COW/CALF CORNER

The Newsletter

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Hay Quality versus Hay Quantity

By Glenn Selk

Harvest date is a very important factor that determines the quality of the hay cut from native grass meadows. After a couple of drought years and below average hay supplies, ranchers may be tempted to go for maximum hay tonnage at any cost. However, producers should strive for the best combination of quantity and quality of forage from the hay that they store for winter feed supplies.

Research from Kansas State University range and pasture researchers sheds light on the optimum native range cutting dates. They harvested native grass meadows in early June, July, August, and September. The June and September dates were clearly less desirable as the June date produced about half as much tonnage as the early August cutting and the September hay quality was extremely low and produced a hay product that would be difficult for cattle to digest easily and yield little in terms of nutritional value. Therefore the decision of cutting time boiled down to the early July versus early August dates. The July harvest produced about 2400 pounds of dry matter forage per acre compared to 2800 pounds per acre in August. The July cutting was tested at about 7% crude protein and the August cutting was about half as good for protein content (3%).

As the calculations of amount of hay and quality are combined, we learn that the earlier cut hay produced about 168 pounds of crude protein per acre and the later cut hay produced only 84 pounds of crude protein per acre. Assuming typical total digestible nutrient content for these hays we would expect to find about 55% TDN in the July hay and 46% TDN in the August hay. Once again we make the calculations to see how much energy (TDN) is harvested to be fed to the cows. The July hay crop produced about 1320 pounds of TDN per acre and the August hay produced 1288 pounds of TDN per acre. Even though the producer hauled more tonnage from the field to the storage area and back out to the cattle with the later cut hay, he moved considerable less nutrients than he would have if the hay had been cut one month earlier. Nobody

likes to haul hay that badly. If we are going to harvest and feed hay, we might as well have protein and energy (things the cows need) going along on the hay ride.

Heritability Estimates of Fertility in Replacement Heifers

By Glenn Selk

"Heritability" is that portion of the difference in the performance of cattle that is due to genetics. The remainder of the differences are presumed to be due to differences in the environment (management). Previous estimates of the heritability of pregnancy rates in heifers ranged from 0 to .28. Iowa State University scientists studied records of 3144 heifers from 6 herds in 5 states. In the Iowa State study, the heritability of pregnancy rate was .13. Pregnancy rate is the percentage of the heifers exposed to artificial or natural breeding that were diagnosed pregnant after their first entire breeding season. First service conception rate is the likelihood that the heifer became pregnant on the first attempt to breed her. The heritability of first service conception rate was even lower at .03. This implies that 97% of the differences in the first service conception rate are due to the management environment in which the heifers were raised. **These low heritability estimates suggest that only slow progress could be made by selecting sires that produced heifers with greater pregnancy rates.** This data also reminds us that management is still the key to successful pregnancy rates in replacement heifers. Source: Minick and co-workers. 2004 Iowa State University Beef Research Report.