

Evaluation of a Revaccination Program in Newly Received High-Risk Feeder Calves Using **Boehringer Ingelheim EXPRESS® 5** As a Multivalent Modified Live Viral Vaccine

Calves entering the feedlot are subject to increased stress and increased exposure to many pathogens. Since the vaccination history is not available on many of these calves, it is common practice to vaccinate for IBR, BVD and other viral pathogens on arrival and then revaccinate for these pathogens in a 7 day to 28 day time frame. Since the overall efficacy of this practice on health and performance is not clear, and since **Boehringer Ingelheim EXPRESS® 5** vaccine is highly efficacious, the primary objective of this study was to evaluate the effects of revaccinating with a multivalent modified live viral vaccine (**EXPRESS 5**) at either 10 or 28 days following the initial processing of high-risk calves.

Key Points

- Initial processing was within 72 hours of arrival with a significant majority within 24 hours.
- All study cattle received Micotil^{®1} as a metaphylactic treatment at initial processing.
- Study cattle were of extreme high-risk with 32% morbidity and 7.5% mortality attributed to respiratory disease across the treatment groups.
- Based on health and growth parameters, calves receiving only a single dose of **EXPRESS 5** at initial processing performed better than calves revaccinated with **EXPRESS 5** at 10 or 28 days following initial processing.

Study Animals and Design

Study Animals	2,601 heifers with average weight of 526 lbs.
Study Design	The study was conducted using a complete block design with four treatments and seven pen replications per treatment. The treatments were randomly assigned to pens within blocks of four adjacent pens. At initial processing all cattle received an endectocide, Micotil [®] , 7 Way Clostridial, abortifacient, implant, EXPRESS 5 , and PULMO-GUARD™ PHM-1. The exception being that treatment RV 28 N did not receive the PULMO-GUARD PHM-1.

Treatment Groups

Group 1 – Control	Vaccination with EXPRESS® 5 and PULMO-GUARD™ PHM-1 at initial processing only.
Group 2 – RV 10	Vaccination with EXPRESS 5 and PULMO-GUARD PHM-1 at initial processing and revaccination with EXPRESS 5 at 10 days post- processing.
Group 3 – RV 28	Vaccination with EXPRESS 5 and PULMO-GUARD PHM-1 at initial processing and revaccination with EXPRESS 5 at 28 days post- processing
Group 4 – RV 28 N	Vaccination with EXPRESS 5 at initial processing and revaccination with EXPRESS 5 at 28 days post-processing.

Study Results

Probabilities less than 10% (P<0.10) were considered significant.

Bold type indicates significant differences.

Treatment group RV 28 N was not included in the statistical analysis.

	Controls	RV 10	RV 28	RV 28 N
Health Data				
% Morbidity – Unique Cases	27.7	32.4	34.8	33.5
% Unique Cases Treated >once	47	47.3	44.3	44.7
% Mortality	6.1	7.5	9.1	7.1
% Case Fatality Rate	19.3	19.8	21.7	18.4
Performance Data				
lbs DMI Deaths Included	14.81	14.41	14.24	14.69
lbs DMI Deaths Excluded	14.9	14.53	14.38	14.79
lbs ADG Deaths Included	2.43	2.35	2.31	2.4
lbs ADG Deaths Excluded	2.67	2.65	2.65	2.67
lbs F/G Deaths Included	6.12	6.17	6.19	6.14
lbs F/G Deaths Excluded	5.58	5.48	5.43	5.55
Carcass Data				
Dressing Percentage	64.2	64.2	63.9	63.9
% of Carcasses < 550 lbs	0.3	0.9	2.6	1.2
% Prime + Choice	50.5	52	51.7	49.9
% Select	47.1	44.6	45.3	46.8
% No Roll	1.7	2.1	2.3	2.3
% Yield Grade 1	24.1	20.4	20	22.4
% Yield Grade 2	39.4	44.3	42.9	46.8
% Yield Grade 3	30	27.1	30.6	26.1
% Yield Grade 4 & 5	6.5	8.2	6.5	8.7

The Bottom Line

The efficacy of **EXPRESS 5**, combined with less animal movement and handling through the chute, showed to be equal to or have an advantage over revaccination at day 10 or day 28 when health, performance, and carcass data were evaluated in this study.