

Hardee Rancher Beef and Forage Newsletter



Hardee County Extension Service
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January / February 2001

Calendar of Events

January	
23	Water Quality Best Management Practices for Cow/Calf Operations in Florida - USDA Horticulture Research laboratory - Fort Pierce, 1:00 - 6:00 p.m.
24	Water Quality Best Management Practices for Cow/Calf Operations in Florida - Okeechobee Civic Center - Okeechobee, 1:00 - 6:00 p.m.
25	Hardee County Cattlemen's Supper - Cattlemen's Building
25	Water Quality Best Management Practices for Cow/Calf Operations in Florida - Florida Cattlemen's Office - Kissimmee, 1:00 - 6:00 p.m.
30	Citrus Production School - Family Service Center Annex, 7:00 - 9:00 p.m.
February	

6	Citrus Production School - Family Service Center Annex, 7:00 - 9:00 p.m.
7	Restricted Use Pesticide License Review and Testing - Hardee County Extension Service, 507 Civic Center Drive - Wauchula, 9:00 a.m. - 12:00 p.m. Test will begin at 1:00 p.m. For more information call the Hardee County Extension Service at 863-773-2164
13	Citrus Production School - Family Service Center Annex, 7:00 - 9:00 p.m.
19-24	Hardee County Fair, Cattlemen's Arena - Wauchula
27	Johne's Disease Meeting - Hardee County Agri-Civic Center, 4:30 p.m.
7	Beef Cattle Herd Health Seminar - Okeechobee

Drought Survival Strategies

by Lockie Gary, County Extension Director

We are well into a protracted drought with predictions of more to come. The Peace River is approximately 94% below normal for this time of year. In addition we had an early frost (November 21st) and with this long cold spell many cows are quickly losing body condition. Remember that a cow's nutritive requirements skyrocket after she calves and most producers have recently turned in bulls expecting their cattle to breed back during this tough weather. What follows are some suggestions which may apply to your operation.

1. Prayer works.
2. Closely observe cow body condition. Cows need to be at BCS of 5.0-5.5 for optimum reproductive efficiency.
3. Consider creep feeding. Young calves make the most efficient gains and this practice will take some stress of the cow.
4. Consider early weaning. Calf prices for 200-350 lbs. calves have been excellent lately. Weaning the calf is a sure-fire way to get the cow to come into heat and get rebred.
5. Test your feed before purchasing winter supplements. The cost of a forage analysis is \$8.00 and is cheap insurance for discovering what your existing forage lacks.
6. Investigate alternative feeds and by-products. Citrus pulp can help if your pastures are bare and you are out of hay. If the processing plant gives it away just remember you are hauling water and it may not be practical if you have a long distance to transport.
7. Sell off older or poorer producing cows. The older cows may have more difficulty maintaining body condition and often times will produce a lighter calf.
8. Ammoniate low quality roughage. The cost is usually about \$15/ton of roughage but it will improve digestibility and palatability.
9. Consider limit feeding a concentrate to cows. If hay is expensive and grain is cheap, limit feeding a concentrate may be as effective as feeding hay and supplement. Make certain the grain is well spread out so that an individual cow does not overeat and develop acidosis.
10. Be certain your cattle are parasite free. It is always cheaper to properly deworm than to feed the worms. Rotating cattle between pastures frequently will also help in the regard.

Value Added Molasses Supplements for the Brood Cow Herd

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. Per unit of crude protein, urea is much less expensive than natural proteins and much easier to mix into a liquid supplement.

We compared different molasses supplements fed during the winter to brood cows grazing bahiagrass pasture and stargrass hay at the Range Cattle REC. The herds contained animals ranging in age from first-calf heifers to 15-year-old cows.

Cows fed a molasses-urea (17% crude protein) supplement for 130 days at 3 pounds per cow per day 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.

