

## **“BULL POWER” (How many bulls do I need?)**

Defining the optimum bull to cow ratio is important to having a successful breeding season. However no one ratio is optimal for all ranches or small herd operations. The number of bulls required to adequately cover the breeding females is related to many factors, some of which are listed below.

### **AGE**

The bull's age is a major factor, which determines the number of cow that can be turned with him during the breeding season. Research indicates that yearling bulls (15 months of age), which pass physical and semen exams, can breed 15–25 cows in a 90-day breeding season. Two to five-year-old bulls can breed 25-45 cows in a 90-day breeding season. Mature bulls (over 5 years of age) with good semen quality can breed 40-50 cows during a 60-90-day breeding season.

### **CONDITION**

You cannot expect fat or thin bulls to perform up to the standards of properly conditioned bulls. Bulls, at the start of the breeding season, should have a body condition of 5-6 on a 9-point scale. Thin bulls, with poor nutrition, can have lower semen quality, where as fat bulls (BCS of 7 or greater) lack the stamina to breed enough cows. Therefore, feed thin bulls a higher plane of nutrition (more energy) before the breeding season to gain weight. Conversely, fat bulls should not be let down too rapidly (loss of body condition) or their performance during the breeding season may be impaired. Bulls will typically lose from 100 – 200 pounds during the breeding season. Producers should monitor the bull's condition, especially young bulls. If a bull gets extremely thin during the breeding season, remove them from the pasture for a brief nutritional flushing period.

### **LENGTH OF BREEDING SEASON**

Length of breeding season and the number of calves born during each 21-day period of the calving season has influence on the number of cows that can be bred to one bull. Research indicates that mature bulls can breed 40-50 cows during a 60-90 day breeding period and sire a high percentage of calves during the first 40 days of the calving season. However, if the cow numbers are increased and/or the bull's age is decreased, the number of calves born the first half of the calving season is going to decrease and thus lengthen the calving season. It is important to ensure the right bull to cow ratio for the proper length of the breeding season.

### **OTHER FACTORS**

Another factor is your breeding system. Are you incorporating a short AI period? If so, your need of bull power may be less. If you retain replacement heifers, you may need a calving-ease sire or if you have a crossbreeding program, you will need one bull for each respective breed.

The size of the breeding pasture has an effect on bull power. In large pastures, cows may run in two groups and having one bull could simply miss cows in estrus in one of the groups. There are several factors to think about in determining the amount of bull power that each producer will need for their respective breeding season.

### **Summary**

It is difficult for producers to know what the optimum cow:bull ratio should be. A Colorado study noticed that some bulls had a poor percentage pregnant even when exposed to a small number of cows, whereas some bulls had a high percentage pregnant even though they were running with 30-50 synchronized females. A time honored rule-of-thumb is to place about the same number of cows or heifers with a young bull as his age is in month. For example a bull that is 14 months old going into his first breeding season should be expected to breed 14-15 cows; whereas, a two-year old bull may be placed with 20-25 cows. Mature bulls that have been examined by a veterinarian and have passed a breeding soundness exam can be placed with 30-40 cows and normally give good results.

The general goals of a cow/calf producer with a bull is to have a bull that is capable to produce quality semen, is physically able to seek out cows and heifers in heat, and is physically able to breed those females. A proper evaluation, including semen quality and physical soundness prior to the breeding season, should be a routine practice on all bulls. As the breeding season gets underway, check your bulls regularly to ensure that he is breeding the cows and that they are becoming bred. For more information, contact your Livestock Specialist or myself, David Hoffman, at 816-380-8460 or hoffmand@missouri.edu. May all you cows calve.