

Breeding Beef Project Information

Ask your 4-H leader, Extension Agent, Breeder, or Parents for help in completing this page

Basic Animal Statistics and Pedigree Information

Heifer's Ear Tag Number		Sire's ID or Name		Sire's Breed	
Heifer's Breed Composition		Dam's ID or Name		Dam's Breed	
Open or Bred Heifer Project		TSU ID for DNA			

Performance Projections

Initial WT (lbs.)		Initial Age (d)		Initial WDA ²	
Initial Hip HT (in)		Initial Frame Score ³		Est. Mature Cow WT ⁴	
Final WT (lbs)		Final Age (d)		Final WDA ¹	
Final Hip HT (in)		Final Frame Score ²		Est. Mature Cow WT ³	

Complete the following if you had a commercial heifer:

- What is the breed composition of your heifer? Why did you select her for this project? Was she purchased or raised?
- What are some qualities (either positive or negative) about your heifer's conformation and/or performance traits? What traits does she excel in? What would you like to change?
- What bull or breed of did you use to breed your heifer (or what would desire to use for open heifers), and why did/would you select this bull or breed of bull?
- Are you planning to breed your heifer via natural service or through artificial insemination? If so, do you plan to use estrus synchronization, or detection of natural heats? If synchronizing estrus, what protocol did you (or are you planning to) use? Who helped you?

² Equation for Weight per Day of Age (WDA) = Weight/Days of Age

³ Equation for Frame Score = $-11.7086 + (0.4723 \times \text{Ht.}) - (0.0239 \times \text{Age}) + (0.0000146 \times \text{Age} \times \text{Age}) + (0.0000759 \times \text{Ht.} \times \text{Age})$
 where Age = days of age and Ht. = hip height. Can also use Table 1 on following page.

⁴ Use Table 2 to project mature size based on animal's frame score.

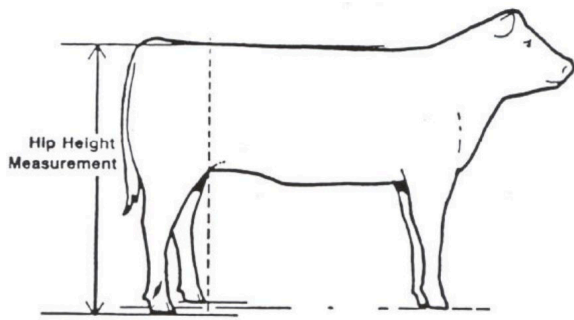


Figure 1. Recommended site for heifer hip height measurement to be taken for accurate projections of future mature cow size.

Table 1. Heifer Hip Height (inches) Frame Score for Ages 5 to 21 Months

Frame Score Based on Hip Height at Various Ages								
Age in Months	1	2	3	4	5	6	7	8
6	34.1	36.2	38.2	40.3	42.3	44.4	46.5	48.5
7	35.1	37.1	39.2	41.2	43.3	45.3	47.4	49.4
8	36.0	38.0	40.1	42.1	44.1	46.2	48.2	50.2
9	36.8	38.9	40.9	42.9	44.9	47.0	49.0	51.0
10	37.6	39.6	41.6	43.7	45.7	47.7	49.7	51.7
11	38.3	40.3	42.3	44.3	46.4	48.4	50.4	52.4
12	39.0	41.0	43.0	45.0	47.0	49.0	51.0	53.0
13	39.6	41.6	43.6	45.5	47.5	49.5	51.5	53.5
14	40.1	42.1	44.1	46.1	48.0	50.0	52.0	54.0
15	40.6	42.6	44.5	46.5	48.5	50.5	52.4	54.4
16	41.0	43.0	44.9	46.9	48.9	50.8	52.8	54.8
17	41.4	43.3	45.3	47.2	49.2	51.1	53.1	55.1
18	41.7	43.6	45.6	47.5	49.5	51.4	53.4	55.3
19	41.9	43.9	45.8	47.7	49.7	51.6	53.6	55.5
20	42.1	44.1	46.0	47.9	49.8	51.8	53.7	55.6
21	42.3	44.2	46.1	48.0	50.0	51.9	53.8	55.7

Table 2. Expected Mature Cow Size Based on Frame Scores

Frame Score	1	2	3	4	5	6	7	8
Mature Cow Weight (lbs)	750 - 850	850 - 950	950 - 1050	1050 - 1150	1150 - 1250	1250 - 1350	1350 - 1450	1450 - 1550