

What are the traits you select for when choosing which females will be kept and used for replacements in your cow/calf operation? This week we will discuss a few traits to select for in young heifer calves that will help improve the **reproductive efficiency** of your herd. We will also discuss traits to look for in first and second calf heifers that will benefit their reproductive ability if managed appropriately.

When choosing replacements out of a group of young, virgin heifer calves, those that were born at the beginning of the breeding season, have good temperament, and possess desirable female characteristics are typically the ones that will be most reproductively efficient. These older calves are more likely to be reproductively mature by the time their first breeding season begins, which gives them a great opportunity to breed early in the breeding season. Further, studies show that females that breed early in their first breeding season will be more reproductively efficient the remainder of their lives. Please note that the biggest calves in a herd are not always the oldest ones. Accurate record keeping is always beneficial, especially when making management decisions about replacement heifers. There are also traits that can be selected for in the more mature females in the herd that have already had their first or second calf. In ideal scenarios, these females are most reproductively efficient if they consistently breed within the first 45 days of breeding season.

Pregnancy diagnosis following breeding season is a great way to determine which females were bred in the first 45 days. Ultrasound and blood tests may be used starting at as early as 30 days of gestation to detect pregnancy, and pregnancy diagnosis by rectal palpation may be used starting at day 60 or later. Postbreeding season pregnancy diagnosis can also be used to develop a marketing and management plan of what to do with the females that did not breed in the first 45 days, or simply did not breed at all. Because it is efficient to have females that conceive in the first 45 days, this does not mean that it is wise to only have the females exposed to a bull for 45 days. A good tool to aid in reproductive selection in breeding yearling females may be to have a 60 day breeding season, retain females that conceive in the first 45 days, and sell other late breeding females in the fall as pregnant females in order to maximize income.

Reproductive efficiency is a beneficial goal to aim for in any cow/calf operation. If you have any questions about improving the reproductive efficiency of the females in your operation, or to learn more about pregnancy diagnosis, please contact us.