

Heifer Selection & Conditioning

Replacement Heifer Development

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Introduction

Depending on which calving season you have, cattlemen must make decisions on which heifer calves they want to keep or buy for their herd. Usually, 10-20% of your herd will need to be replaced with heifers each year. It is extremely important to apply adequate selection pressure to prospective herd replacements at weaning and after weaning. Developing these heifers to become productive females in your cow herd can be a tremendous investment in a cow-calf operation. The following are some guidelines that should be used when selecting your replacement heifers.

Record Keeping

An individual record should be kept on each cow in your herd. Whether you write it down on a note pad or keep it in your cell phone, knowing when this cow has calved, birth weight, and making sure the calf is growing properly is essential information. Keeping records on the following information will help you select the heifers that you want to keep out of your high performing cows:

1. Calving Percentage
2. Cow Performance (Body condition, number of calves, rebreeding, etc.)
3. Weaning Weights
4. Quality of Calves at Weaning (are all the calves the same size and uniform in weight)



Longevity is Important

It is important to keep heifers that are being selected from the cows that have consistently produced a heavy weight and high-quality calf every year. Keep notes on which cows have a 12-13 month calving interval each year. If it is possible look at birth dates and select those heifers that were born in the beginning of your calving season. Research shows that these heifers tend to reach puberty at an earlier age. This means that these heifers should start their estrus cycle earlier and get bred earlier, then those that calved at the end of your breeding season. Select high quality heifers at weaning time:

1. Heifers from a High Milking Dam
2. Disposition
3. Visual Appraisal
4. Adequate Growth



Heifer Average Daily Gain

Heifers should be gaining 1.5- 2.25 lbs/d to reach 65% of their mature weight when it is time to start breeding them at 15 months of age so they can calve at 2 years old. Monitor your heifers by viewing their body condition scores to make sure they are not losing or gaining too much weight. Depending on the breed of heifer, weights will vary and age of maturity will vary. Heifers that have failed to develop and gain the appropriate amount of weight should be culled. For Example:

- Mature Weight: 1200 lbs
- Weight at Breeding: 780 lbs

Conditioning

In order to achieve a target body weight for a cycling heifer at breeding, some challenges need to be overcome. The first challenge is making sure your heifers are achieving an ideal average daily weight gain (ADG) to avoid over and under conditioning. Here are a few tips on how to overcome these challenges:

1. High enough protein concentration to support muscle growth
2. Ideal heifer development Crude Protein percentage in their diet 13-14% and TDN of 55%
3. Make sure energy content is enough to reach the target ADG
4. Another option: Winter annual grasses such as oats, triticale, rye or a combination of those
5. Make a plan and have a good back up plan if the forage production is not optimal

Reproduction Potential

When your heifers are reaching breeding age, keep a record of who has come into heat and who hasn't. Depending on the size of your operation, there are a few different options to check and see if your heifers are cycling. If they are not cycling, you can set them up with an estrus synchronization protocol to get them to reach puberty. Listed below are some different ways that you can document if your heifers are ready for breeding season :

1. Take record to see who has come into standing heat
2. Use the Reproductive Tract Score (RTS) method by a large animal practitioner with palpation and/or ultrasound technology
3. Obtain pelvic measurements two to three weeks before the breeding season
4. Palpating for ovarian development



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Selection Based on Visual Appraisal

When selecting heifers visually, the following criteria should be considered:

- Volume & Capacity
 - Spring of rib
 - Depth of body
 - Natural thickness & shape down the top
 - Width & depth to stifle
 - Width in her pin set
- Frame & Growth
 - Moderate frame
 - Length of body
 - High performance
- Design & Structure
 - Stands square on front & rear legs
 - Heavy boned
 - Walks with flexibility in their pasterns
 - Level from her hooks to her pins
 - Moves with flexibility in her hock
 - Correct angle in her shoulder
- Femininity
 - Feminine: Want your females to look like females
 - Smooth shoulder
 - Long fronted
 - Check her teats and make sure they look uniformed
- Balance
 - Level down her top
 - Want her forerib to be level with her flank
 - Deep flank

