

# **Steer Feeding Guidelines**

## **Based on Hip Height Measurements**

Steer projects require a great amount of attention and detail to the feeding regime. The following article is a feeding guideline based on height to help you achieve the proper weight for your finished project. It is wise to check with your local feed store or veterinarian to prepare a ration that will fit your project.

### **Frame Score**

This is the measurement of the height of the animal being fed, and will determine the number of days the animal needs to be fed to achieve the desired grade (finish). Frame score is a score based on an actual measurement of hip height. This score is related to harvest weights at which cattle should attain a given quality grade or attain a given amount of fat thickness.

Once the 4-H Member has selected the animal, then the frame score should be estimated to determine how best to feed the animal.

Example, A Steer, born on March 15, 2002, with a hip height of 46.6 inches on October 15, 2002.

- H (Height) = 46.6 inches
- Age = 214 days (7 months)
- Frame Score = 6 (~ 6.25) from the chart.

### **Frame Score is closely related to Maturity Type.**

- Small Framed animal – Early Maturing (FS 1-2)
- Medium Framed = Moderate Maturing (FS 3-5)
- Large Framed = Late Maturing (FS 6-8)
- Extreme Framed = Very Late Maturing (FS 9-11)

### **Frame (1-2)**

- Generally very short.
- Lack rapid growth potential.
- Low Carcass weight.
- 330-396 lbs. At 9-12 mm fat.

### **Frame (3-5)**

- Average Growth Rate potential.
- Good Muscle development.
- Generally reach market at 440-770 lbs. At 9-12 mm of fat.

### **Frame (6-8)**

- High growth potential.
- Some cattle will lack muscle expression.
- Market carcass weights range from 770-990 lbs. At 9-12 mm fat.
- These tend to be cattle that are fed for a long time in the feedlot.

**Extreme Frame (9-11)**

- Huge cattle, extremely high growth potential.
  - Very late maturing.
  - Generally very lean.
  - May not become fat enough for quality market.
  - Carcasses will >990 lbs. If desired fat can be achieved.
- At early stages of physical maturity, growth rates are similar.
  - Large frame cattle continue high growth rates for longer time and mature at a slightly older age and a heavier weight.
  - The higher the frame score, the longer to finish the animal.
  - From the earlier example of a 7 month calf with a H (height) of 46.6 inches, we determine the FS was 6.25.
  - This calf would finish with an estimated weight of about 1275 pounds.
  - If the calf weighed 675 pounds when weigh in occurred and there were 5.5 months to feed the calf, then the ADG would be calculated as follows:
    - $1275 - 675 = 600$  pounds of gain
    - $5.5 * 30 = 165$  days
    - $600 \text{ pounds} / 165 \text{ days} = 3.64$  pounds per day of gain

<b>Steers</b>									
Age (months)	<b>Frame Score</b>								
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>5</b>	33.5	35.5	37.5	39.5	41.6	43.6	45.6	47.7	49.7
<b>6</b>	34.8	36.8	38.8	40.8	42.9	44.9	46.9	48.9	51
<b>7</b>	36	38	40	42.1	44.1	46.1	48.1	50.1	52.2
<b>8</b>	37.2	39.2	41.2	43.2	45.2	47.2	49.3	51.3	53.3
<b>9</b>	38.2	40.2	42.3	44.3	46.3	48.3	50.3	52.3	54.3
<b>10</b>	39.2	41.2	43.3	45.3	47.3	49.3	51.3	53.3	55.3
<b>11</b>	40.2	42.2	44.2	46.2	48.2	50.2	52.2	54.2	56.2
<b>12</b>	41	43	45	47	49	51	53	55	57
<b>13</b>	41.8	43.8	45.8	47.8	49.8	51.8	53.8	55.8	57.7
<b>14</b>	42.5	44.5	46.5	48.5	50.4	52.4	54.4	56.4	58.4
<b>15</b>	43.1	45.1	47.1	49.1	51.1	53	55	57	59
<b>16</b>	43.6	45.6	47.6	49.6	51.6	53.6	55.6	57.5	59.5
<b>17</b>	44.1	46.1	48.1	50.1	52	54	56	58	60
<b>18</b>	44.5	46.5	48.5	50.5	52.4	54.4	58.4	58.4	60.3
(Hip Height, Inches)									

## Feeding program

### 3 Phases

- **Starting** - 14-28 days, generally the less stress the easier to get the calf started on a grain ration.
- **Growing** - 14-84 days, generally use this period to maximize protein (muscle) gain and prepare the animal for the finisher diet.
- **Finishing** - 85-finish, generally 60-90 days depending upon the frame score. The larger the frame score the longer the finisher period. For very large framed cattle, the finisher period will last too long to properly finish the animal for market in a 4-H program. Cattle with a frame score of 7 or more may not finish in the desired days.

### Starting calves on a grain-feeding program

- Provide a starter feed at about 0.5% of body weight. From the example, we would start the calf with 675 lbs.  $*0.5\% = 3.375$  pounds (3-3.5 pounds) of starter feed provided in 2 equal feedings.
- This would be fed with all the good quality hay they could consume. About 2-2.25% of BW, DM basis, or 16-18 pounds of hay (85% DM).
- After 3-5 days when the calf is consistently consuming the grain offered, increase the amount of grain offered by 1 pound.
- Increase the grain by 1 pound every 3-5 days until the calf is consuming about 8 pounds of grain per day.
- If the calf is not showing signs of sickness, the starter phase has been successfully completed and we can move on to the grower phase.

### Grower phase feeding program

- During the grower phase, we want the calf to consume approximately 1.5% of its body weight as grain (on a dry matter basis).
- Four our calf, at 21 days into the feeding period, he will weigh approximately 725 pounds. The average weight for the next month will be about 770 pounds.
- The average amount of grain will be:
  - $770 * 1.5\% = 11.55$  pounds/88% Dry Matter
  - = 13 pounds of grain per day. The increases need to be done slowly so the calf does not get acidosis and go off grain feed.
- When individually feeding cattle, each animal will respond differently.
- Generally, larger frame animals have a higher intake capacity, and can be increased in grain a little quicker than smaller frame cattle.
- For the best results I find 1 pound increase in grain every 3 to 5 days is easiest on the cattle.
- Feed grass type hay for best results. High legume (alfalfa) hays can sometimes cause bloats.
- Most feeding programs will have adequate protein, but implanted large frame steers may need as much as 15% crude protein in the diet dry matter. A Starter ration with 15% Protein will be adequate for these cattle.

- To make adequate rations using home grown grains the following will be used:

	<b>14% Starter</b>	<b>13% Grower</b>
Oats 10%	200 kg	- - - -
Barley 11%	645 kg	900 kg
32% Supp R	155 kg	100 kg

- The Grower/Finisher may not have enough energy to finish calves with a frame score > 6.5 but may need a ration with 15-20% more energy.

**Estimated carcass slaughter weight**

- The frame score will aid in determining the final carcass weight (this can be estimated from the following table). This will estimate the final finished weight of the animal.
- Knowing the starting weight, final weight and number of feeding days, the required Average Daily Gain (ADG) can be determined.

<b>Frame Score</b>	<b>Estimated in pounds</b>
2	850
3	950
4	1050
5	1150
6	1250
7	1350
8	1450
9	1550

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