



Systems for Backgrounding Beef Cattle

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Many different methods or systems of backgrounding, or growing beef cattle, are available. Each system has advantages and disadvantages that producers must weigh before deciding which is right for them. Producers should recognize the need for many different types of systems because of the many different types of cattle. Not all backgrounding systems work with each type of cattle. Some cattle are best suited to being finished directly after weaning, while other cattle are best finished following an extensive growing program.

This publication will outline the different types of backgrounding systems that are available for producers to use and describe the kind and type of cattle that best fit each system.

Types of Backgrounding Systems

■ Preconditioning

This term usually is used to describe a backgrounding system that prepares calves to enter a feedlot at another location. Some operations also may use this system to add weight to light calves following weaning.

Most preconditioning programs last 30 to 45 days. Preconditioning programs usually involve the following procedures or steps:

- Weaning the calf prior to shipment to the feedlot. This step significantly reduces calf stress during weaning, transport and commingling at a feedlot. Calves “weaned on the truck” are typically more prone to sickness at the feedlot than calves that were weaned prior to shipment.
- Providing vaccinations while the calf is still on the cow and giving booster shots before the cattle leave the farm or ranch.
- Preparing cattle for feedlot entry by “bunk breaking,” or acclimating the calves to eat from a feed bunk, as well as drink from fountain waterers rather than streams, dugouts or sloughs.

The emphasis in preconditioning is on ensuring calf health and preparing calves for entry into a feedlot. Gains during this weaning period will be minimal.

In most cases, cattle should be acclimated to eating out of a bunk by providing long-stemmed hay in the bunks during the first four to seven days following weaning. During this time, provide a palatable grain or protein supplement top-dressed with the hay. One pound of high-protein cake (40 percent crude protein [CP]), 3 to 5 pounds of grain or grain byproducts such as wheat midds, or 3 to 5 pounds of a pelleted commercial starter work well during this period.

The key is to use highly palatable feedstuffs to get the cattle to come to the bunk. Avoiding the use of fermented feedstuffs such as silages during the first four to seven days the cattle are in the lot may be advisable because most calves are not accustomed to the flavors of these feeds. Also avoid finely ground feeds that are dusty and have lower palatability. Dusty feeds can contribute to respiratory problems in freshly weaned calves.

Calves accustomed to drinking out of ponds or streams may not know how to drink out of a fountain or commercial waterer. In this case, allowing the

fountain to run for a few days so the cattle hear the sound of running water may be useful. The familiar sound of running water will help bring the calves to the waterer. A stock tank also can be a useful supplement to a fountain waterer during this time.

The biggest advantage of preconditioning is it reduces the risk of disease problems once calves are in the feedlot through proper preweaning and weaning vaccinations. Having the calves bunk broke also helps ensure a good start for the calves at the feedlot.

One of the disadvantages of this system is that getting a premium for preconditioned calves may be difficult.

Work with your local sales barn or order buyer to document the fact that the calves are preconditioned, or work with buyers who wish to purchase preconditioned calves.

■ Wintering

This system of backgrounding generally involves using large quantities of forage (hays, crop residues that are grazed or harvested, or dormant native range) to grow cattle slowly (0.5 to 1.5 pounds of average daily gain [ADG]) through the winter. In most cases, this system is used to prepare calves to be placed on pasture the following summer as yearlings.

The overall goal of this system is relatively simple: minimize winter feeding costs while keeping cattle healthy.

Data from the University of Nebraska indicates this system can achieve very acceptable slaughter break-evens and competitive cost of gain during the finishing period. The key is to minimize the wintering costs. Compensatory gain during the summer grazing period often results in inexpensive gains while the cattle are run as yearlings. Producers may opt to sell these “wintered” or “green” calves in April or May, when the seasonal price patterns for grass cattle are favorable. Figure 1 details the seasonal price patterns for 500- to 600-pound calves, 700- to 800-pound feeder calves and slaughter cattle in North Dakota.

Smaller-framed British and British-cross cattle generally fit this system quite well. If placed on feed directly as calves, these types of cattle may have excess finish and carcass weights too low to fit today’s carcass specifications. Wintering systems give these cattle time to add frame and, when coupled with the proper summer grazing program, finish within the carcass weight specifications accepted in the industry today.

