

RANGE COW NUTRITION IN LATE PREGNANCY

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The success or failure of a cow-calf operation depends on how well the cow's nutritional requirements are met during the last three months of pregnancy.

In Arizona, the majority of cow-calf producers manage their breeding herds for spring calving and the sale of weaner calves in the fall. This is a traditional practice. It is logical and reflects experience gained from generations of cattle ranching in the southwest.

The practice of spring calving, like nearly everything else in the cow business, creates its own share of management problems. One of these concerns deals with the nutritional requirements of the breeding herd during the winter months.

For the cow that has been bred to calve in February or March, or perhaps even earlier, one of the most critical periods in her yearlong productive cycle is the interval between late December through March. This time represents the 7th, 8th and 9th months of pregnancy or what is often referred to as the third trimester of gestation. Unfortunately, however, this is the season when most forages reach their lowest nutrition. This is particularly true with protein and carbohydrate levels and the problem occurs with both grass and browse.

The graphs illustrate the relative nutritive values of grass and browse species found in the southwest:

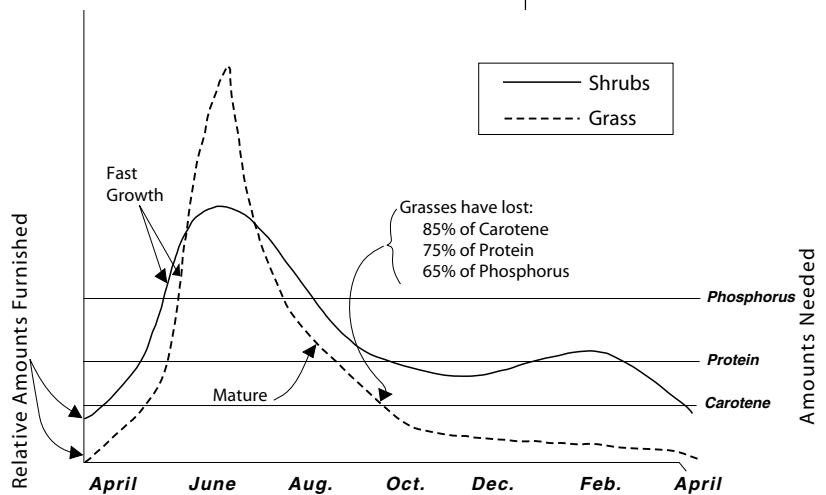


Figure 1. Seasonal Trends in Protein, Phosphorus, and Carotene Content of Range Forage.

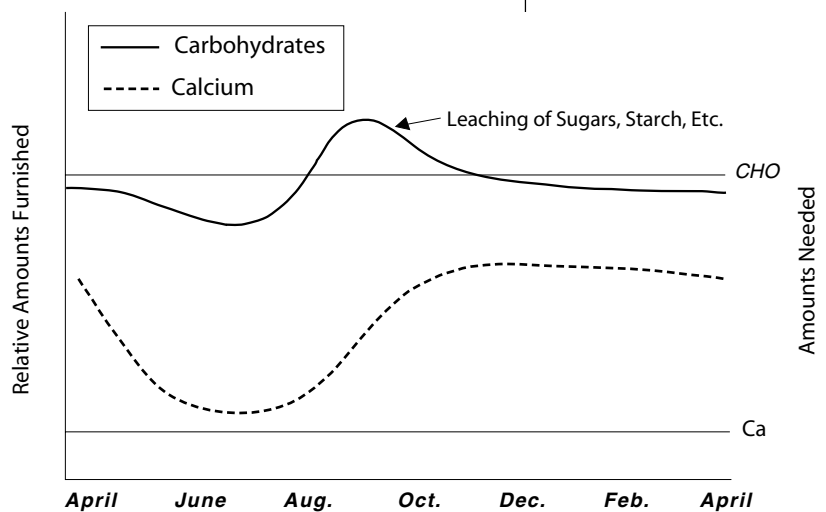


Figure 2. Seasonal Trends in Calcium and Carbohydrates in Range Grass.

It can be seen that grass and browse vary considerably in nutritive levels throughout the year. More important however, from the standpoint of the

pregnant cow, is the fact that the nutritive levels of these forages are usually lowest during plant dormancy. This also happens to be a critical time for the cow in the latter stages of pregnancy.

To emphasize the importance of nutrition in the cow and why this 80-90 day period is so vital to her performance, consider a few of the duties expected of the cow that are affected by nutritional intake during this time:

- a) she must adequately nourish the developing unborn calf because it triples in weight during the last 3 months of gestation,
- b) her thriftiness and body condition must be maintained in order to promote normal calving (weak cows produce weak calves or no calves at all),
- c) the cow must insure an adequate supply of milk for the newborn calf,
- d) she needs to maintain good health to minimize the interval between calving and first heat after calving,
- e) she should stay in good condition to increase the likelihood of conception during the first or second heat period after calving.

With these thoughts in mind, it might be good for the producer whose breeding program is aimed at weaning a marketable calf from as many cows as possible every 365 days, to check the arithmetic involved. The length of gestation in most cows is between 275-290 days. Thus, a beef cow is pregnant for most of the year! So, if the objective is for the cow to calve every 12 months, she has only 75-90 days after calving before she is pregnant again. It is obvious there is little time to waste.

Consider then, the work the cow is expected to complete, the time span she has to work in and the generally

inadequate nutritive levels of forages she grazes. It is evident that she will need help.

One logical way to help the animal during this important 80-90 day period is to increase the nutrient level or quality of feed available. It is important to understand this goal. Even under proper grazing management where animal numbers and their daily dry matter requirements are in balance with forage production, there are times when forages will not provide the quality of nutrition necessary to attain the live-stock performance level desired.

One of the most common and economical methods of providing the cow with extra nutrition during her critical period is by supplying what the industry refers to as a supplemental feed. The word supplement means something that completes or makes an addition. This is what a supplemental feed is, a nutritional additive that lends balance and helps "round-out" the nutrients provided by range forages.

Supplemental feeds are not designed nor should they be expected to substantially replace dry matter, roughage of range forages or both. (This does not consider true range feed emergencies, wherein the role of supplemental feeds may be altered temporarily.) Most supplemental feeds contain varying quantities of the nutrients protein, carbohydrate, minerals and vitamins.

The questions and details concerning the what, where and when of supplemental feeding represent subjects in themselves and are not dealt with here.

The purpose of this material is to remind stockmen of the vital functions that must take place in the cow during the latter stages of her pregnancy and the part adequate nutrition plays in these functions. It's up to the rancher to insure that the nutritional needs of the cow during this critical time are met.

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