



# The Veterinary Link

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## Consider early pregnancy detection

Historically, cows and heifers are examined for pregnancy status about five to six months after the start of the breeding season. At this time, the females that became pregnant during the first week of the breeding season are 150-180 days along in gestation. Often, the reason given to promote pregnancy determination is to find open cows so they can be managed differently than pregnant cows. This usually means immediate sale or a period of weight gain followed by sale.

### Palpation clues

Other reasons to palpate heifers and cows after breeding require not only determining the pregnancy status, but also estimating when the female became pregnant (and subsequently estimating her calving date). By determining what percentage of the herd became pregnant in each of the 20-day periods of the breeding season, your veterinarian can create a chart that is very helpful to evaluate the success of the breeding season. Such information is also helpful in determining if the breeding season was not as successful as hoped, and it provides some important clues to determine the cause.

Veterinarians are much more accurate at estimating how long a heifer or cow has been pregnant early in pregnancy. While it is generally easier to determine whether or not a cow is pregnant late in pregnancy, as pregnancy progresses, it becomes more difficult to accurately estimate the age of the fetus. I prefer to determine pregnancy status about 95 to 105 days

after the start of the breeding season, depending on the length of the breeding season.

For a herd that starts breeding on May 20, 105 days later would be Sept. 2. This time period is earlier than many herds currently palpate but can coincide with other management activities such as fly control, moving pastures, or preweaning vaccinations. Because late summer is typically very hot, the cattle should be handled very early in the day.

The most common method of analyzing pregnancy data is to break the breeding season into 20-day periods. Then, to provide further clues if the breeding season was not as successful as anticipated, the information can be broken down another level, into two or more categories by 20-day periods. Categories analyzed can include age, breed, pasture or other management groups. Estimated fetal data can be collected and displayed while on the farm by using handwritten grids or computer-generated spreadsheets.

### Ideal breeding profiles

For a 60-day breeding season, the ideal profile should resemble Fig. 1. Herds should strive for nutritional and management systems that allow at least 65% of the exposed females to become pregnant in the first 20 days of the breeding season. The majority of the remaining females should become pregnant in the second 20-day period. And, 5% or less of the herd should be nonpregnant at the end of the 60-day breeding period. If the data meet these goals, the breeding season can

be considered a success, and further diagnostics are probably not warranted. If, however, the profile is less than ideal, further evaluation of the females, bulls, or disease status should be done to determine the cause.

To capture more information from fetal aging, the distribution of breeding dates can be analyzed not only by 20-day intervals, but also by category within those 20-day intervals. The data depicted in Fig. 2 are further analyzed by breaking them into four separate evaluations for each 20-day period: the overall percentage pregnant, the percentage of pregnant heifers, the percentage of pregnant first-calf heifers, and the percentage of pregnant mature cows. Although the overall pregnancy distribution for this herd is not alarming, a very poor reproductive rate for the first-calf heifers indicates that management for this herd is not satisfactory. Not only are more than one-half of the open animals from the first-calf heifer group, the percentage pregnant during the first 20 days of the breeding season for this group is also unacceptable.

### Options

If palpating the entire herd early won't work within your management plan, another option is to palpate those groups that are most likely to have poor reproductive performance such as heifers and first-calf heifers and to delay palpating the mature herd until a time when handling them is more convenient. If you utilize estrus synchronization and artificial insemination (AI), I recommend

palpating about 60-70 days after the start of AI breeding.

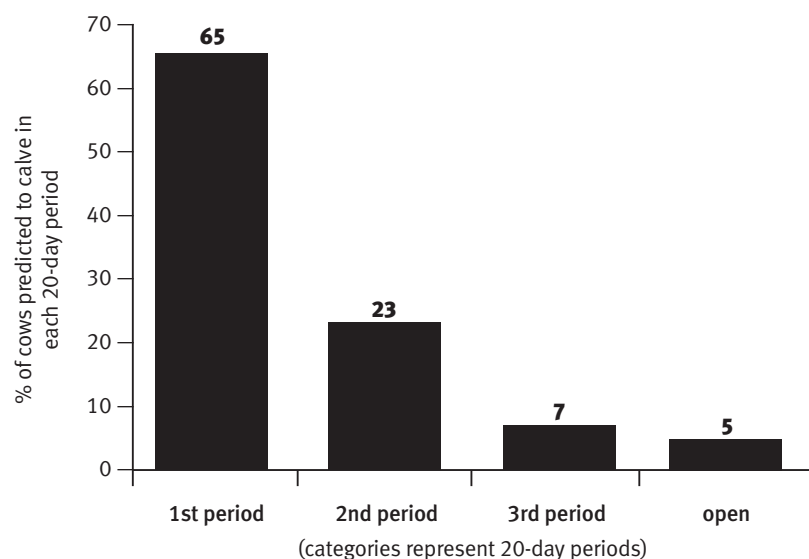
By determining fetal age this early in pregnancy, your veterinarian can accurately determine the percentage of females that became pregnant to the AI breeding, as well as the percentage that became pregnant approximately 20 days later. If the percentage that became pregnant in the first 20-30 days of the breeding season is less than you anticipated, you may not have had enough bulls, and you may want to consider extending the breeding season longer than you originally planned.

If you do utilize a very early pregnancy detection, your veterinarian won't be able to detect those females that become pregnant later in the breeding season. Any animal that is not confirmed pregnant at the early palpation should be palpated again later to determine if she is open or if she conceived later in the breeding season.

In order to add more information to early pregnancy diagnosis, some veterinarians use ultrasound to more accurately examine the reproductive tract and to determine fetal sex (usually between 55 and 65 days of gestation). Other methods to determine if a female is pregnant — such as measuring certain hormones or substances in the blood stream — can be done, but are limited. They cannot determine the age of the fetus or allow a veterinarian to determine the percentage of animals that became pregnant during each 20-day period of the breeding season.

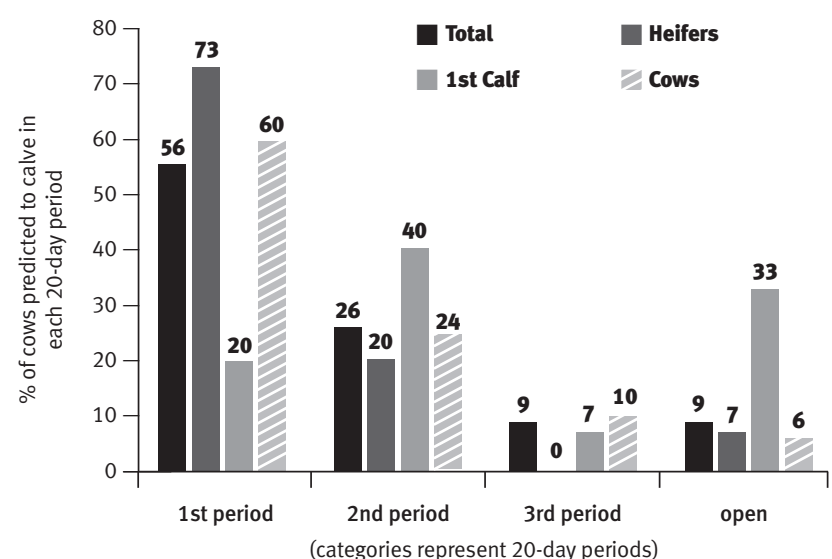


**Fig. 1: Ideal breeding profile\***



\*For a 60-day breeding season

**Fig. 2: Breeding date distribution analyzed by category\***



\*Within 20-day intervals