin, rib, and chuck.