

Pregnancy Diagnosis in Bovines

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Pregnancy diagnosis is essential for profitable animal rearing particularly in the bovine species. The economic profitability is directly related to the milk yield and reproductive efficiency of a cow or buffalo to calve every year. First strategy for improving reproductive performance is to shorten the calving interval and second to initiate therapies if needed at an early date through rapid, accurate and timely diagnosis of pregnant cows.

Methods of Pregnancy Diagnosis

The methods of pregnancy diagnosis have been classified into three categories 1) Visual methods, 2) Clinical methods and 3) Laboratory tests.

1. Visual methods

- a. Non return to estrous: It is the most simple and cheapest mean of pregnancy analysis which does not require a Vet. Non-return to estrus, after mating is a considerable sign of pregnancy in bovine species, however, usually it over estimate true pregnancy diagnosis.
- b. Increase in abdomen size
- c. Development of the udder (specially in dairy heifers 4 months onwards)
- d. Movements of the fetus visible externally (especially in fed cows on the right side of abdomen 6 months onwards).

2. Clinical methods

- a. Recto-genital palpation: Cowie first described transrectal palpation of the uterus as a method for pregnancy diagnosis in cattle which makes it the oldest, most widely used and fastest method of pregnancy diagnosis in dairy cattle and buffalo even today with nil harm to the animal and its fetus when performed carefully. It involves palpation of the uterus through the rectal wall and detection of its content. However, a drawback of this method is that it requires enough experience from a practitioner.

- b. Ultrasonography: It is a minimally invasive, efficient and accurate process to analyze pregnancy in bovines with an added advantage over rectal palpation due to detection of early existence of embryo with more precision and it also provides additional information on ovarian structures, identification of twins, and determination of fetal viability and age. However, it requires a great deal of skill and experience.

3. Laboratory tests

- a. Progesterone hormone assay: Elevated levels of progesterone in milk or plasma of pregnant animals can be a good indicator of pregnancy in animals.
- b. Estrone sulfate hormone assay: Estrone sulfate is produced by the conceptus and can be measured in maternal plasma, milk, urine or feces in all farm animals.
- c. Pregnancy associated glycoproteins (PAG)
- d. Early pregnancy factor
- e. Interferon tau
- f. Barium chloride test
- g. Germination inhibition test

Conclusion

Sustainable income of a dairy farmer, is highly influenced by pregnancy diagnosis at a right time and transrectal palpation is most valuable and cheap technique for pregnancy diagnosis.