

Comparison of Nuflor Gold® (florfenicol) and Draxxin® (tulathromycin) for Treatment of BRD in Feedyard Cattle with a 7-Day PTI

(MS Nuflor Gold 04-08)

Abstract. In November 2008, a clinical study to compare the effects NUFLOOR GOLD (florfenicol) to Draxxin as a first line therapy for bovine respiratory disease was initiated. In this 60-day study, 927 high risk, cross-bred beef heifers with an average in weight of 542 pounds were candidates for the study. As animals qualified for the study (n = 244) they were randomly treated with either NUFLOOR GOLD or Draxxin and both groups used a 7-day post treatment interval.

The overall morbidity for the candidate pool was 26% and mortality was 2.6%. There was no difference in first (p=0.42) or second (p=0.12) treatment success rates for NUFLOOR GOLD and Draxxin. There was no difference in the BRD case-fatality rate between NUFLOOR GOLD and Draxxin (p=0.57). Additionally, the weight gain (p=0.80) and ADG (p=0.81) for this 60-day study was not different between NUFLOOR GOLD and Draxxin. These data indicate that NUFLOOR GOLD exhibited equivalent performance to Draxxin as a first line BRD therapy with a 7-day post treatment interval.

Study Animals

- 927 Beef Heifers
- Average in weight 542 lbs

Study Design

- Timing: Winter 2008-2009
- Randomized, Blinded Trial
- Natural BRD Clinical Trial
- Metaphylaxis: Excede®
- Trial Duration: 60 Days
- Location: Texas Feedyard

Enrollment Criteria

- Respiratory or Depression Score Greater than 2 (2 of 4)
- Rectal Temperature $\geq 104^{\circ}\text{F}$

Treatment and Dosing

- *Initial Therapy*
 - NUFLOOR GOLD: 40 mg/kg, [6mL/cwt], SQ, once 7-day PTI
 - Draxxin: 2.5 mg/kg, [1.1 mL/cwt], SQ, once 7-day PTI
- *Second Treatment:* Baytril®

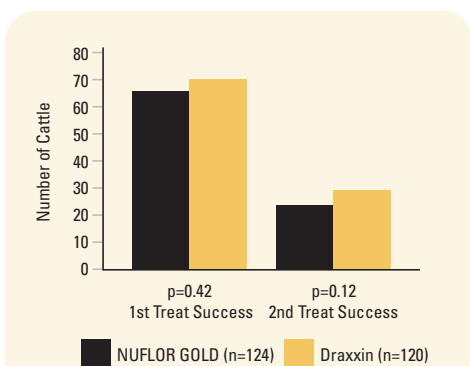
Outcomes

- Morbidity and Mortality
- Body Weight Gains
- Feeding Performance

Results. After metaphylaxis with Exede and a 3-day moratorium, there were 224 eligible candidates enrolled in the study. The first treatment success was not different (P = 0.42) between cattle receiving NUFLOOR GOLD (66) and those receiving Draxxin (70). The second treatment success was not different (P = 0.12) between treatment groups (Graph 1). However, all cattle received the same antibiotic therapy (Baytril) for the second respiratory treatment. Despite this tendency, BRD mortality did not differ (p=0.57) between NUFLOOR GOLD (13) and Draxxin (11). The case fatality rates of 10.5% and 8.3% for NUFLOOR GOLD and Draxxin, respectively (Table 1) were not significantly different (p = 0.57).

Initial weight on test (p=0.34), collected at the time of cattle enrollment on the study, and final weights (p=0.80) did not differ among treatments (Graph 2). The total weight gains of 97 pounds for NUFLOOR GOLD and 96 pounds for Draxxin were not different (p=0.80). In addition, the ADG during the 60-day study period for NUFLOOR GOLD (1.67 lbs/day) and Draxxin (1.60 lbs/day) did not differ (p=0.81, Table 2). Increased respiratory treatments from either group were associated with lower weight gains during this 60-day treatment study. Animals treated 1, 2 or 3 times for BRD (regardless of group) gained 114.6 pounds (1.91 lbs/day), 60.9 lbs (1.01 lbs/day) and 33.4 lbs (0.56 lbs/day), respectively.





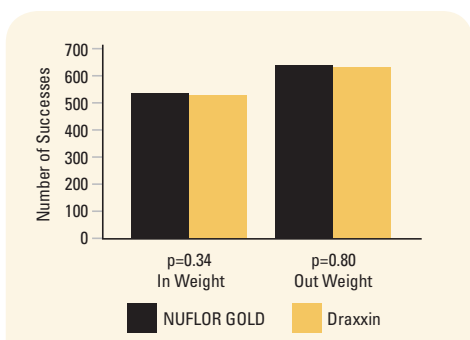
Graph 1.

Treatment Success for Cattle Treated with NUFLOL GOLD or Draxxin.

Treatment	Chronics	BRD Deads
NUFLOR GOLD	13	10.5%
Draxxin	11	8.3%
p value	0.57	.057

Table 1.

Mortality Summary of Cattle Treated with NUFLOL GOLD or Draxxin as First Line Therapy for BRD with a 7-day PTI



Graph 2.

Average Body Weights of Cattle with BRD and Treated with NUFLOL GOLD or Draxxin

Treatment	Total Weight Gain (lbs)	ADG (lbs/day)
NUFLOR GOLD	97	1.62
Draxxin	96	1.60
p value	0.80	0.81

Table 2.

Performance Summary of Cattle Treated with NUFLOL GOLD or Draxxin as First Line Therapy for BRD with a 7-day PTI

Conclusions. This study showed a typical incidence of morbidity and mortality often noted for high risk cattle entering feedyards in the Texas panhandle. The morbidity for the candidate pool was 26% (range 11% - 41%) and the death loss was 2.6% (range 1.1% - 4.4%). After a candidate was qualified and treated with NUFLOL GOLD or Draxxin, a 7-day Post-Treatment Interval (PTI) was observed. A post treatment interval is a commonly used tool that allows for more recovery time for cattle and can

help reduce labor and medicine costs. Following the 7-day PTI the first treatment success rates for NUFLOL GOLD and Draxxin did not differ. There were no significant differences in total body weight gains or average daily gains of cattle in this study. Overall this study shows that NUFLOL GOLD performed similarly to Draxxin as first line therapy for Bovine Respiratory Disease following a 7-day PTI. NUFLOL GOLD is an excellent choice for the first line therapy of Bovine Respiratory Disease.

