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WHY DOES MY CONCEPTION RATE DROP IN SUMMER?

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Every summer we look forward to the arrival of sunshine and warm temperatures. As we hit the month of July we start to see a drop in our herd conception rates. This can be explained in part due to our cows feeling the effects of heat stress. Heat stress is caused by both the environmental temperature and humidity. When the temperature rises above 22C our cows start to feel it and conception rates will start to drop.

Under hot, humid conditions a cow's normal body temperature will remain higher. At a higher body temperature a cow will produce poor quality oocytes (eggs), have poor embryo survival if fertilization is successful and have higher early embryonic death loss. Heat stress leads to poor growth of the follicle and therefore lower estradiol hormone levels when a cow is coming into heat. The result is shorter or quiet heats, no heat cycles, longer time between heats, more cystic ovarian structures or persistent follicles and also more twinning. Cows with poor quality follicles will have poor quality corpus luteum (CL) and the result is lower progesterone and lower conception rate. The early pregnancy is sensitive to the cow's body temperature. When heat stress causes her body temperature to rise above 39C (102.2F), we will start to see reduced embryo survivability.

To manage the effects of summer heat we need to cool our cows. Cooled cows not only have higher dry matter intake and produce more milk with better components, they will have 8 to 20% higher conception rates. The most effective cooling is soaking the cows with water and having fans blow air over them. Soaking can be done in the holding area, parlor, return alley or over the feed alley in the barn. Fans need to be sized and directed over the cows. Ensure there is lots of clean fresh water available for the cows to drink.

If cooling is maximized, other solutions to improving the number of pregnancies are to get more semen into cows through a timed AI program rather than waiting for cows to show you suboptimal heats. Using CIDRs to improve progesterone levels in your timed AI program may help fertility as well. Early pregnancy checking to find the open cows and get them rebred is also worthwhile. Embryos produced during cooler weather have been shown to have better conception rates and it may be an option to implant those in cows that are not producing their own fertile oocytes or embryos. Heifers may also feel the effects of heat stress and can have a drop in fertility, but this is never as severe as in the cow herd. Therefore breed extra heifers if they are available to compensate for the lower fertility in the cows over the summer months.

Keeping cows cool and comfortable will help conception rates over the summer months. Stay on top of heat detection and breeding. Regularly check cows for pregnancy to find those open to get them bred back. If you would like a free booklet on heat abatement please ask us. They are provided compliments of ELANCO. Enjoy summer while it's here.

Rick

