

Knowledge Is Power

Unraveling the complexities of liver abscess disease can help us optimize its management.

A full understanding of the liver abscess disease complex is elusive, as is determining when and how to best manage it. “Knowledge is key. If we don’t know how and why abscesses are formed, we won’t know how to best control them,” says Scott Laudert, Ph.D., SBL Tech Consulting. In addition to understanding current management strategies, research efforts must continue to discover new ways to make liver abscess management more effective. Casey Maxwell, Ph.D., operations analyst at Cactus Feeders, adds, “Given the increasing pressure for accountability when using antibiotics in cattle, understanding more about the disease can help us optimize how and when to use them.”

“Because there are no outward signs of the disease, there’s no way to pinpoint which factor is most important. This isn’t a straightforward disease, so there are no easy fixes.”

— Scott Laudert, Ph.D., SBL Tech Consulting

A huge price to pay

Liver abscesses continue to be a costly problem for the industry through the loss of condemned liver and other viscera because of reduced animal performance, lower carcass yields and decreased processor efficiency. Using conservative estimates, viscera losses are approximately \$60 million per year.¹

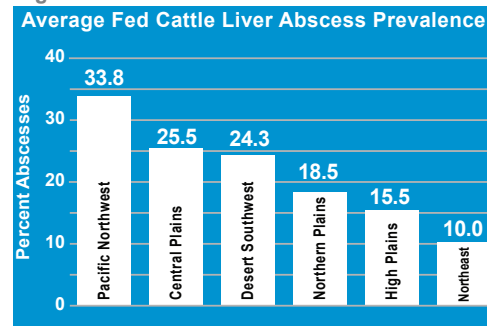
Surveying for liver abscess incidence¹

Liver abscess prevalence trials were conducted to help determine conditions

at the feedyard that may affect outcomes and quantify trim losses and carcass characteristics associated with liver abscesses. In total, 161,491 livers were evaluated from seven fed-beef processors in the Central Plains, Desert Southwest, High Plains, Northeast, Northern Plains and Pacific Northwest.

The average liver abscess incidence for cattle harvested at fed-beef processing plants was 21.3%. Incidence was lowest in the Northeast (10.0%) and highest in the Pacific Northwest (33.8%) (Figure 1).

Figure 1.



When evaluated by cattle type, fed Holsteins had a higher abscess incidence rate (25.0%) than fed beef steers (18.2%) or fed beef heifers (19.1%).

Complex, variable and puzzling

“The liver abscess disease complex has so much variability,” says Maxwell. “For example, we can see drastically different incidence levels from one pen of cattle to another that have come from the same location and that have been managed the same way.” Another unanswered question is why certain breeds and types of cattle

have a higher prevalence of liver abscesses compared to others, such as Holsteins. One possible explanation is that Holsteins spend more days on feed than beef cattle (roughly 350 days vs. approximately 200 days). More research needs to be done to determine why these cattle appear to be more susceptible.

“This disease is multifactorial,” Laudert agrees. “In addition to feedlot region, cattle type, time of year, the diet composition and when and how it’s fed to the cattle can all combine to affect incidence. Because there are no outward signs of the disease, there’s no way to pinpoint which factor is most important. This isn’t a straightforward disease, so there are no easy fixes.”

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“Currently, Tylan® (tylosin) is the most efficacious tool available for reducing the incidence of liver abscesses in cattle,” says Maxwell. Elanco remains committed to learning more about the liver abscess disease complex, developing strategies that help ensure judicious antibiotic use and searching for new solutions.

Visit elanco.us or contact your Elanco sales representative to learn more about Tylan.

The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

Tylan® (tylosin)

CAUTION: Federal law restricts medicated feed containing this veterinary feed directive (VFD) drug to use by or on the order of a licensed veterinarian.

For reduction of incidence of liver abscesses associated with *Fusobacterium necrophorum* and *Arcanobacterium pyogenes*: Feed continuously as the sole ration at 8 to 10 g/ton of tylosin (90% DM basis) to provide 60 to 90 mg/hd/d.

Elanco supports the use of shared-class antibiotics for therapeutic uses while under the oversight of a veterinarian.

Visit <https://www.elanco.com/healthy-purpose/responsible-use-of-antibiotics> for more details on Elanco’s Antibiotic, Welfare and Sustainability Policies.

¹Ryan Travis Herrick dissertation, West Texas A&M University. 2018.

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