

COW/CALF CORNER

The Newsletter

From the Oklahoma Cooperative Extension Service

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In this issue:

New Information About Calf Vaccination Timing

Glenn Selk, OSU Extension Cattle Reproduction Specialist

This Year Test the Forage Before You Cut!

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The July issue of the Journal of American Veterinary Medical Association contained some good news for cow calf producers. Oklahoma State University veterinary scientists cooperating with the Noble Foundation of Ardmore studied the timing of modified-live virus vaccinations in beef calves. For years, the recommendation for the timing of modified-live vaccines called for the vaccine to be given after maternal passive immunity antibodies had disappeared from the blood of the calf. It was thought that maternal antibodies (received in the colostrum) would interfere with the effectiveness of the vaccine. Therefore most viral vaccines were not given until the calves were 5 months or older. However, the OSU/Noble Foundation research has shown otherwise. They vaccinated calves at 67 days of age and boosted them at weaning (190 days) and compared that with vaccinating at 167 days of age and boosted at (190 days) weaning. **There was no difference in the percentage of calves protected by the vaccine due to the timing of the first vaccination.** Not surprising was the fact that the vaccinated calves had lower treatment costs and less mortality in the feedlot than the non-vaccinated control calves. This research suggests that the first vaccination with a modified live virus vaccine can be given at normal “calf-working” time, if boosted again at weaning. **The calves would not need to be gathered at a separate time (approximately 3 – 4 weeks prior to weaning).** Source: Kirkpatrick, et al. 2008. JAVMA Vol. 233, No. 1, Pages 136-142.

This Year Test the Forage Before You Cut!

Glenn Selk, OSU Extension Cattle Reproduction Specialist

Hot dry summer weather brings about heat and drought stress on summer annuals. Stressed plants such as the forage sorghums can occasionally accumulate dangerous concentrations of nitrates. These high nitrate plants, either standing in the field, or fed as hay, can cause abortion in pregnant cattle, or death if consumed in great enough quantities. Nitrates do not dissipate from suncured hay (in contrast to prussic acid), therefore once the hay is cut the nitrate levels remain constant. Therefore, producers should test hay fields before they cut them for hay. Stop by any OSU County Extension office for testing details. This gives them an additional option of waiting and allowing for the nitrate to lower in concentration before harvesting the hay. The major sources of nitrate toxicity in Oklahoma will be summer annual sorghum type plants,

including sudan hybrids, sorgo-sudans, sorghum-sudans, millets, and Johnsongrass. Other plants also may accumulate nitrates. See [OSU Fact Sheet F-2903](#) .

Some of the management techniques to reduce the risk of nitrate toxicity (Note: the risk of this poisoning cannot be totally eliminated), include:

- 1) Test the crop before you harvest it. IF it has an elevated concentration of nitrates, you still have the option of waiting for normal plant metabolism to bring the concentration back to a safe level. And experience tells us that we cannot estimate nitrate content just by looking at the field.
- 2) Raise the cutter bar when harvesting the hay. Nitrates are in greatest concentration in the lower stem. Raising the cutter bar may reduce the tonnage, but cutting more tons of a toxic material has no particular value.
- 3) Know the extent of nitrate accumulation in the hay. If you still have doubt about the quality of the hay, send a forage sample to a reputable laboratory for analysis, to get an estimate of the nitrate concentration. This will give some guidelines as to the extent of dilution that may be necessary to more safely feed the hay.
- 4) Allow cattle to become adapted to nitrate in the hay. By feeding small amounts of the forage sorghum along with other feeds such as grass hay or grains, cattle begin to adapt to the nitrates in the feed and develop a capability to "digest" the nitrate with less danger. Producers should avoid the temptation of feeding the high nitrate forage for the first time after a snow or ice storm. Cattle will be stressed, hungry, and unadapted to the nitrates. They will consume unusually large amounts of the forage and be in high risk for nitrate toxicity. Be sure to read [OSU Fact Sheet F-2903](#) closely before cutting and feeding any sorghum forage hay.

We wish everyone a SAFE, and HAPPY Fourth of July!! Enjoy a Steak or Burger!!

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