

Feeding a Small Number of Cattle for the Freezer

Warren Gill, Professor and James B. Neel , Professor
Animal Science Department, University of Tennessee

A limited number of Tennessee beef producers feed a small number of cattle for their own personal consumption or market to the public for “freezer beef.” A simple, economical feeding program to accomplish this is to feed the cattle a ration of whole shelled corn and a protein supplement. This feeding program is a simple and convenient with no complicated formulas. Both corn and the supplement can be purchased at most local agricultural supply outlets.

Advantages of This Program

1. Eliminates hay feeding or cattle running on pastures
2. Corn requires no grinding
3. Excellent feed conversion and average daily gain.
4. Less labor , facilities required and feed processing equipment.
5. Produces a tender yet lean, quality carcass.
6. Decreased days to produce quality product.
7. Lower cost of gain compared to traditional feeding program.

The goal of the feeding program is to produce an animal that yields a carcass with good eating qualities (tenderness and taste) and in lean meat yield. The following guidelines are designed to do this.

Facilities

The cattle should not be allowed access to pasture with this program. They must be confined in a “dry lot.”

Select a feeding area that is clean, well-drained and has ready access to clean water. Each calf needs an enough space (at least two feet) in a trough for it to consume its feed allotment without interference from other cattle. Fencing should be adequate to keep calves confined and should be free of potential sources of injury. In general, allow at least 200 square feet of space for each animal on a dirt lot. Shelter should be available for animals to escape from cold, wet weather and shade must be provided during hot weather months. See Table 1 for space requirements.

Table 1. Facility Requirements for Finishing Cattle (Space per Animal)

<u>Lot</u>	
Paved	50-100sq. ft
Dirt	150-200 sq. ft.
<u>Housing</u>	
Calves (<600lb)	15-25 sq. ft
Older Calves(600 lb>)	25-35 sq ft.
<u>Bunks</u>	
Height	
(<600 lb)	24"
(600>lb)	30"
Depth	
(<600 lb)	8"
(600>lb)	10"
<u>Length (per head)</u>	
Hand Feeding	
(<600 lb)	18-24"
(600>lb)	24-30"
Free Choice	
(<600 lb)	4"
(600>lb)	4"

Starting on Feed

A number of companies have prepared feed mixtures and / or supplements that are designed for easy feeding. These are very suitable feeding programs. It is recommended that labels be followed with this feeding program.

Cattle that were grown on a pasture or hay can be easily converted to the feeding program by following the direction listed below. Have grass hay available for free-choice consumption during the first few days of the feeding period. As concentrate feeding increases, gradually decrease consumption of hay. Within 10-14 days hay can be removed. See Tables 2 and 3 for details on how to gradually switch to concentrate feeding.

This feeding program is based on using the following feeds:

- Starter Feed - Commercially prepared mixture, typically medicated with antibiotic, 14 to 16% protein and blended to be relatively safe for starting calves on feed.
- Corn - Either purchased or home-grown, fed as whole-shelled. Should be relatively free of dust and have not evidence of mold or other contamination.
- Protein supplement - Commercial blends often run 32 to 44 percent crude protein. Ingredients can be soybean meal, cottonseed meal or purchased protein feeds.
- Mineral - Most typically provided free-choice or incorporated into commercial blended feeds.

Table2. A guideline for starting calves on feed, based on 600 pound calf ¹

Day	Corn (Lbs)	Starter (Lbs) ²	Protein Supplement (Lbs) ²
1 - 4	1.5	4.5	1.0
5 - 8	3.0	3.0	1.0
9 - 12	4.5 to 6.0	1.5	1.5
12 to finish	9.0 at beginning ³	0 - 1.5	1.5

¹For best results, divide these amounts into two feedings per day

²Top-dressed over corn

³Will increase as calf grows, but should typically be maintained in 1.5 to 2.0 % of body weight.

Table 3. A guideline for starting calves on feed, with recommended amounts presented as percent of body weight ^{1,2}

Day	Corn (% of body weight)	Starter (% of body weight) ²	Protein Supplement (Lbs) ³
1 - 4	.25	.75	1.0
5 - 8	.50	.50	1.0
9 - 12	.75	.25	1.5
12 to finish	1.5 to 2.0	0 - .25	1.5

¹This allows calculation of feed amounts for any size calf. For example, feed corn at 0.5 percent of body weight to a 500 pound calf, the math is $500 \times .5 / 100 = 2.5$ lbs

² For best results, divide these amounts into two feedings per day

³Top-dressed over corn

The Finishing Period

The most common questions about the finishing period are related to how long to feed and how to tell when a calf is “finished.”

The calf needs to be fed at least 55 to 65 days to allow the fat tissues to get rid of the flavors that have accumulated from forage. Another way of considering it is that this is the minimum amount of time to start getting the desirable “corn-fed” flavor.

To achieve “choice” quality, it is likely that the calves will need to be fed at least 90 to 110 days. If calves are started at about 600 to 800 pounds and gain at a suitable 3.0 - 3.5 pounds per day, this will put them in the 900 to 1200 pound weight range.

As calves finish, they start to accumulate fat that can be visually assessed, particularly around the tail-head, over the ribs and through the brisket area.

Pointers for Success:

- Make all changes in feed as gradually.
- Keep fresh water available at all times.
- If a feeding is missed, do not “make it up” next time by feeding twice as much. It is much better to keep it at the normal amount, or slightly less, then work back up to the normal level.
- Feeding twice a day is preferable. Cattle should clean up the amounts fed in less than 30 minutes. If calves go “off-feed,” it may be necessary to back up in the feeding program by feeding less and working back up.
- If feed is not cleaned up by the next feeding, remove it so that it won’t spoil and cause sickness or consumption problems.

Weight / Volume Conversions

It is always better to measure feed by weight. Volume estimates are prone to error. Novice feeders, especially, should avoid making feed estimates by volume. Table 4 contains common weight / volume conversion estimates simply because some people do not have scales available at all times and an informed weight estimate is better than a wild guess.

Table 4. Weight volume conversions

Feed	Lb per quart	Lb per gallon
Corn, Shelled	1.8	7.2
Corn, Cracked	1.6	6.4
Soybean meal	1.5	6.0
Cottonseed meal	1.5	6.0