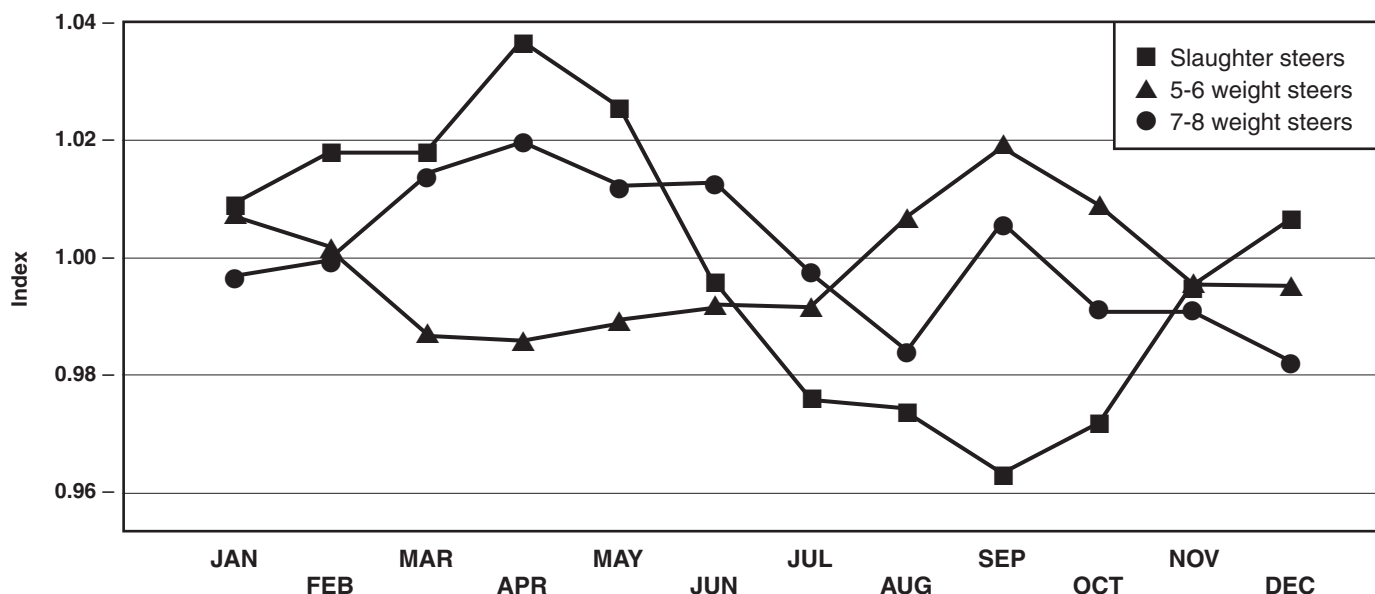


Figure 1. Seasonal changes in North Dakota cattle prices.

(Adapted from "Seasonal Price Patterns for Livestock in North Dakota." EC763. 1995. L.D. Stearns, T.A. Petry, H. Hughes.)

Large-framed exotic and exotic-cross cattle do not fit this system of backgrounding. When grown at slower rates of gain for the winter period, these cattle generally develop too much frame. Consequently, these cattle will finish with carcass weights that are too high for today's industry standards (greater than 950 pound hot carcass weight).

Table 1 shows the relationship among frame size, live weight and hot carcass weight. The current industry standards call for carcass weights between 550 and 950 pounds. Severe discounts exist for carcasses

Table 1. Relationship among frame size, live weight and carcass weight at Choice Quality Grade. Assumes a 63 percent dressing percent (hot-carcass basis).^a

Frame Score	Steer Live Weight (lbs)	Steer Carcass Weight (lbs)	Heifer Live Weight (lbs)	Heifer Carcass Weight (lbs)
1	750	472	600	378
2	850	536	700	441
3	950	598	800	504
4	1,050	662	900	567
5	1,150	724	1,000	630
6	1,250	788	1,100	693
7	1,350	850	1,200	756
8	1,450	914	1,300	819
9	1,550	976	1,400	882

^a R. Rasby, I. Rush and R. Stock. Wintering and backgrounding beef calves. G94-1228-A. University of Nebraska.

that fall outside of this range (usually greater than \$20/hundredweight on a hot-carcass basis).