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 at \$80 to \$100 per cwt, feeding the cow herd molasses supplement fortified with urea or 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 unpalatable to cattle and serves as an intake limiter when added to molasses mixtures fed free-choice in many situations. However, 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 higher calf crop the following year. Remember, cows bred this winter conceive calves that will be marketed in the fall of 2002. The 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 dividends down the road.

Dr. Findlay Pate

Range Cattle REC Newsletter, October, 2000

Biological Control of Pasture Mole Crickets with Nematodes

Foreign mole crickets cause serious damage to bahiagrass pastures in Florida. There are three pest mole crickets found in Florida; the Southern, Tawny and Short-winged mole cricket. Of these three, Tawny is the most damaging. In a 1998 survey conducted by the South Florida Beef and Forage Program, 64% of cattle producers reported approximately 290 acres of their bahiagrass pastures as being damaged by mole cricket infestation. At an estimated cost of \$200 per acre for pasture renovation, this amounts to \$3,712,000 for

every 100 beef cattle producers in south central Florida. These estimates do not include losses in revenue from reduced forage and hay production. While chemical control strategies can be effective, they provide only short-term relief and may leave harmful residues in the environment.

Fortunately, the UF/IFAS patented mole insecticidal nematodes (*Steinernema scapterisci*) carry bacteria (*Xenorhabdus* sp.) that kill pest mole crickets within a few days after infection. These nematodes are selective for pest mole crickets and generally do not affect other insects or animals. The special nematodes may provide long-term protection by multiplying inside dead mole cricket bodies and then spreading to other mole crickets nearby. We are hopeful that these mole cricket nematodes will become commercially available late next year.

The insecticidal nematodes are marketed in a moist porous-foam formulation. Nematodes are delicate living organisms and must be properly handled, stored and applied in the field. The product should be stored ideally in refrigeration (39 °F), or at least under air-conditioning until application. Since nematodes tend to lose viability with time, storage should not exceed 6 weeks. These nematodes are sensitive to high temperatures and UV light, so the nematode product should be transported to the field under air-conditioning, or in chest coolers, and not be exposed to direct sunlight or prolonged heat.

An injection sprayer is required to place the nematodes 1 to 2 inches below the soil surface in order to protect them from direct sunlight. An ordinary sod-seeder can be modified into a sprayer by adding a tank, pump, hoses and nozzles. The nematode product is premixed in a pail of water before adding it to the sprayer tank containing water. The spray mixture is injected into the ground at 800 million nematodes in 100 gallons of water per acre. These nematodes were shown to persist and continue to infect pest mole crickets 8 years after being applied to a pasture in Florida. There are on-going studies to evaluate the effectiveness of strip-field application of nematodes for mole cricket control. If effective, strip-field inoculation will reduce the cost of applying insecticidal nematodes to pastures considerably.

The nematodes enter the body of mole crickets through all natural body openings such as the mouth, anus and spiracles (breathing holes). Therefore, nematodes are more effective on adult mole crickets, which have larger openings, than on nymphs. This also implies that the best time to apply nematodes in south-central Florida is in the fall (September to November) or early spring (February to March) when adult Tawny mole crickets are most abundant. There is little soil surface activity by mole crickets in December and January, as they "overwinter" deeper in the soil so this is not a good application time. Fall field-application is preferable because it allows for a longer period of infection before egg laying by Tawny mole crickets which occurs from March to May. Following infection with nematodes, the mole crickets die within a few days, and young nematodes emerge from dead mole cricket bodies in 10 to 14 days. These fresh nematodes will infect other mole crickets to repeat the cycle and provide long-term control.

Another easy method of spreading nematodes on small areas is to trap, infect and release mole crickets during the early spring mating flights. Sound emitters, that may become commercially available soon, mimic male songs and attract adult mole crickets to traps. Trapped mole crickets are incubated in a nematode solution for several hours and then released on heavily mole cricket-infested areas (hot spots) of a pasture to spread the nematodes to other pest mole crickets.

Dr. Martin Adjei

Range Cattle REC Newsletter, October, 2000

STAFF CONTRIBUTORS

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For questions or comments regarding this publication contact



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