## **Replacement Heifer Post Breeding Management Impacts Pregnancy Rates**

**BROOKINGS, S.D.** - Replacement heifer's breeding season is quickly approaching and strategies to get them ready vary by operation. However, as Julie Walker, SDSU Extension Beef Specialist SDSU Associate Professor explained, every cattle producer's goal is the same.

"Ultimately, it's about getting the heifers bred and preferably early in the breeding season," Walker said. Following breeding, Walker said research shows increased conception rates in heifers depends upon post breeding management.

"To start with, heifers should be in a body condition score of 5 or 6 and range between 55 to 65 percent of their mature weight," she said. Research conducted at South Dakota State University provides some insight on the importance of post breeding management, especially following AI, explained George Perry, SDSU Extension Beef Reproductive Management Specialist SDSU Professor. "Previous research indicated that moving drylot-developed heifers to spring forage immediately after AI adversely affected average daily gain (ADG) and AI conception rates," Perry said. However, he added that the research showed that after 27 days of grazing, there was no difference in ADG between heifers developed in a drylot and heifers developed on forage. The research, conducted at the Antelope Research Station, reported that when heifers were moved from drylot to range, they lost weight - on average 3.5 pounds per day - during the first week. Whereas range-developed heifers gained weight -

about 2 pounds per day over the same period of time.

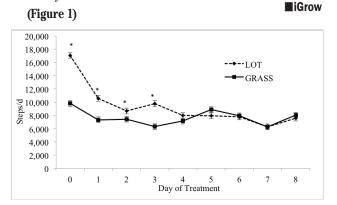
"Heifer's grazing skills and dietary habits are acquired early in life and this learning is important to develop the motor skills necessary to harvest and ingest forage," Walker said. Based on this, Walker recommended cattle producers allow animals to increase their consumption of grazed forage to meet nutrient needs. Perry referenced two studies conducted at SDSU to determine the impact of adaptation to grazing on weight change and activity when heifers were moved to spring forage

(Experiment 1), and whether supplementing heifers when moved to pasture following AI improved pregnancy success

(Experiment 2). The findings Experiment 1 was conducted to investigate if heifer development management could impact grazing behavior. Sixty-nine drylot developed heifers were randomly allotted to one of two treatments: 1) heifers remained in the drylot, or 2) heifers were moved to graze spring forage during 42 days. Daily activity was measured by steps per day. "Heifers that were grazing spring forage took more steps per day compared to heifers in the drylot," Perry said. "However, after they were moved to spring pasture, heifers that remained in the drylot increased activity compared to those with previous experience grazing spring forage

(Figure 1). Walker added that this is significant because energy requirements increase with activity.

In the second experiment, 301 drylot-developed heifers were synchronized with the 7-day Controlled Internal Drug Releasing device (CIDR) protocol. Heifers were either moved to pasture at AI, or moved to pasture and supplemented with 5 pounds per head per day of dried distillers grain (DDGS). Supplementation increased pregnancy success compared to non-supplemented heifers by 76 percent and 61 percent, respectively. "Thus, post breeding management can affect performance and activity," Walker said. Management options that provide an adaption period for heifers prior to the breeding season or supplementation when heifers are moved to pasture can allow for increased reproductive efficiency.



## **Spring Turn-Out Dates: What Are Your Options?**

## BROOKINGS, S.D. -

Every year at green up, grass managers must make decisions about when and where to begin grazing.

Considerations include hay reserves, the cost of purchasing additional feed and the impact of early grazing on pasture grasses, explained said Pat Johnson, SDSU Professor of Range Science. Before a decision can be made, there is often a long list of questions that need to be answered including; How long should they continue to feed stored forages, to delay the impact of grazing on pastures? How early can cattle be turned out to relieve the cost of feeding? Which pastures should be grazed first? "The answer to these questions is - It depends," Johnson said. "Cattle producers

pasture grasses with time to shift from dependency on reserves to utilizing photosynthesis for energy. If grazing is initiated too early, production for the balance of the growing season can be reduced.

Graze tame grass pastures earliest: Access to pastures planted with introduced cool-season grasses, such as crested wheatgrass and smooth brome, provides early season flexibility and avoids early grazing on native pastures which may compromise production later in the season.

These pastures are typically ready to be grazed two or more weeks before

WE BUY, SELL &

## native pastures.

Flash grazing winter **pastures:** A recent study demonstrated that native winter pastures could be grazed in mid-May at about 25 percent relative use without a decrease in stockpiled winter forage. Exceeding 25 percent use or extending grazing into mid-June, however, could reduce forage in those pastures that you will need next winter.

Wait to graze native pastures until grasses are "ready." Research suggests that grass plants are most vulnerable to grazing before they have formed three new leaves. Knowing how many growing degree days are required to reach the threeleaf stage provides a general "rule-of-thumb" about plant development.

The date that grasses reach the three-leaf stage varies considerably, so examining the important plants in your own pasture is recommended.

One way to come up with a date to begin examining your grasses is to use "growing degree days" (GDD base 32 degrees Fahrenheit after March 1).

"For introduced grasses, the three-leaf stage generally requires accumulation of about 500 GDD; many native cool-season grasses require

about 1200 GDD," Johnson said.

Johnson explained that the calendar date when these growing conditions occur varies considerably from one location to another and from year to year.

For example, climate data

from the weather station at Oral indicates the average date at which 1200 GDD accumulate is May 28. For Nisland, average date for 1200 GDD is June 1. Recently, 1200 GDD accumulated as

■ SPRING, Page 5

