

# Evaluation of the strategic use of Tylan Premix to control liver abscess condemnation in finishing beef cattle.

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STUDY OBJECTIVE

The objective of this study was to determine the effects of the strategic use of Tylan® Premix on liver abscess prevalence, along with feedlot performance and carcass characteristics of 3,360 crossbred beef steers in a commercial setting.

TRIAL DESIGN

- A randomized, complete block design with six treatments (Table 1) was used to evaluate the effects of Tylan, fed for various durations and times throughout the feeding period, on liver abscess prevalence of cattle
- The study consisted of six treatments with eight replications per treatment for 48 pens of cattle

SUMMARY

- Data indicate that Tylan effectively reduces the incidence and severity of liver abscesses in cattle
- Tylan fed continuously from day 0 until slaughter resulted in the greatest efficacy on liver abscess prevalence
- Feeding Tylan in the first half of the feeding period resulted in greater efficacy than feeding it in the last half of the feeding period. These data suggest that initiating Tylan use as early as possible in confined feeding situations results in the greatest efficacy on liver abscess prevalence
- In this study, removing Tylan for the last 30 DOF had no negative effects on liver abscess prevalence or feedlot performance

KEY POINTS

- Tylan remains an effective solution for preventing and reducing the severity of liver abscesses in cattle (Figure 1)
  - Total liver abscesses were reduced by 34% when Tylan was fed continuously compared to Control (10.29% vs. 15.69%, respectively)
  - Total A+ liver abscesses were reduced by 42% when Tylan was fed continuously compared to Control (4.96% vs. 8.49%, respectively)
- Cattle fed Tylan the last 84 days on feed had similar total liver abscess (16.50% vs. 15.69%, respectively) and total A+ liver abscess rates (7.36% vs. 8.49%) as the control cattle (Table 2)
- Feeding Tylan strategically did not affect feedlot performance or carcass characteristics

FIGURE 1. Effects of strategic Tylan use on total and A+ liver abscess prevalence rate

