

Duration of Immunity Induced by Commercially Available *Pasteurella haemolytica* Vaccines

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Calves on range with their dams were vaccinated with 5 commercially available *Pasteurella haemolytica* vaccines in duration of immunity studies. Immunity was challenged at 83 and 97 days post-vaccination by transthoracic inoculation of virulent *P. haemolytica*. Combining and summarizing the results (accompanying table), **LeukoTox M** and **LeukoTox 1** (American Animal Health, Inc.) resulted in 80 percent survival compared to 10 percent survival in controls. Similarly, **Presponse HM** (Fort Dodge Animal Health) resulted

in 50 percent survival; **One Shot** (Pfizer Animal Health), 40 percent survival; and **Once PM-H** (Bayer Corp.), 10 percent survival. Lung lesion size was correlated with high mortality in ranked Mann Whitney U tests for significance. Antibody titers measured by cytotoxin neutralization and bacterial cell agglutination did not correlate well with deaths and lung lesions suggesting that other immune mechanisms are also important in the duration of immunity.

Protection Against Transthoracic Challenge of Immunity in Vaccinated and Nonvaccinated Calves

Vaccine	Challenge Test Results (Dead/Total No.)	
	83 Days Post-Vaccination	97 Days Post-Vaccination
LeukoTox M	1/5*	1/5**
LeukoTox 1	1/5*	1/5**
Presponse HM	1/5*	4/5
One Shot	4/5	2/5
Once PM-H	4/5	5/5
Controls	5/5	4/5

*Number of deaths and lung lesions significantly less than controls ($p < 0.05$).

**Lung lesions significantly less than controls ($p < 0.05$).

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