

# *Frequently Asked Questions about BioPRYN™*

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**Q. What is BioPRYN™?**

A. BioPRYN™ is a blood pregnancy test for ruminants, and has specific appeal for the commercial U.S. cattle industry, because it delivers fast, accurate, safe and economical pregnancy diagnostic results.

**Q. What does the test name stand for?**

A. The test's name is a partial acronym for "Pregnant Ruminant Yes/No," and the technology works on all ruminants, including cattle, sheep, goats, bison, deer, elk and moose. A specific test using ELISA technology, which produces fast results and has been developed for use exclusively in cattle.

**Q. How does BioPRYN detect pregnancies?**

A. BioPRYN™ evaluates the blood (more specifically, the serum or plasma) of ruminants for a protein called Pregnancy Specific Protein B (PSPB). PSPB is produced by the placenta, and therefore pregnant animals will have the protein in their blood. This makes the test more accurate than earlier attempts at pregnancy diagnosis that evaluated blood or milk for progesterone or other hormones that can occur in normally cycling animals.

The test uses enzyme-linked immunosorbent assay (ELISA) technology for processing, which contributes to its low cost and fast turn-around.

**Q. How early in a pregnancy can animals be tested with BioPRYN™?**

A. Heifers and cows can be tested at 30 days or later, after breeding. Lactating cows must also be 90 days after calving.

Lactating cows have residual PSPB from the previous pregnancy until 90 days after calving. To be safe in not getting a false-positive result, breeders are cautioned to take the sample at 30 days or more after breeding, and 90 days or more after calving. Thus if a cow is bred at 60 days after calving, it is appropriate to take the 30 days post-breeding sample, which is 90 days after calving. If she is bred at 55 days after calving, then the post-breeding sample should be taken at 35 days so that the cow is 90 days post-calving.

Animals that are detected open can then be immediately returned to aggressive breeding programs using Lutalyse®, OvSynch® and/or CIDRs™.

**Q. What is the accuracy of BioPRYN™?**

- A. BioPRYN™ has been shown to have an overall accuracy rate of 97 percent. In fact, the test is 99 percent accurate in detecting open cows, with only 1 percent showing false-open (false-negative). Correct open detection is very important because giving Lutalyse or other synchronizing drugs to misdiagnosed pregnant cows will cause abortion.

The false-pregnant (false-positive) rate for the test is approximately 5 percent. In practice, high-producing dairy cows tend to show slightly higher false-positive rates of 7 to 8 percent, especially during periods of extremely hot weather. It is presumed that a portion of this variance is due to higher early embryonic death, and not to test inaccuracy.

**Q. How much does BioPRYN™ cost?**

- A. The test itself costs \$2.75 from the laboratory that processes it, plus the cost of a sample tube and needle. Shipping expenses also must be added if the tests are not processed locally.

**Q. What are the advantages of using BioPRYN™ versus other methods of pregnancy diagnosis?**

- A. Producers incur approximately the same or less cost using BioPRYN™ compared to rectal palpation by a veterinarian, and less cost than ultrasound. It is also considerably less expensive than currently available on-farm diagnostic methods.

BioPRYN™ allows producers to diagnose pregnancy at least seven days sooner than rectal palpation, with no risk of damaging the fetus. Cows diagnosed open can then be re-bred more quickly, resulting in tighter calving intervals, more calves born per year.

The test is more convenient to ranchers because on-farm personnel can draw and ship blood samples, rather than working around a veterinarian's schedule. Eliminating rectal palpation also frees up the veterinarian to concentrate on higher-level issues with the ranches management team.

No test is more accurate than BioPRYN™, and BioPRYN™ is more accurate than early palpation and at an earlier time. Thus, fewer cows are misdiagnosed (called open by mistake, and treated (and aborted) to initiate new reproductive cycles. This can amount to a considerable savings in not having to re-establish a pregnancy, and by reducing days open.

In addition, money is saved by earlier re-establishment of pregnancy in cows correctly detected as open; this also reduces days open.

**Q. How long does it take to receive the test results?**

- A. The test requires 27 hours from laboratory set-up to reporting. A report can be made for the next working day for samples arriving in the lab before noon. If samples are mailed by overnight carrier, add an extra day to this schedule. Results are faxed or e-mailed back to the producer.

**Q. How should blood samples be prepared and shipped?**

- A. Producers need to draw blood samples from the tail vein, which is an easy-to-learn procedure. Blood samples of at least 2 mL per animal should be collected in individual vacuum tubes and labeled with each animal's identification number. It is important to draw samples using individual, disposable needles, to avoid cross-contamination between animals. Needles and tubes can be obtained from veterinarians or veterinarian supply companies.

Tubes containing blood samples should not be opened and should be packed in a well-padded box to avoid breakage. They do NOT need to be packaged in ice. Samples may stay in transit for several days without compromising the results of the test. Fastest results, however, are achieved when samples are shipped via Federal Express, UPS overnight, DHL, Airborne Express, U.S. postal service overnight, or other overnight carrier method.

**Q. Who manufactures BioPRYN™?**

- A. R. Garth Sasser developed the BioPRYN™ test using technology licensed from the University of Idaho. Garth Sasser also developed the licensed technology while a researcher and faculty member at the University of Idaho.

**Q. How can a producer get started using BioPRYN™?**

- A. Producers should contact BioPreg Check LLC at (979) 282-9998. Bio Preg Check LLC will set up an account, provide detailed shipping instructions and establish a system for returning results to the producer.

**Q. To whom is the test available?**

- A. Thanks to the availability of efficient shipping methods, Bio Preg Check LLC can process samples from cattle producers throughout the United States and internationally. Veterinarians who serve smaller herds also may wish to regularly pool samples from several herds and ship them for processing.

**Q. Where can I find more information about BioPRYN™?**

- A. To learn more about BioPRYN™, contact Teresa Schwertner at Bio Preg Check, LLC, 979/533/0858, email: [biopregcheck@yahoo.com](mailto:biopregcheck@yahoo.com). See the website at [www.biopregcheck.com](http://www.biopregcheck.com) for more information.