

IDEXX Milk Pregnancy Test – a new tool for pregnancy diagnosis in cattle

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Introduction

Accurate and timely detection of pregnancy in dairy cows is an essential component of any bovine reproductive management program. Veterinarians and farmers use detection of non-pregnant (open) cows to make decisions regarding re-breeding of cattle and to manage calving intervals, thereby maximizing milk production and revenue for the farm. Increased profits result from many areas, including decreased average days-in-milk for the lactating herd, additional milk yield, less culling of cows due to reproductive failure, and less variation in lengths of lactation and dry period.

Currently, pregnancy is determined by rectal palpation, transrectal ultrasound of the cow, or laboratory-based testing of blood samples. IDEXX has recently developed an enzyme-linked immunoassay (ELISA) for the detection of pregnancy-associated glycoproteins (PAGs) in milk samples to provide another laboratory-based method for the accurate detection of pregnancy, which could provide an important tool for the identification of open cows in dairy herds.

Materials and Methods

This study was conducted to evaluate the sensitivity and specificity of the IDEXX Milk Pregnancy Test in dairy cows, starting at 60 days after insemination and/or 60 days after calving. Milk samples spanning the entire gestation period, as well as the post-calving period were tested. Transrectal ultrasound or palpation

was also performed to confirm the pregnancy status of bred cows. All samples were tested on the IDEXX Milk Pregnancy Test in accordance with the package insert protocol. Blood samples from many of the animals were also tested for PAGs using the IDEXX Bovine Pregnancy (Blood) Test in accordance with the package insert protocol for that test.

Results

The sensitivity of the IDEXX Milk Pregnancy Test was > 99% when cows were tested at ≥ 60 days of gestation; concurrently, acceptable specificity was maintained for open cows. Agreement between results obtained using the IDEXX Milk Pregnancy Test and the IDEXX Bovine Pregnancy Blood Test was very high.

Significance

This evaluation of the IDEXX Milk Pregnancy Test indicates that the use of a milk based pregnancy test as part of routine herd monitoring can provide additional information to customers, thereby maximizing the use of milk samples as herd management resource. In this regard, the test can be a useful adjunct to existing reproductive management programs. As with any diagnostic test, the IDEXX Milk Pregnancy Test should be used under the guidance of a veterinarian as part of the farm's overall health and reproductive management program.