Heat stress during dry period is equally important as in lactating period

Heat stress can greatly reduce milk production and decrease fertility in dairy cows. Furthermore in many farms this statement applies only for cows in the lactation period, and cows in the dry period are often disregarded from management against heat stress only by the believe that they are not in production. However, an important phase of the production cycle takes place on the dry period. Mammary gland involution and redevelopment of the gland are important for the next lactation and heat stress is believed to affect this processes.

A research team of the University of Florida has evaluated the effects of heat stress during early, late and the entire dry period and their subsequent performance of milk production. Cows were dried off 45 days before expecting calving and divided in 4 groups. Cows that were exposed the entire dry period to cooling or heat stress and cows that were exposed to heat stress either at the beginning or end of the dry period. The results showed that heat stress at the beginning of dry off period (first 3 weeks) decreased body weight and dry matter intake but not when heat stress was at the end of the dry period, and cows exposed just to cooling gain body weight. Heat stress at any time reduced the gestation length by 4 days. Milk production was greatly reduced when heat stress was present at any time during the dry period. However, cows exposed to heat stress at the beginning had similar milk yield in the first 30 DIM as cows exposed just to cooling.

Our conclusion: This study has shown that heat stress management is equally important during the whole dry period in order to achieve better milk yield on the subsequent lactation. However, this study focuses only on the effect of heat stress and milk yield. Future studies should focus on other effects of heat stress during dry period such as reproduction outcomes. (jc)

Source: Fabris, et al. (2019), J. Dairy Sci. 102:5647-5656