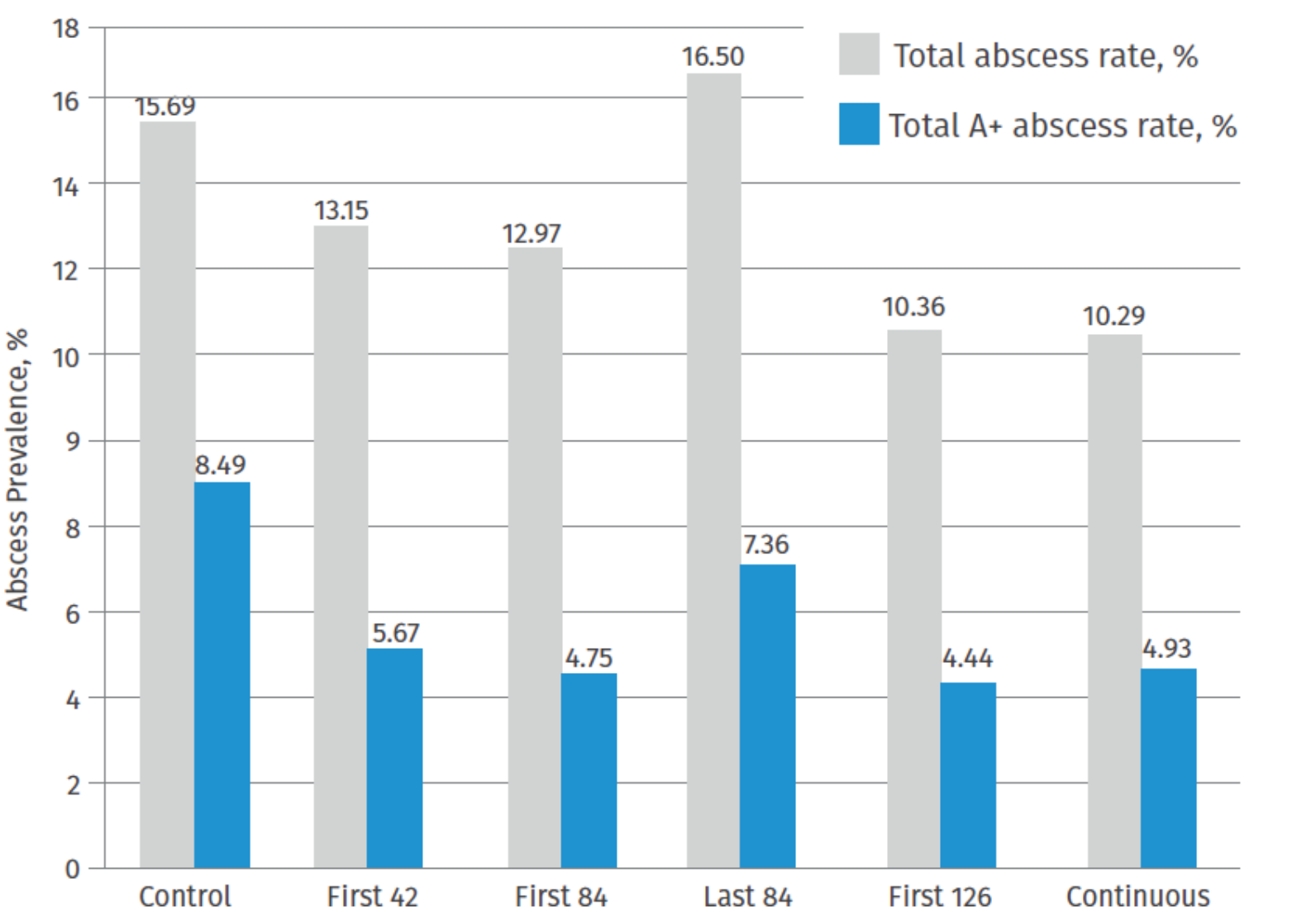


TABLE 1. Description of treatments

Treatment group	Tylan feeding program description
Control	Negative control – no Tylan fed
First 42	Continuously for approximately the first 42 days of the feeding period
First 84	Continuously for approximately the first 84 days of the feeding period
Last 84	Continuously for approximately the last 84 days of the feeding period
First 126	Continuously for approximately the first 126 days of the feeding period
Continuous	Fed continuously for the entire feeding period

Tylan was included (9.7 g/ton) as per treatment during the respective Tylan feeding period.

TABLE 2. Liver scores for steers fed Tylan for differing days on feed and times during the feeding period

Item	DAYS ON TYLAN FEEDING								
	Control	First 42	First 84	Last 84	First 126	Continuous	SEM <sup>1</sup>	P > F <sup>2</sup>	Contrast <sup>3</sup>
Livers	541	548	547	516	541	544	--	--	--
Edible, %	76.18	79.75	76.79	76.36	80.06	80.16	2.03	0.30	ns
Abscessed, %	15.69	13.15	12.97	16.50	10.36	10.29	1.81	0.008	I, II, IV <sup>†</sup>
A-, %	2.09	2.78	3.68	1.70	2.81	1.11	1.42	0.09	III, IV <sup>†</sup>
A, %	5.21	4.83	4.65	7.74	3.21	4.31	1.97	0.03	IV
Total A+, %	8.49	5.67	4.75	7.36	4.44	4.96	1.32	0.03	I, II, III <sup>†</sup> , IV <sup>†</sup>
A+, %	2.94	1.82	1.28	2.13	0.55	1.47	0.72	0.09	II, III <sup>†</sup>
A+ adhered, %	1.56	0.97	1.15	2.59	1.56	1.92	1.12	0.41	ns
A+ Ad./Open, %	3.88	2.38	2.38	2.57	1.48	1.66	0.92	0.15	I, II
Contaminated	6.22	4.62	5.95	3.53	6.54	6.87	1.14	0.18	ns
Other,* %	2.20	2.53	4.38	3.90	3.65	3.31	0.86	0.32	ns

<sup>\*</sup>Other includes condemnation causes such as cirrhosis, flukes and telangiectasia.  
<sup>†</sup>Denotes single df contrasts when 0.05 < P ≤ 0.10.

<sup>1</sup>Standard error of the marginal means (Stata 15, College Station, TX).  
<sup>2</sup>Probability > F for the joint test of equality.  
<sup>3</sup>Single df contrasts (P ≤ 0.05). I = Control vs. Continuous; II = Linear effect of increasing days of Tylan feeding from the beginning; III = Quadratic effect of increasing days of Tylan feeding from the beginning; IV = First 84 vs. Last 84; V = Control vs. Last 84. NS = not significantly different (P > 0.05).

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

Elanco supports the use of shared class antibiotics for therapeutic uses while under the oversight of a veterinarian. More details on Elanco's Antibiotic, Welfare and Sustainability Policies can be found on [www.elanco.com/antimicrobialpolicy](http://www.elanco.com/antimicrobialpolicy).

**Indications & Directions for Use:**

**Tylan**

**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.