



Digestion



Rumen



Intestines

ACTIVE DRY YEAST



Effects of CEREVIDA® Active Dry Yeast and/or PROVIDA® Dairy Probiotics on the Performance of Growing Holstein and Jersey x Limousin Calves

Objective of this study

The objective of the study was to evaluate the effects of CEREVIDA® Live Yeast and PROVIDA® Dairy probiotics on the dry matter intake and growth performance of growing Holstein and Jersey x Limousin calves.

Study design & data collection

Forty eight calves (36 Holsteins & 12 Jersey x Limousin) were blocked initially by breed and then initial body weight (228 ± 25 pounds). Calves were randomly assigned to pens within 4 blocks (3 calves per pen & 4 pens per block). The first block consisted of all the Jersey x Limousin calves and blocks 2, 3, and 4 were low, moderate, and high initial body weight blocks, respectively. Within each block pens were randomly assigned to 1 of 4 dietary treatments. The study was conducted as a replicated 4 x 4 Latin Square Design with 14 day periods, which consisted of 10 days of adaptation and 4 days of collection. Therefore, pen was the experimental unit and there were 16 pens per treatment because every pen received each treatment at some time during the study. The sequence of treatments applied to each pen was random to prevent confounding of any possible carry-over effects. The dietary treatments included:

Control, Negative Control, Carrier Only

CEREVIDA, 0.5 grams of CEREVIDA Live Yeast/head/day (10 billion CFU/hd/d)

PROVIDA, 2.5 billion colony forming units PROVIDA Dairy/hd/d

Combo, Combination of the CEREVIDA and PROVIDA treatments

The study was conducted from April to June, 2017. Calves were housed in open corral pens (10 ft x 16 ft, width x length) with a soil surface. All calves were fed a single complete texturized grower diet (Purina Mills, St. Louis, MO), and treatments were hand mixed into each pen's diet every morning by adding a 1 pound premix of the respective treatment using dextrose as the carrier. Calves were fed once daily at 0800. The amount of grower offered to each pen and



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the amount refused from the previous day were recorded daily. The amount offered was adjusted daily to ensure approximately a 10% refusal. All calves had ad libitum access to fresh water.

An individual calf body weight was recorded to the nearest 0.05 pound at the beginning and end of each period. Daily feed intake for the pen was calculated by subtracting the refusals from the amount offered the previous day.

