



On-Farm Finishing for Beef Cattle

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Tennessee cattle producers are often interested in feeding a few head of cattle for personal consumption or marketing directly to the public (Holland and Bruch, 2013). A simple feeding program consisting of a high-energy feed, such as corn, and a high-protein supplement can accomplish this. The goal of finishing beef on-farm is to produce a carcass with palatable, tender cuts and adequate yield.

The advantage of on-farm finishing is that you can keep it fairly simple and still make a quality product. However, due to increased interest in finishing beef, finding a local processing facility that can get you on their schedule may be more challenging (Bruhin et al., 2019). Ensure that you have a harvest date before you start feeding cattle so that you know when to put them on feed in relation to your harvest date.

Feeding programs for finishing beef on-farm can be divided into two phases: growing and finishing. The grower phase takes weaned calves (seven to nine months of age; 550 to 675 pounds) to about 800 pounds by feeding them to gain an average of 2.0-2.25 pounds per day. The finishing phase takes those calves to between 1150 to 1300 pounds, gaining about 3.0 pounds per day or more. The feeding program is different for both of these phases.



Calves eating supplement from feed troughs in pasture. Credit: Amy Radunz

Feeding Basics

The feeding program should be designed to gradually increase the amount of energy in the diet to achieve desired average daily gains, while still meeting other nutrient requirements. Consistent intake at or near the maximum intake potential is crucial in a successful finishing program. The growing diet is commonly a 60:40 concentrate (i.e., grain/grain byproducts, protein supplement, liquid feeds such as molasses, vitamins and minerals) to roughage diet on an as-fed basis, and the finishing diet typically consists of up to 90 percent concentrate and 10 percent roughage, as-fed. As you allow cattle to adjust to growing and finishing rations, step up the amount of feed gradually.

For the grower diet, gradually increase the concentrate mixture by 1 to 2 pounds every two to three days until calves are on the desired feed amount. Provide a long-stemmed or coarsely processed roughage source during this transition phase to keep the rumen functioning properly and avoid abrupt changes in rumen pH. In the finishing phase, increase the concentrate by three to four pounds per week, over a period of three weeks to a month, until animals are unable to consume all feed in a 24-hour period. Free-choice roughage can be reduced after 10-15 days during finishing, but it is important to offer 0.5 percent BW per day of roughage throughout the finishing period. See Table 1 for example ration options for the growing and finishing phases.

Table 1: Example rations for growing and finishing beef cattle.

Grower	Finisher
85:15 cracked corn: cottonseed meal mixture fed at 1.5 percent of BW per day with free-choice access to moderate-to-high quality long-stem or coarsely processed hay	Cracked corn fed at 2.0 to 2.5 percent of BW per day. May consider adding 5-10 percent cottonseed hulls or soy hulls to improve texture and palatability. Offer 0.5 percent BW per day of long-stemmed or coarsely processed roughage.
50:50 soy hulls: corn gluten or distiller’s grain feed fed at 2.5 percent of BW per day with free-choice access to moderate-to-high long-stem or coarsely processed hay	

The Finishing Phase

How can you tell when a calf is “finished”? You must consider the number of days on feed and visual assessment of the animal. If you prefer to change the flavor profile associated with calves being on pasture, they should be fed a concentrate-based finishing diet for at least 60 days leading up to harvest. This is the minimum amount of time that it takes to start getting a traditional “grain-fed” flavor. As calves reach the final finishing weight, they will begin to put on fat cover around the tail head, over the ribs, and through the brisket area. Fat deposition will also be observed in the udder of finished heifers and the cod (the remaining portion of the scrotum) of fat steers.

To accumulate enough marbling to achieve the USDA Quality Grade (QG) of “Choice”, calves will likely need to be fed for at least 120 days. Calves started on a finishing diet at 800 pounds should finish in the 1200- to 1350-pound range in 140 to 160 days if managed and fed appropriately. However, plan on longer if you expect their rate of gain to be low. Also consider that carcass quality decreases and the total cost of feeding increases as finishing cattle get older.

Tips to Remember

- Plan ahead to identify a processor and harvest date so that cattle are put on feed and harvested at the appropriate time.
- Make all changes to diet gradually to maintain optimum rumen pH and rumen function.
- Provide fresh water at all times.
- Feed twice a day if possible. Cattle should eat all provided feed very quickly, and all feed should be consumed by the next feeding time. If they go off-feed, back the feeding program down and work back up to the desired amount
- Any feed that remains in the bunk at the next feeding time should be removed so that it does not spoil or cause intake or illness issues.
- Try to feed at the same time(s) each day.

- Do not double the amount of feed if a feeding is missed. High-starch finishing rations can cause ruminal upset without proper feeding management. It is always better to feed less and work up to a normal amount instead of feeding more.
- Measure feed by weight rather than volume to reduce errors in feeding amounts.

Contact your county Extension agent for more information or resources about beef cattle production.

References

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