

# ONA REPORTS

*published in*

***THE FLORIDA CATTLEMAN AND LIVESTOCK JOURNAL***

**November-1994**

## **Using Fats in Molasses-Based Supplements**

F.M. Pate,  
*University of Florida, IFAS*



For questions or comments regarding this publication contact

[Findlay Pate](#)

When we consider winter supplementation of cattle in Florida we immediately think 'crude protein' supplementation. We often fail to realize that Florida forages are quite low in energy or digestibility (TDN) during the late fall and winter months. For example, bahiagrass pasture averages about 45 percent TDN from October through March. The TDN requirement for a lactating brood cow is around 57 percent, and a yearling heifer requires a diet containing around 62 percent TDN. This is why we recommend that brood cows be fed relatively liberal quantities of supplement from the time they calve in the fall or early winter until well into the breeding season. This recommendation is five lb/cow/day of a good molasses-based liquid feed or four lb/ cow/day of a good dry concentrate feed when they are grazing bahiagrass and similar quality pasture forages.

Yearling heifers require an even greater quantity of TDN as supplement to bahiagrass forage because of their higher TDN requirement. This requirement is difficult to obtain using a liquid feed with a recommended daily intake of about one percent of a yearling heifer's body weight. A possible solution to this problem is the use of fat in the molasses mixture. Fat provides 2.25 times more energy than the same amount of carbohydrate (sugars and starches). A small amount of fat can significantly increase the TDN content of a liquid feed, and thus TDN intake by the animal.

Research was conducted on supplementing cattle with molasses containing added fat at the Everglades Experiment Station at Belle Glade in the late 1960's by Dr. Dan Beardsley (See Pate et al., 1972. Fla. Exp. Sta. Bull. 752). Yearling steers grazing St. Augustinegrass pasture and fed three lb/animal/day of molasses with 10 percent vegetable fat gained 16 percent faster than steers fed molasses without fat. This result showed that young growing cattle would respond to fat in molasses.

Recently, a series of two studies were completed at the Range Cattle Station in which five percent catfish oil was added to a molasses and feather meal slurry. Supplements were fed to yearling heifers grazing bahiagrass from weaning through a 60 day breeding season. Stargrass hay was fed from December through April. Heifers fed the slurry mix with fat gained .45 lb/ day more than heifers fed the slurry mix without the fat. When palpated in August heifers fed molasses and feather meal slurry with catfish oil had a 14 percentage point (50 vs. 64 percent) higher pregnancy rate than heifers supplemented with the same slurry mix without catfish oil.

The Range Cattle Research and Education Center is continuing to conduct research on molasses-based feeds containing catfish oil, beef tallow and restaurant grease using both yearling heifers and brood cows. We feel that these fat sources will be both beneficial and economical in the molasses slurry program currently used by many Florida cattlemen.