The advantages of this system include the opportunity to sell cattle for the stocker cattle market in April and May (typically seasonal high in the market) and the ability to grow smaller-framed cattle through the winter at a slow rate of gain and take advantage of compensatory gain on grass during the summer. The main disadvantage of this system is that it does not fit all types of cattle. Large-framed, growthy cattle do not fit this system.

■ Growing

Targeted rates of gain in growing systems are usually between 1.5 and 2.5 pounds per head per day. Generally, these systems use a mixture of grains and forages to achieve these gains. In many cases, the producer's goal is to utilize feedstuffs that were raised on the farm or ranch or to make use of relatively inexpensive byproducts or screenings that are available locally.

This system best fits moderate-framed exotic and British breed cattle that benefit from this moderate rate of growth. If grown more slowly (in a wintering system), these cattle may finish at weights too large to fit today's carcass weight specifications. If grown faster, the cattle may become too fleshy and may not achieve their optimal finish weight.

The biggest advantages in this system are the ability to market home-raised feeds or inexpensive grains or byproducts through calves grown in this system and the ability to market calves after the normal fall runs of weaned calves are sold in the fall. A potential disadvantage of this system is that small-framed cattle may become fleshy or overconditioned if grown too fast and be subject to discounts at the time of sale.

■ Fast-track

Fast-track systems generally strive to push the cattle as fast as possible and, in many cases, use feeding rations that approach the amount of grain typically fed in commercial finishing rations. **The goal in this system is to get the cattle to gain as quickly as possible.**

Gains in this system generally exceed 3 pounds per day. This system works best with large-framed exotic or exotic-cross cattle that, if placed in a backgrounding program where gains were lower, would finish at a weight too large for industry standards.

Careful attention to nutrition, feeding management and grain processing is necessary to make this system successful. Without attention to these details, digestive problems will cause gains and feed efficiencies to be poor, resulting in increased cost of gain.

The biggest advantage of this system is the ability to take advantage of the genetic potential of high-growth cattle. Potential disadvantages of this system include the need for a much higher degree of management to run this system, as well as the increased risk of digestive problems.

■ Calf-fed Finishing Systems

Calf-fed finishing systems place cattle on finishing diets immediately following weaning (or following a 30- to 45-day preconditioning period).

This type of program is better suited for commercial feedlots than farm or ranch feeding enterprises.

Large-framed exotic cattle are best suited for these types of finishing programs, which do not include a growing or backgrounding component.

Cattle placed in these systems may finish in time to hit the seasonal highs in the slaughter cattle market (typically the seasonal high prices occur in March and April). Smaller-framed, lighter-weight cattle typically do not fit this system very well because they will finish at slaughter weights that are too low for today's carcass specifications.

The biggest advantage of this system is that it allows the producer to market slaughter cattle near the seasonal high prices (March-April).

The major disadvantage of this system is the potential for missing the seasonal highs if weather or other problems hinder cattle performance.

Matching Your Cattle to a System

Many ranches, because of differences in calving date and genetic capability of each calf, have two or more groups of calves that probably should be placed in different systems following weaning.

Typically, the heavier, larger-framed steers are best suited for systems such as growing or fast-track. Medium-framed steer calves fit well in growing systems that allow steers to grow while not becoming fleshy. Small-framed steers are generally best suited for wintering programs, followed by a yearling period on grass, to allow adequate frame growth prior to finishing.

Most heifers are best suited for some type of growing program prior to entry into the feedlot. Small-framed heifers that are not kept for replacements fit well in wintering systems that will allow frame growth prior to feedlot entry.

No single system fits all types of cattle.

Your final market target (carcass weight window) determines to a large degree the type of system in which your cattle should be placed. As the industry narrows the acceptable carcass weight range, producers will need to select cattle more carefully for placement into specific systems.

For more information on this and other topics, see www.ag.ndsu.edu

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