A major expense in cow/calf production is winter supplementation. The most expensive component in a supplement is crude protein. The two broad classes of crude protein are non-protein nitrogen (urea) and natural protein. Natural proteins include feedstuffs such as cottonseed meal, soybean meal, and feather meal. Urea is much less expensive than natural proteins and much easier to mix into a liquid supplement.

At the Range Cattle REC we fed different molasses supplements during the winter to brood cows grazing bahiagrass pasture and offered stargrass hay. The herds contained animals ranging in age from first-calf heifers to 15-year-old cows. When fed for 130 days at 3 pounds per cow per day, cows fed a molasses-urea (17% crude protein) supplement produced 39 pounds more calf per cow than cows fed molasses only. Cows fed molasses-cottonseed meal-urea slurry (17% crude protein) produced 18 pounds more calf per cow than cows fed molasses-urea.

In the Range Cattle REC trial, it cost $7.00 per cow to add urea to molasses and produce 39 pounds more calf. It cost an additional $5.00 per cow to replace most of the urea with cottonseed meal and produce 18 pounds more calf. With feeder calves now selling for $1.00 per pound, feeding the cow herd molasses supplement fortified with either urea or some natural protein results in very positive returns.

The Range Cattle REC trial further showed that the greatest response to supplemental crude protein in molasses, as either urea or natural protein, was by first-calf heifers. Older cows fed molasses-cottonseed-urea or molasses-urea also performed better than cows fed molasses only, but there was no advantage of feeding molasses-cottonseed meal-urea slurry over molasses-urea. Thus, a good production practice would be to manage first-calf heifers and older brood cows in separate herds, supplementing younger cows with molasses-natural protein slurry and older cows with a molasses-urea mixture.

There are other factors that should be considered when selecting a molasses-based supplement. Molasses-natural protein slurries are very palatable to cattle and they must be limited-fed to brood cows and first calf heifers, usually with twice weekly feeding. In contrast, urea is unpalatability to cattle and serves as an intake limiter when added to
molasses mixtures fed free-choice in many situations, but over or under consumption of molasses-urea supplements are problems at times and intake should be monitored.

The long term benefits of feeding brood cows adequate amounts of a good quality winter supplement must be recognized. Feeding brood cows during the winter not only means heavier calf weaning weights next fall, but a larger calf crop the following year. Remember, cows bred this winter will conceive feeder calves to be marketed in the fall of 2002. The feeder calf market is predicted to be strong for the next few years. Now is the time to spend money on practices that promote better calf production. Better cow nutrition through winter supplementation is one of the most important of these practices, and one that will return excellent dividends down the road.

For questions or comments regarding this publication contact Findlay Pate