EFFECT OF TIME OF FEEDING A SUPPLEMENT ON TIME OF CALVING IN A PUREBRED BRAHMAN COW HERD

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SUMMARY

One hundred thirty-one (65%) of 202 purebred Brahman cows calved between midnight and 6:00 A.M. as compared to 16% between 6:00 A.M. and noon, 16% between noon and 6:00 P.M. and 1% between 6:00 P.M. and midnight.

The changing of time of feeding a concentrate supplement from morning (8:00 A.M.) to afternoon (4:00 P.M.) or the free choice offering of a liquid supplement did not change the percentage (35%) of cows calving during daylight hours.

INTRODUCTION

Every management practice must be used to increase the percentage of newborn Brahman calves which survive to three days of age. The customary winter feeding routine results in feeds being provided during the morning. In 1979, a Hereford breeder in Manitoba Canada changed the number of his cows calving during daylight hours (6:00 A.M. to 10:00 P.M.) from 39.5 to 75.5% by providing some feed during night time hours. Starting two weeks before calving, he provided hay and supplement at 11:00 A.M. and 10:00 P.M. instead of 8:00 A.M. and 3:00 P.M. University of Georgia researchers increased the number of Angus cows calving during the daylight hours from 71 to 95% by offering hay only during 7:00 P.M. to 7:00 A.M. A Washington State University researcher reported that late afternoon feeding caused 85% of 50 pregnant cows of British-breed origin to calve between 5:00 A.M. and 9:00 P.M. whereas early morning feeding caused only 58% to calve during daylight hours. If the calving time of Brahmanes could be manipulated to daylight hours, closer observation during and immediately after parturition might improve survival rates.

OBJECTIVE

This study was conducted to determine the effect of time of feeding a supplement on the time of calving in a purebred Brahman cow herd.

PROCEDURE

Pregnant purebred Brahman cows which had satisfactorily weaned at least one previous calf were kept under close surveillance during three calving seasons which commenced in late December. The number of parturitions studied were 69 in 1981, 66 in 1982 and 67 in 1983. In 1981, all of
the cows were fed a dry concentrate supplemental feed in troughs at 8:00 A.M. In 1982, all were fed the same feed at 4:00 P.M. In 1983, one-third of the cow herd was offered a liquid supplement, U.S. Sugar Corporation Suga Lik 5, free-choice in troughs while the remainder were fed a dry concentrate supplement at 4:00 P.M. In each year, the cows were fed Coastal bermudagrass hay on an ad libitum basis (round bales were unrolled each day).

RESULTS AND DISCUSSION

Regardless of the time of supplemental feeding, about 65% of the cows calved between midnight and 6:00 A.M. Table 1 shows that only two of 202 cows calved between 6:00 P.M. and midnight. While variation occurred, the number calving in the forenoon and afternoon averaged 18 and 16% respectively. The hours of closest observation for calving in this herd should have been between 4:00 A.M. and 7:00 A.M. because 99 of the 202 (49%) were born in this three-hour period.

**TABLE 1. TIME OF BIRTH OF BRAHMAN CALVES BY YEARS AND TIME OF FEEDING OF SUPPLEMENTS**

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<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>6:00 A.M. to noon</td>
<td>36</td>
<td>18</td>
<td>17</td>
<td>8</td>
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<tr>
<td>Noon to 6:00 P.M.</td>
<td>33</td>
<td>16</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>6:00 P.M. to midnight</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Midnight to 6:00 A.M.</td>
<td>131</td>
<td>65</td>
<td>45</td>
<td>67</td>
</tr>
<tr>
<td>Between 4:00 and 7:00 A.M.</td>
<td>99</td>
<td>49</td>
<td>36</td>
<td>54</td>
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^aOne-third offered liquid supplement ad libitum remainder fed at 4:00 P.M.
^bAll offered dry concentrate supplement at 4:00 P.M.
^cAll offered dry concentrate supplement at 8:00 A.M.

The change in time of feeding a dry concentrate supplement from 8:00 A.M. in 1981 to 4:00 P.M. in 1982 had no effect on time of calving. In 1983, the one-third of the herd which was offered a liquid supplement ad libitum had the following calving record: 64% between midnight and 6:00 A.M., 23% between 6:00 A.M. and noon, 11% between noon and 6:00 P.M. and none during 6:00 P.M. to midnight. These times are almost identical to those recorded for the dry concentrate supplement fed in mornings or evenings.

Apparently, the regulation of time of feeding a supplement to purebred Brahman cows with free access to grass hay is not a dependable method for changing the time of calving to daylight hours.