

Developing and Managing Replacement Heifers

Production objective:

Your main objective would be to develop weanling heifers into productive cows. The NIRS/NUTBAL program addresses the nutritional aspects of this challenge.

Goals and protocol:

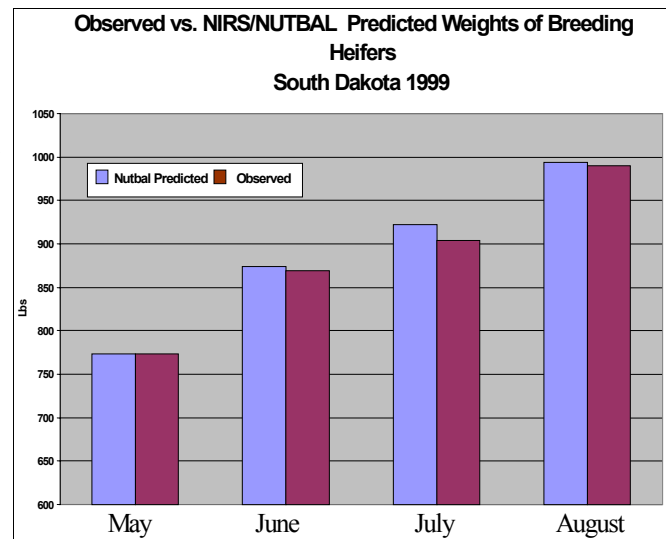
Nutrition plays an important role in successfully managing females from weaning to second breeding season. Each phase of development has unique goals. Your goals may resemble those mentioned in a Texas Agricultural Extension publication by Drs. L.R. Sprott and T.R. Troxel, "Management of Replacement Heifers for a High Reproductive and Calving Rate." Let's take a look at some of these goals and how the NIRS/NUTBAL system would benefit the costly task of developing replacement heifers.

- ◆ First breeding season: Heifers need to be at least 65% of their mature body weight for adequate conception rates.

Appropriate weights at first breeding positively affects re-breeding and reduces calving difficulty. Start your monitoring program by calculating the average daily gain needed to reach the target weight. Monitor the weaning heifers to breeding by collecting a composite sample each month, sending it to the GAN Lab for NIRS analysis and running a NUTBAL animal performance report. The report will tell you how much the heifers are gaining. It will also help you decide whether or not to make changes, feed or less supplements, or to rotate pasture, etc.

- ◆ Calving time: Heifers should weigh at least 85% of expected mature weight and have a body condition score of at least 5 or 6 for good conception rates during the second breeding season.

As with mature cows, body condition also affects the milking ability of first-calf heifers. Again, calculate the average daily gain needed to reach these targets. Collecting samples once a month would be appropriate for this phase of development also.



Graph 3: Heifer Validation. AngusX on improved pasture. End weights deviated at most 2% of actual weight.

- ◆ Second breeding season: First-calf heifers need to have a nutrient rich diet to meet their high nutritional requirements and to breed back.

Cattlemen have often noted that heifers calving for the first time tend to have lower pregnancy rates and breed back later in the breeding season following their first calf. A number of factors attribute to this problem. First-calf heifers perform all the functions of mature cows while they are still growing. Translation: high nutritional requirements. Incisor teeth are also shed at this time. Because of their smaller size, heifers have less capacity for feed. Result: limited ability to consume roughages. So, in order to avoid sacrificing reproduction, heifers with calves should have a more nutrient dense diet, i.e., high quality forage or supplementation.

Benefits:

The NIRS/NUTBAL system helps you to decide how to cost effectively allocate resources (feed and grass) and to make nutrition management decisions in a timely manner to maximize heifer productivity.

Nutritional Monitoring Success

Setting your goals

Include not only what you want to happen but what you do not want to happen. For example, your goal may be a herd BCS of 6.5 by calving season, and you do not want to exceed your budget.

Applying new skills

Learning to body condition score cattle and estimate forage standing crop will greatly enhance your ability to monitor cattle and pasture. These two skills also help you effectively utilize this technology.

Training offered

We are planning another producer-oriented workshop at Texas A&M University this August. Similar to workshops we conduct for USDA-NRCS personnel, training includes running NUTBAL software, evaluating body condition score, and estimating forage.