

Grazing Gazette



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MONITORING BODY CONDITION IS IMPORTANT TO GRAZIERS

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Consistently maintaining high dry matter intake for cows on pasture is a major challenge to graziers. Not only does low or variable dry matter intake affect milk yield, but it will result in weight loss, especially in early lactation. Research studies have uniform-

intake, and milk yield with the onset of estrous cycles. Cows were classified into three groups based upon the interval to first ovulation: (1) before 40 days, (2) between 40-60 days, and (3) no evidence of ovulation by 63 days.

The cows that had not cycled by 63 days postpartum consumed less dry matter per day, produced less milk during the first nine weeks, and a larger percentage of the milk that was produced came from body reserves compared to cows that cycled early. Previously, most

Item	Onset of Estrous Cycles		
	Early	Late	Very Late
No. Cows	25	14	15
Days to 1st ovulation	22	43	-
Days to 1st heat	47	73	110
DMI, lb/day	41	39	33
4% milk yield, lb/day	74	70	63
BW change, lb/day	-1.8	-1.8	-2.7
Energy balance, Mcal/day	-4.4	-4.1	-5.6

ly shown that cows that fail to consume levels of dry matter after calving lose more weight and body condition, produce less milk and the onset of estrous cycles is significantly delayed. As an example, the table documents the relationship between energy status, body weight loss, dry matter

people believed that high milk yield was the major factor causing anestrus (failure to cycle). However, in this study, energy balance was the major factor.

Average energy balance during the first nine weeks was lower for the anestrus cows (-5.6 Mcal/cow/day) compared to groups 1

and 2, respectively (-4.4 and -4.1 Mcal/cow/day). It was concluded that the more negative energy balance was attributed to the negative energy balance during the first three weeks postpartum. Body weight loss during the first two weeks of lactation was also related to onset of ovarian activity. Cows ovulating earlier lost less body weight than cattle that ovulated later.

Although this information was obtained from research conducted in a conventionally fed herd with no pasture, the concepts apply to pastured herds as well. It is much easier to monitor dry matter intake in a conventional fed herd. In addition to monitoring milk yield on a regular basis, graziers should take time to score and record body condition throughout the year but especially during the pasture season.

Cattle should be evaluated for body condition at calving, 30 and 60 days into lactation, during mid lactation and at the end of lactation. It is important to record the actual score for each cow at each time period and calculate the average change in condition between each period during lactation. During early lactation cows will generally lose one-half a condition score. A change greater than one-half a point but less than one point on the 1 to 5 scale from calving to 30 days may be a sign of inadequate dry matter or energy intake or a ration imbalance. An average loss greater than one point is more serious and the onset of estrous cycles and conception rate will likely be adversely affected. If the average loss is in excess of one condition score, then several cows must have lost severe weight.

Most of the current information

has been obtained from research and field studies with nongrazing cattle. In general, high producing cows in our various grazing studies at Penn State have been lower in body condition score than cows in confinement, and have tended to gain less condition during the grazing season. These trends existed even when grain has been fed with grain to milk ratios of 1 to 4 and 1 to 3. We often hear and see lower than desired body condition in high producing cows on pasture.

This situation indicates an inadequate energy intake and a loss of body reserves to support the high level of milk production. Several factors are likely related to the less than adequate body condition.

1. Inadequate pasture DMI and/or low quality pasture.

2. Extra energy needed for maintenance. Cows that are grazing expend more energy to graze than cows in confinement. This requirement is greater depending on the distances cows walk to and from pasture, the available pasture (cows walk more with sparse pastures), and heat stress. Cows may require from 2 to 4 lb of cornmeal (grain) per day just to meet the energy needs of activity. This maintenance energy can be viewed as a "fixed cost" that must be met before energy is used for milk production.

3. Inadequate supplemental energy to complement the energy intake from pasture.

Although the degree of change in body condition is most important, we should set targets for body condition scores at specified periods. Cows should calve with a score 3+ to 4-. It is important to attain this condition score by the end of the previous lactation and

maintain condition during the dry period. If body condition loss and low body condition is the problem, then consider the following:

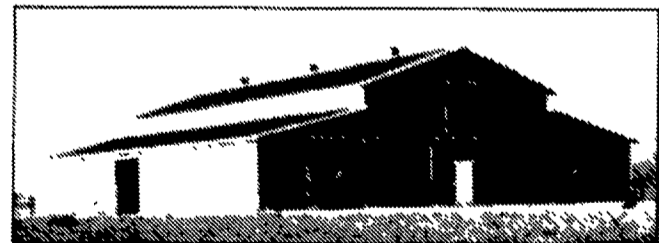
1. Routinely monitor body condition, record the scores, and make necessary adjustments.

2. Keep the "feed bunk" full, or in grazing terms, provide adequate available pasture that is high in quality. The major reason to move to a pasture-based system is to utilize as much high quality, low cost pasture as possible. A grazing management system that can maximize DMI and energy intake is the key to the success or failure of a pasture-based system.

3. Provide adequate supplemental energy, particularly to the early lactation cows. This additional energy meets the activity requirement and the energy for milk production and minimizes condition loss. Cows fed only high quality pasture obtain enough energy to produce about 40-45 pounds of milk. In order to obtain milk production close to the genetic potential of the cows, grain is needed at a grain to milk ratio of 1:3 to 1:4 for early lactation cows. Consider added fat, similar to what we do with nongrazed herds. Corn silage is an excellent supplemental forage to provide energy and to complement the nutrients in pasture. Producers who feed the grain and forage as a TMR can likely expect better utilization of energy and body condition status.

4. During the summer heat stress and pasture slump, consider less grazing to reduce the energy needed for activity and maintenance. Numerous producers have success in the milk pail and with body flesh by just grazing during the cooler evenings, and keep cows in the barn during the day. (Turn to Page E10)

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