

PREVALENT LEPTO GIVES PRODUCERS WAKE-UP CALL

In 2003 dairy producers got a wake-up call: an infectious, contagious leptospire was present in an alarming number of dairy herds. What's more, standard five-way lepto (L5) vaccines couldn't touch it.

That leptospire is *Leptospira borgpetersenii* serovar hardjo (Type: hardjo-bovis), commonly referred to as hardjo-bovis.

The wake-up call came from a study led by Carole Bolin, PhD, DVM, Michigan State University. She found hardjo-bovis present in more than 55 percent of dairy herds tested across the United States and as high as 90 percent in California.

"Cows and heifers infected with hardjo-bovis tend to have low conception rates, delayed returns to heat and early embryonic deaths," explains Jerry Olson, DVM, dairy senior veterinarian, Pfizer Animal Health.

Bolin's study documented the need for new vaccine technology and additional methods of lepto control because standard L5 vaccines do not protect against hardjo-bovis. The study proved L5 vaccines were leaving doors open for the spread of leptospirosis.

Preventing the Spread of Hardjo-bovis

Unlike other types of lepto, hardjo-bovis is a maintenance-host infection, lurking in the kidneys and reproductive tracts of cattle, which often do not show outward clinical signs. Since cattle are the carriers, hardjo-bovis can easily spread within a herd, and can continue to shed for weeks, years or even a lifetime via urine and reproductive fluids. Hardjo-bovis can also be transmitted to newborn calves in utero. As a result, a calf can be born a host and infect herdmates immediately after birth.

Spirovac®, the first and only vaccine to protect against hardjo-bovis, was introduced by Pfizer Animal Health in 2003. Before the release of Spirovac, hardjo-bovis had been unstoppable, since no vaccine had contained the antigen to fight it.

Efficacy studies conducted by Bolin showed that Spirovac prevents leptospires from colonizing in protective sites such as the kidneys and reproductive tract. Additional studies by Bolin and other researchers showed that Spirovac also prevents urinary shedding, thereby breaking the cycle of clinical and subclinical disease caused by hardjo-bovis.

Initial vaccination with Spirovac requires a 2 mL subcutaneous dose followed by a booster four weeks later. Thereafter, animals need only be revaccinated once a year for a full 12 months of protection against hardjo-bovis.

Spirovac can be administered to cows in any stage of lactation. Breeding-age females should be initially vaccinated with two doses at least four weeks prior to breeding. Calves can be vaccinated as young as four weeks of age.

"Routine 'early calf' vaccination is one of the most practical means of preventing carrier animals from a herd and optimizing lepto control," Dr. Olson says. "This prevents infection before it starts."

Effective control of hardjo-bovis requires vaccination of healthy animals and may include antibiotic therapy of infected maintenance hosts. The use of any antibiotic for hardjo-bovis is extra label and consultation with your veterinarian is recommended.

For more information about Spirovac, contact your veterinarian or Pfizer Animal Health representative, or visit www.spirovac.com.

Spirovac Solves Reproduction Challenges

First proven safe and highly effective in research trials, Spirovac is now delivering the same successful results for dairy producers and veterinarians.



"Spirovac has enabled our dairy to reduce its average breedings per conception by one-third and significantly reduce our culling rate. Our cull rate is down because more cows are pregnant."

- Richard Rynda, Ryndaville Dairy, Montgomery, Minn.



"Our practice has found Spirovac to significantly lessen abortion and early embryonic death in herds previously infected with Lepto hardjo-bovis. In one particular herd, the dairy's palpation pregnancy rate—which measures how many cows are pregnant of all pregnancy checks that day—improved dramatically within two months after vaccination."

- Greg Edwards, DVM, Napoleon Veterinary Clinic, Napoleon, Ohio



"Spirovac is stopping early embryonic deaths and increasing pregnancy rates in herds once infected with Lepto hardjo-bovis. Cows vaccinated with Spirovac and confirmed pregnant stay pregnant. This is consistent throughout vaccinated herds."

- Doug Yoder, DVM, Dairy Veterinary & Management Services, Goshen, Ind.



"Spirovac is significantly reducing abortion rates and increasing the conception and pregnancy rates in several of our herds. For example, the abortion rate in one herd dropped by close to 10 percent in just one year, and 21-day pregnancies are also up. These improvements are consistent with other herds in our practice that have included Spirovac in their vaccination protocol."

- Greg Crosley, DVM, Countryside Veterinary Service, Somerset, Mich.



"The greatest benefit of Spirovac has been a significant drop in abortions. By significant, we're talking a 40 percent to 50 percent decrease in just two to three months after including Spirovac in their vaccination protocol."

- Jan Jansen, DVM, Dairy Management Support, Hudson, Mich.



Pfizer Animal Health