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A STUDY ON THE BODY TEMPERATURE VARIATIONS
IN DAIRY CATTLE IN RELATION TO
THEIR REPRODUCTIVE STATUS
—ESTROUS CYCLE, PREGNANCY AND PARTURITION—

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Body temperatures of dairy cattle were recorded throughout the year to study the relationship between body temperatures and their reproductive status, especially the estrous cycle, pregnancy and parturition. Rectal temperatures were taken twice daily, at 8:30 in the morning and 16:00 in the evening, from 39 Holstein cows and heifers.

The body temperatures of cycling cattle decreased 3 days before estrus, increased markedly on the day of estrus, decreased again on the day after estrus and gradually increased again until mid-cycle. The mean temperature rises on the day of estrus were 0.25°C in the morning and 0.14°C in the evening, compared with the day before. The differences between the morning and the evening temperatures were greater in the heifers than in the cows.

The body temperatures of the pregnant cattle taken in the morning increased gradually from late-pregnancy onwards. A similar rise was seen in the evening from mid-pregnancy. The temperature rises during the pregnancy period were greater in the evening than in the morning. Therefore, the differences between the morning and the evening temperatures became greater as pregnancy advanced. This trend was clearer in the cows than in the heifers.

The high temperatures of the late-pregnancy rapidly fell during the 2 or 3 days before parturition. The mean temperature drops during the 2 days before parturition were 0.31°C in the morning and 0.53°C in the evening. The temperatures were high during the few days after parturition, then decreased rapidly in the morning and gradually in the evening. The temperatures returned to normal level for cycling cows about 20 days postpartum.

The influence of either the ambient temperatures or the seasons on these body temperature variations related to the reproductive status was not clear.