

## **Using Early Evening Feeding to Influence Calving Time**

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Cow-calf producers who ensure adequate supervision at calving can have a significant effect on reducing calf mortality.

On most ranching operations, supervision of the first-calf heifers will be best accomplished in daylight hours and the poorest observation takes place in the middle of the night.

The easiest and most practical method of inhibiting nighttime calving at present is by feeding cows at night; the physiological mechanism is unknown but some hormonal effect may be involved. Rumen motility studies indicate the frequency of rumen contractions falls a few hours before parturition.

Intra-ruminal pressure begins to fall in the last two weeks of gestation, with a more rapid decline during calving. It has been suggested that nighttime feeding causes intra-ruminal pressures to rise at night and decline in the daytime.

The concept is called the Konefal method. A Canadian rancher named Gus Konefal reported his observations in the 1970s. In a follow-up Canadian study of 104 Hereford cows, 38.4 percent of a group fed at 8 a.m. and again at 3 p.m. delivered calves during the day, whereas 79.6 percent of a group fed at 11 a.m. and 9 p.m. did so.

Another study testing 1,331 cows on 15 operations in Iowa showed that 85 percent of the calves were born between 6 a.m. and 6 p.m. when the cows were fed once daily at dusk.

Additionally, Kansas State University scientists recorded data on five consecutive years in a herd of spring-calving crossbred cows at the university's agricultural research center at Hays, Kansas. They recorded the time of calving to within the nearest half hour. Births that could not be estimated within an hour of occurrence were excluded.

Cows were fed forage sorghum hay daily between 4 p.m. and 6 p.m. For statistical purposes, the day was divided into 4-hour periods.

The results were as follows:

- 34.23 percent of the calves were born between 6 a.m. and 10 a.m.
- 21.23 percent of the calves were born between 10 a.m. and 2 p.m.
- 29.83 percent of the calves were born between 2 p.m. and 6 p.m.
- 8.41 percent of the calves were born between 6 p.m. and 10 p.m.
- 4.40 percent of the calves were born between 10 p.m. and 2 a.m.
- 1.91 percent of the calves were born between 2 a.m. and 6 a.m.

It's noteworthy that 85.28 percent of the calves were born between 6 a.m. and 6 p.m. This is very similar to the Iowa data when cows were fed at dusk. These data also revealed that for a majority of animals in the herd, the time of calving was within three hours of the average time of day that a cow had previously given birth.

The bottom line: Cow-calf producers should strongly consider employing early evening feeding as a management strategy.