2013

Using RAMP® for Receiving Cattle Compared to Traditional Receiving Diets

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Summary

Performance of newly arrived 570 lb steer calves fed RAMP or a control ration was evaluated in two trials completed in 2010 and 2011. Treatment diets were fed for an average of 31 days in year1 and 24 days in year 2. Diets included a control receiving diet consisting of alfalfa hay, Sweet Bran®, dry rolled corn, and supplement or RAMP which is a complete starter ration containing a high level of Sweet Bran and a minimal amount of forage. Across both years, RAMP improved F:G but was due to increased ADG in year 1 and decreased DMI in year 2. Feeding RAMP to newly arrived calves improved feed efficiency the first three weeks cattle were in the feedlot.

Introduction

RAMP is a complete starter ration developed by Cargill, which contains a high level of *Sweet Bran* and a minimal amount of forage. RAMP is intended to serve as an alternative to a mixture of grain and forage for receiving cattle or adapting cattle to grain, therefore eliminating a large portion of the forage needed in feedlots and the need to mix a starter diet. Feeding RAMP to newly received calves has been shown to increase ADG and improve F:G (*2012 Nebraska Beef Cattle Report,* p. 87). The objective of this study was to repeat the previous study completed in 2010 in order to compare performance and health characteristics of cattle fed RAMP during the receiving period to cattle fed a traditional receiving diet across multiple years.

Procedure

Two receiving trials were conducted in October of 2010 and 2011 at the University of Nebraska–Lincoln Agricultural Research and Development Center (ARDC) near Mead, Neb.. to evaluate effects of feeding RAMP on cattle performance during the receiving period. Crossbred steers (year 1: n=642; BW= 582±27.1 lb, year 2: n=758; BW= 567±33.7 lb) were received over two consecutive days in 2010 and 2 days, one week apart in 2011. Steers were blocked by arrival date and location within the feedlot yielding 2 blocks in year 1 and 3 blocks in year 2. Cattle were allocated randomly based on processing order to 34 pens in year 1 and 44 pens in year 2, resulting in approximately 15 to 20 steers per pen balanced within replications. During processing in year 1, steers were identified with an individual ear tag, individually weighed, vaccinated with Bovishield™ Gold 5, Somubac®, and Dectomax® Injectable, and orally drenched with Safe-Guard. Thirteen days after initial processing, cattle were revaccinated with Bovishiel Gold 5, Ultrabac® 7/ Somubac, injected with Micotil and weighed. Processing in year 2 was the same as year 1 with the following exceptions: Safe-Guard was not administered and cattle were not revaccinated until the end of the trial and were not given Micotil.

Treatments included a control receiving diet (CON;35% alfalfa hay, 30% Sweet Bran, 30% dry rolled corn, and 5% supplement; DM basis) and RAMP, a complete starter ration (formulated and provided by Cargill Inc, Blair, Neb.) that contained a high level of Sweet Bran with a minimal amount of forage. All diets contained 25 g/ton Rumensin and 12 mg lb thiamine. Steers were offered *ad libitum* access to treatment diets for 30 or 31 days in year 1 and 21, 24, or 28 days in year 2 (by block). Following the feeding period, cattle were limit-fed a common diet (47.5% Sweet Bran, 23.75% grass hay, 23.75 alfalfa hay, and 5% supplement; DM basis) at 2% of BW for five days before collecting ending BW to minimize variation in gut fill. Ending BW were averages of two-day weights. Initial BW was not shrunk because steers were weighed within 12 hours of arrival and had no access to feed before weighing.

Performance data for both years were analyzed using the MIXED procedure of SAS (Sas Inst. Inc., Cary, N.C.) with pen as the experimental unit. Treatment, year, and treatment × year were treated as fixed effects and block as a random effect. Incidence of Bovine Respiratory Disease (BRD) was evaluated as the rate of respiratory illness or the number of steers treated for BRD in a pen divided by the number of steers in that pen. Incidence of BRD was then analyzed using the GENMOD procedure of SAS. Incidence of BRD was affected by year and DMI, consequently the final model contained DMI, treatment, and year. No significant effect of block or treatment × year existed so they were removed from the model. Treatment means for BRD incidence were calculated using the PROC MEANS function of SAS.

Results

There was a year × treatment interaction for ADG ($P = 0.05$) and DMI ($P < 0.01$), therefore performance data are presented by year in Table 1. Feeding RAMP increased ADG ($P < 0.01$) compared to CON in year 1, but in year 2 ADG was not different ($P = 0.93$). In year 1, DMI was not different ($P = 0.11$). However in year 2, CON cattle had greater DMI

Table 1. Performance of cattle fed RAMP® or a control receiving diet in 2010 or 2011.

	2010		2011		*P*-values	
Item	Control	RAMP	Control	RAMP	Treatment[1]	Treatment × year
Initial BW, lb	576	577	572	572	0.88	0.88
Ending BW, lb	673	686	658	659	0.31	0.26
DMI, lb/day	15.7[a]	16.2[a]	14.0[b]	12.8[c]	0.04	0.05
ADG, lb	3.24[a]	3.59[b]	3.51[ab]	3.53[ab]	0.11	<0.01
Feed:Gain[2]	4.80	4.46	3.98	3.63	<0.01	0.55
Incidence of BRD, %	5.5	7.1	12.7	16.4	0.28	0.49

[1]Main effect of treatment across years.
[2]Data analyzed as G:F with the inverse presented as F:G.
[a,b]Means within a row without a common superscript are different ($P < 0.10$).

($P < 0.01$) compared to cattle fed RAMP. No year × treatment interaction was observed for F:G or incidence of BRD. Across both years, RAMP improved ($P<0.01$) F:G compared to CON (4.39 and 4.05, respectively). Incidence of BRD was not different ($P = 0.27$) due to treatment across years (9.6 and 12.4% for CON and RAMP, respectfully). Starting cattle on RAMP improves F:G early in the feeding period when compared to a traditional receiving diet.

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