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Improving the Productivity of Beef Heifers in Florida

Dr. John Arthington

University of Florida

Range Cattle Research and Education Center



For questions or comments regarding this publication contact

[Dr. John Arthington](#)

The management of commercial beef heifers in Florida has been a recognized challenge since cattlemen first began implementing improved agricultural practices. Replacement heifers represent our investment in the continued improved quality of the cowherd. In all herds that are making progress toward genetic improvement, the heifers represent the animals with the highest potential value. Potential is the key word here and achieving this potential takes considerable time and money. Most Florida cattlemen appreciate the maternal characteristics of Brahman-influenced cows. Brahman breeding often makes up 1/4 quarter to « of the genetic makeup in commercial Florida cowherds. Although Brahman-influenced cows have exceptional longevity, they mature slowly, often not achieving full maturity until 4-years of age. During this development period these females require special attention. Many management schemes have been developed to address the special needs of developing heifers.

Replacement heifers - purchase or raise my own? This is a very important question to answer for your operation, especially if you are a medium to small producer. The costs associated with raising a replacement heifer are great. To complicate the issue we all realize that selecting bulls that have the potential for producing quality replacement heifers, as well as calves with good carcass traits is difficult. Many producers have addressed this issue by making a habit of always purchasing their replacement females. In doing so, producers are able to select from a wide variety of females with the goal of finding the right breeding at the right price. Under this management system, these producers are able to make bull-buying decisions based only on carcass quality (terminal cross). Even though the average price per heifer replacement may increase, the improved value of the calf crop may offset this difference.

When selecting replacement females big is not always better. Mature cows consume approximately 2.0% of their body weight on a daily basis - no matter what their size. Therefore, we could expect a 900 lb cow to consume about 1 ton less dry matter annually compared to a cow weighing 1200 lb. This increase in feed intake is a major cost to any production system. This added cost must be offset by an increase in calf weaning weight. Select replacement heifers that are in the upper average for weaning weight, but not the largest in the group. An excellent way to best understand this concept is by dividing a calf's weaning weight by the weight of their pregnant dam at weaning. This ratio tells us what proportion of the cows actual body weight is being marketed each year. Although our largest cows are consuming the most feed, they seldom fall out on top in this evaluation.

Maintain weaned heifers on a high-plane of nutrition. Brahman-influenced heifers achieve puberty more slowly than heifers of British breeding. Nevertheless, Brahman-influenced heifers can still successfully breed as yearlings when maintained on a high-plane of nutrition after weaning. A common target weight for the start of the breeding season is 65% of the projected mature cow weight. For example, if your mature cowherd averages 1000 lb, then you should target a heifer weight of 650 lb by the start of the breeding season. Typically, we can expect heifers to be ready for their first breeding at about 13 to 15 months of age. In a typical Florida system, heifers born during October - December of one year can be exposed to bulls in December and January of the following year. The key to achieving acceptable conception rates is targeting optimal heifer weight at the start of the breeding season.

Manage heifers and young cows separate from mature cows. This is an important concept. Heifers and young cows require increased management beyond that of the mature cowherd. Supplementing heifers and young cows the same as the mature cowherd will result in poor reproductive performance from the young, still-growing females. On the other hand, supplementing the entire cowherd to address the needs of young females will be expensive and wasteful since the mature cows will be provided supplemental nutrition beyond their requirement. Consider keeping heifers separate from the mature cows until they have weaned their second calf. This provides the opportunity to address the special nutritional needs of heifers, separate from the mature cowherd, during the first and second lactation.

Target your highest quality forages for heifer grazing. Consider the range in quality of your pasture forages and allow your heifers and young cows to access to the highest quality forage available. These females can best utilize this forage to maximize production. If you have improved forages available, consider using these exclusively for heifer and young cow grazing. Also, there are often opportunities to provide limited grazing on hay pastures. Heifers and young cows should be used for these situations as well.

Early weaning. The added nutrition required to support lactation is great, especially for young females. Recent results from our research have shown that early-weaned, first calf heifers require approximately 50% less TDN to achieve and maintain an optimal body

condition compared to lactating heifers and their calves. These data alone suggest that early weaning may be a practical and profitable management consideration for Florida cow/calf operations. The use of early weaning will allow young females to regain their lost body condition, and do so with less forage and supplemental feed. As well, these females will have a shorter post-partum interval meaning that they will become pregnant earlier in the breeding season and therefore produce calves that will be older and heavier at next year's weaning. Producers may choose to market early-weaned calves immediately after weaning versus accepting the management of these young animals. The mild winters associated with Florida offer a unique opportunity to manage early-weaned calves on a forage-based grazing system using ryegrass, a highly nutritious, winter annual forage. Fall-born, early weaned calves can be maintained on winter annuals and then marketed in late April or early May when calf prices are typically their highest of the year.