Western Beef Resource Committee *Third Edition*

Cattle Producer's Handbook

Management Section 747

Time of Weaning and Cow Condition

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Time of weaning can be altered to manipulate cow body condition to maintain high reproductive rates and reduce winter feed requirements. Cows nursing their calves for a longer or shorter period of time than is traditional decrease or increase their body condition. Often when a cow is declining in body condition the calf is not growing at optimum rate. Changing either the calving date and/or the weaning date will have an influence on cow condition.

Age of the calf at weaning is affected by both the date of birth and the date of weaning. Any change in time of weaning must balance the potential positive impacts on the cows with potential negative impacts on the calves or calf market weights.

Role of Cow Body Condition on Herd Productivity

The condition of beef cows at calving is associated with length of postpartum interval (time after calving before a cow begins to cycle again). It also affects lactation performance, health and vigor of the newborn calf, and in extremely fat or thin heifers the incidence of calving difficulty. The condition of cows at breeding influences the number of services per conception, calving interval, and the percentage of open cows (Herd and Sprott 1987).

For spring calving cows body condition in the fall affects the amount and type of winter feed supplements that will be needed (Momont and Pruitt 1994). Cows in adequate body condition usually need only small quantities of supplements, while thin cows usually need large quantities of supplements high in energy. Researchers in Minnesota (Thompson et al. 1983) reported a 6 to 10 percent higher energy requirement for maintaining thin cows (vs. moderate to high body condition) through the winter in a cold environment. A cost savings may also result from having cows enter the winter in good body condition.

Matching Calving and Weaning Dates to the Ranch Forage Base

Timing the start of calving in anticipation of the plant growth cycle can reduce the need for high levels of supplement or hay. The cow's nutrient requirements increase substantially after calving and continue to increase through peak lactation, generally 45 to 60 days post calving. At the same time reproductive functions must be supported in order to remain on an annual calving schedule.

As range or pasture plants mature, nutritive quality declines to the point that optimum production cannot be maintained. While an individual plant's maturation date will vary with the year, temperature, rainfall, soil, elevation, aspect, etc., it is well established that with maturation comes a decline in both digestibility and protein content. Regardless of the date, this decline in quality begins at the boot stage for grass plants and at the bud stage for broad leafed forbs.

Research at the Squaw Butte Experiment Station in Oregon indicates northern Great Basin desert ranges typically reach maturity in mid-July. More arid sites will be earlier and high elevation forest ranges will be later. After plant quality declines due to season, it is difficult for a lactating cow to consume sufficient nutrients to maintain her calf, herself, and her own body condition.