Results

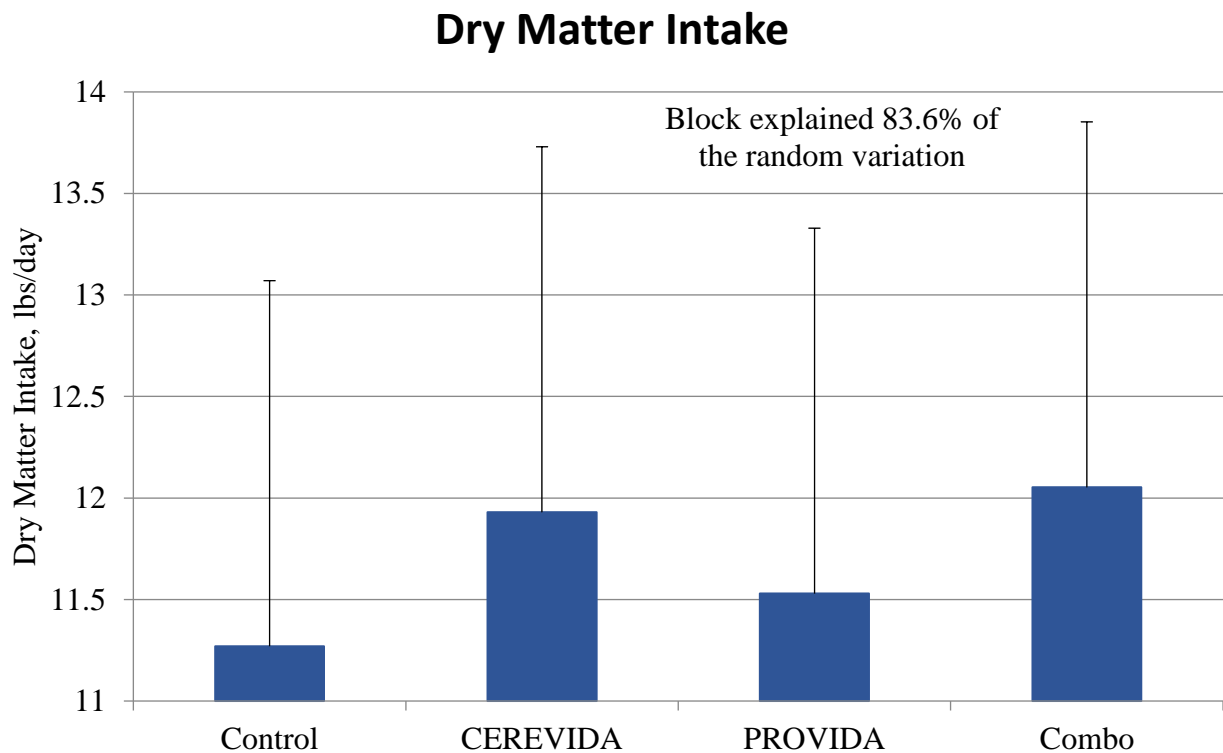


Figure 1 - Dry Matter Intake. The effects of supplementing 10 billion colony forming units of CEREVIDA[®] Live Yeast and/or 2.5 billion colony forming units of PROVIDA[®] Dairy probiotics on the average dry matter intake per calf per day. Supplementing CEREVIDA Live Yeast increased dry matter intake ($P=0.057$), whereas there was not difference due to PROVIDA Dairy supplementation ($P=0.530$).

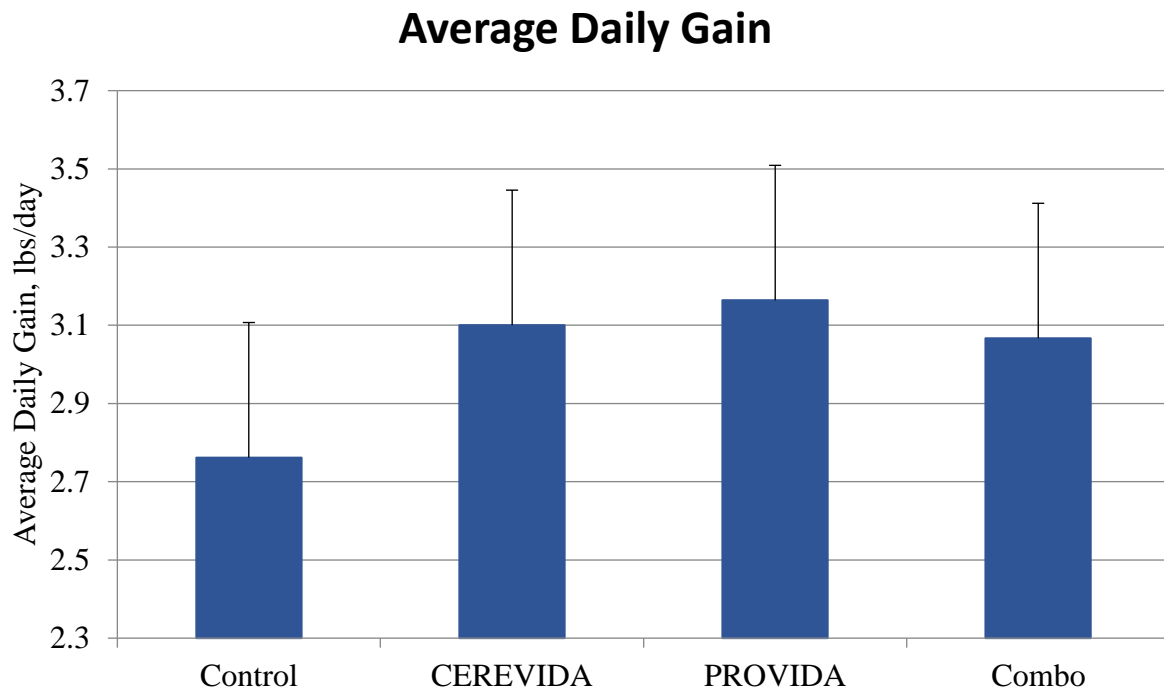


Figure 2 – Average Daily Gain. The effects of supplementing 10 billion colony forming units of CEREVIDA® Live Yeast and/or 2.5 billion colony forming units of PROVIDA® Dairy probiotics on average daily gain. Supplementing either CEREVIDA Live Yeast and/or PROVIDA Dairy increased average daily gain ($P=0.054$).

Conclusions

These data indicate that supplementing growing calves with 10 billion colony forming units per head per day of CEREVIDA Live Yeast tended to increase dry matter intake by approximately 6.4%. Additionally supplementing either CEREVIDA Live Yeast and 2.5 billion colony forming units of PROVIDA Dairy probiotics either alone or in combination increased average daily gain by approximately 12.6%. These data support the use of CEREVIDA Live Yeast and PROVIDA Dairy probiotics to improve the performance of growing calves.

- **Recommended feeding rate for growing calves**
 - CEREVIDA® Live Yeast = 10 billion colony forming units per head per day
 - PROVIDA® Dairy = 2.5 billion colony forming units per head per day
- **Packaging**
 - CEREVIDA Live Yeast: Box with two 10 kg vacuum sealed mylar foil bags
 - PROVIDA Dairy: 500 g (1.1 pound) Mylar foil bag (2,000 doses)
- **Storage**
 - CEREVIDA Live Yeast and PROVIDA Dairy Probiotics: Added on farm or stable up to 3 months in a vitamin & mineral premix. Cannot be pelleted