Leptospirosis is an important disease entity that can cause substantial productivity and profitability losses in the U.S. beef industry, particularly through its effect on reproductive performance and calf losses.

- The primary cause of bovine leptospirosis in the United States is *Leptospira borgpetersenii* serovar Hardjo type Hardjo-bovis, commonly called Lepto hardjo-bovis.\(^1,2\)
- A study conducted in six states with a cross section of environmental and management conditions representative of the U.S. beef cattle industry found overall prevalence of Lepto hardjo-bovis in cattle herds to be 42 percent.\(^3\)
- Another study suggested 59 percent of U.S. dairy herds may be infected with leptospira.\(^4\)
- Infection of human leptospirosis can occur through exposure to urine, placentas or aborted calves from infected cows and cause a flu-like disease.\(^5,6\)
  - A medical study in New Zealand indicates that hardjo-bovis is responsible for 46 percent of all human leptospirosis cases in that country.\(^7\)
  - Prevention of leptospiral infection in producers by cattle herd vaccination has become a common practice in New Zealand.\(^8\)

Disease caused by Lepto hardjo-bovis is generally subclinical in cattle and difficult to diagnose, the most common clinical presentations include:

- Fetal infections, with resulting abortions
- Stillbirths
- Birth of weak calves
- Reduced reproductive performance

Most commercial 5-way leptospirosis vaccines in the United States contain hardjo prajitno – not hardjo bovis - as the hardjo antigen.

- Hardjo prajitno is found primarily in the United Kingdom.\(^6,9,10\)
- The use of hardjo prajitno antigen in U.S. vaccines – rather than hardjo-bovis – may explain the lack of complete protection of cattle against Lepto hardjo-bovis afforded by standard commercial vaccines.\(^6,9,10\)

Use of a Lepto hardjo-bovis vaccine with label indications for year-long prevention of urinary shedding and renal colonization and that prevents reproductive tract colonization, is an effective management tool for helping to improve reproductive performance in U.S. beef and dairy herds.

- Bovi-Shield GOLD\textsuperscript{®} HB* provides superior protection against Lepto hardjo-bovis for at least 365 days, which is unmatched in the industry.
The Bovi-Shield GOLD line and PregGuard® GOLD FP® 10 are recommended for vaccination of healthy cows and heifers approximately 1 month prior to breeding. These products can also be administered to pregnant cattle provided they were vaccinated, according to label directions, with any Bovi-Shield GOLD FP or PregGuard GOLD FP vaccine prior to breeding initially and within 12 months thereafter. Failure to follow label directions may result in abortions. The Bovi-Shield GOLD line may be administered to calves nursing pregnant cows, provided their dams were vaccinated within the last 12 months as described above. Consistent with good vaccination practices, heifers should receive at least 2 vaccine doses, with the second dose administered approximately 30 days pre-breeding.


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