Off-Station Short Reports

Using progesterone as a management tool in captive male livestock

**Investigators:** Brenda Alexander, Kathleen Austin, John Blake, Andrea Cupp, Jan Rowell, Milan Shipka, and Robert Ziegler

**Issue:** Reindeer bucks are difficult to manage and can be dangerous to handlers during the rutting period. Progesterone agonists have been used anecdotally in the field to favorably influence buck behavior, but influence on reproductive signaling and semen production has not been determined.

**Goal:** University of Wyoming researchers (Fig. 1), in collaboration with the University of Alaska Fairbanks and University of Nebraska–Lincoln, are working to determine the feasibility of utilizing progesterone as a management tool in farmed reindeer.

**Objectives:** Evaluate the effect of progesterone on semen production and neural signaling in areas of the brain important for the expression of reproductive behavior in males.

**Expected Impact:** Although progesterone has been used as a management tool in captive reindeer, its influence on reproductive performance has not been evaluated. If it is determined that use of progesterone agonists does not negatively impact reproductive performance, agonists could be adopted in Wyoming and other states for use in the management of male farm and ranch animals where handler safety is a concern, e.g., farm-raised reindeer bucks, dairy and bison bulls, as well as the occasional ornery beef bull.

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**Keywords:** progesterone, bull management, animal behavior

**PARP:** not applicable

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Genomic research and prediction technologies for beef cattle: where are the economics?

**Investigators:** Christopher Bastian, Timur Ibragimov, Kristi Hansen, Steve Paisley, Bridger Feuz, and Nicole Ballenger

**Issue:** Commercially available genomic prediction technologies, stemming from public investments in beef genomics research, may have potential to increase the economic returns from these value-adding production strategies.

**Goal:** Study the benefits and their distribution in the beef cattle industry stemming from the use of beef genomics to increase feed efficiency.

**Objectives:** Estimate the economic benefits of using beef genomics to select for increased feed efficiency in beef cattle.

**Expected Impact:** Results should improve understanding and communication of the potential economic effects of genomic prediction technologies aimed at increasing feed efficiency in beef cattle. Better understanding of potential benefits can assist cow-calf (Fig. 1) and feedlot operations in Wyoming and other states in determining if using beef genomics testing regarding feed efficiency is economically beneficial.

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**Keywords:** beef cattle, beef genomics research, genomic prediction technologies

**PARP:** V:1,7,8, VII:6, VIII:1,6, IX:1

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**Figure 1.** Research by a University of Wyoming team could help cow-calf and feedlot operators determine if using beef genomics testing regarding feed efficiency is economically beneficial. (Photo courtesy Robert Waggener)