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## **Seasonal Changes in the Growth and Quality of Bahiagrass and the Need for Supplement**

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Forage forms the base for cattle nutrition programs in Florida. Two perennial grasses (bahiagrass and limpograss) are the foundation for grass pasture programs on most central- and south-Florida ranches. These are extensively managed grasses that are dependable, long-lived, and highly adapted to the soil, climate and management of most ranches. In addition, there are special-use grasses such as stargrass, bermudagrass, and rhodesgrass that fill a special niche in a forage program and can be used for cattle with high nutritional needs such as growing calves or lactating cows, and can be intensively managed for hay or silage production.

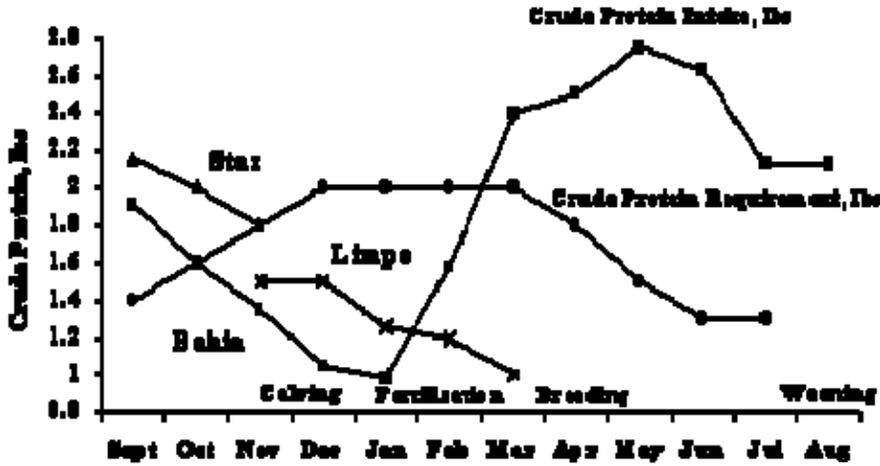
The key to a successful grazing program is to match strengths and weaknesses in growth and quality of pasture grasses to the animal production schedule. Forages can be selected based upon their seasonal distribution of growth and quality, taking into account grazing management and pest problems that influence persistence. Utilization of these grasses can be timed based upon breeding, calving and weaning seasons.

Over the past several years, bahiagrass pasture samples were collected at various times during the year from south-Florida ranches, and analyzed for crude protein (CP) and total digestible nutrients (TDN). Differences in management and forage availability existed among ranches. In general, cows began calving in November-December, pastures were fertilized in February-March, the breeding season began in February-March, and calves were weaned in late-summer.

Using this cattle production schedule, estimated intake (lbs/day) and requirements (lbs/day) for CP and TDN of a 1000 lb cow are shown in Figures 1 and 2, respectively. The graphs start at the last-third of pregnancy which begins the most critical time of the cow's production year. Adequate forage availability and quality from bahiagrass were

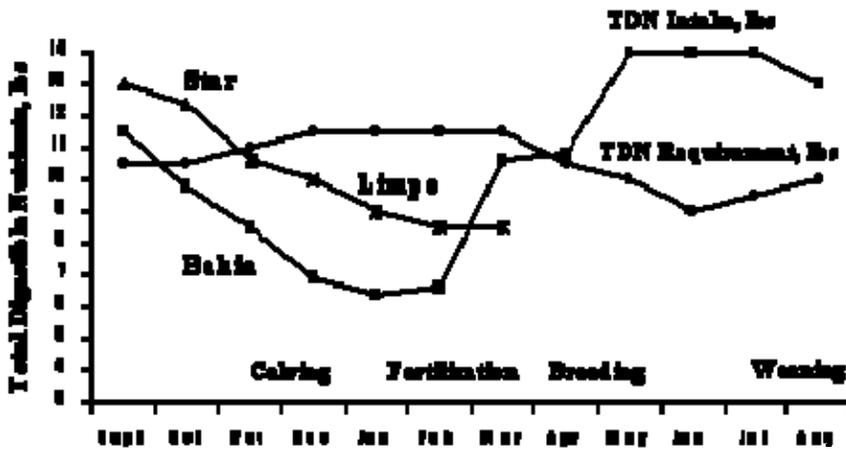
noted during the late-spring after rain, and through the summer. After June, CP and TDN of bahiagrass forage began to decline.

**Figure 1. Seasonal changes in CP intake and requirements for a 1000 lb cow.**



Requirements for CP and TDN exceeded that consumed from bahiagrass pasture from two to three months before calving and into the breeding season. During the last trimester of pregnancy the shortfall was .5 to 1.0 lbs of CP and 2.5 to 4.5 lbs TDN. Given adequate bahiagrass forage availability, this represents (as-fed basis) approximately 3.0 to 4.0 lbs of a liquid feed or 2.0 to 3.0 lbs of dry feed, each containing 16 to 20% CP. From calving until after fertilization and pastures begin to regrow in March-April, shortfalls were 1.0 to 1.5 lbs CP and 5.0 lbs TDN. Given adequate bahiagrass forage availability, this represents (as-fed basis) approximately 6.0 to 8.0 lbs of a liquid feed, or 5.0 to 7.0 lbs of a dry feed, each containing 16 to 20% CP.

**Figure 2. Seasonal changes in TDN intake and requirements for a 1000 lb cow.**



Utilization of stargrass or bermudagrass prior to frost, and limpograss through the winter and early-spring can help offset the low quality of bahiagrass, and reduce supplement needs at a time when cow requirements are high. Utilization of stargrass or bermudagrass in a highly-managed rotational grazing system during the last-third of pregnancy may eliminate the need for supplementation during this period. After calving, utilization of limpograss can reduce the need for supplement by about .3 lbs CP and 2.0 lbs TDN daily. This would result in a supplement need of 4.0 to 6.0 lbs of a liquid feed or 3.0 to 5.0 lbs or a dry feed, each containing 20 to 24% CP.