DAILY RUMINATION TIME AND CALVING DISEASES

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Rumination monitoring has become in the last few years readily available for both research and in-the-field usage. Recent researches had demonstrated a distinct rumination behavior at the first week after calving. At the day of calving rumination dramatically decreases and in the following week it quickly recovers, reaching a maximum value at about 7 days after calving, and staying at almost a stable level in the following months. It was demonstrated that events disturbing the usual eating and resting behavior of dairy cows have a marked effect on rumination time.

The objective of this study was to examine the association of rumination at the first week of the lactation with two common calving diseases, namely ketosis and endometritis. In two medium sized (ca. 500 cows) dairy farms, 285 high yielding (about 12,500 kg milk) dairy cows were monitored with the aid of HR™ collars. Cows were checked for the occurrences of ketosis and endometritis at day 6-9 after calving. Sick cows were treated and were followed until full recovery. 4 cows were diagnosed having left displaced abomasums (LDA) at median 20 days after calving.

The daily rumination times of healthy cows (n=167) were 304±7, 383±7, 429±7, 471±7, 496±7, 505±7 (minutes ± SEM) at day 1, 2, 3, 4, 5, and 6 after calving respectively. Respective times of cows with light endometritis or ketosis (n=67) were 283±12, 355±10, 411±11, 432±12, 458±12, 476±11. Cows with medium to severe endometritis or ketosis (n=55) had respective times of 220±16, 280±19, 294±17, 341±14, 366±14, and 368±13 minutes per day. The four cows with LDA had very low daily rumination times: 99±50, 152±76, 205±103, 229±54, 234±44 and 213±46. No significant association was found between the two participating farms, and between cows suffering from ketosis and those with endometritis (or both).

The results of this study suggests the use of rumination times at the first week after calving for the early detection of potential calving diseases, thus enabling their early treatment. Such a protocol will potentially minimize the use of drugs, reduce calving diseases effects on production and reproduction, and optimize ANIMAL WELFARE.