Strategies for DDGS Supplementation
Frequency to Grazing Yearling Steers

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Summary with Implications

Infrequent supplementation saves labor and may reduce animal performance, but recent research with reduced fat distillers grains has provided inconsistent results. This experiment evaluated the effects of daily and three times a week supplementation of dried distillers grains on yearling steer performance grazing smooth bromegrass pastures from May to August. Daily supplemented steers received 5.6 pounds of dry matter per steer of dried distillers grains with solubles 7 days/week. The three times a week supplemented steers received 13.0 pounds of dry matter per steer of dried distillers grains with solubles three days/week (Monday, Wednesday, Friday). A control treatment received no supplementation. Providing distillers grains supplement increased gain by 0.89 pounds per day compared to non-supplemented cattle. Daily supplementation of dried distillers grains increases gain by 0.31 pounds per day compared to three times a week supplementation and a non-supplemented control. Supplementing distillers grains three times per week may reduce ADG by 10% compared to daily supplementation.

Introduction

Supplemental rumen undegradable protein and energy may be provided in a forage-based production system during periods of limited forage quantity and/or quality. Supplementation can increase animal weight gain to meet desired performance but can also increase labor requirements. However, the labor needs for sup-

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Table 1. Effect of daily or 3x weekly distillers grains supplementation on performance of grazing steers

<table>
<thead>
<tr>
<th>Performance</th>
<th>DAILY</th>
<th>ALT</th>
<th>CONTROL</th>
<th>SEM</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial BW, lb</td>
<td>698</td>
<td>699</td>
<td>700</td>
<td>2.75</td>
<td>0.96</td>
</tr>
<tr>
<td>Ending BW, lb</td>
<td>961</td>
<td>933</td>
<td>878</td>
<td>6.23</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>ADG, lb</td>
<td>2.75</td>
<td>2.45</td>
<td>1.86</td>
<td>0.06</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

*Treatments included daily (DAILY) DDGS supplementation fed at 3.6 lb DM per steer, alternate (ALT) DDGS supplementation fed 3x per week at 13.0 lb DM per steer, and a non-supplemented control (CONTROL). 

** means within a row with different superscripts differ (P < 0.05).

Figure 1. Pre and post graze biomass availability from 3 DDGS supplementation strategies of steers grazing Smooth Bromegrass paddock.

than ALT steers (P < 0.01). Therefore, daily supplementation of DDGS resulted in greater ADG and greater final BW when compared to three times a week supplementation and the non-supplemented control for steers grazing smooth bromegrass pastures. These results agree with past research (2003 Nebraska Beef Cattle Report, pp 8-10) with ALT supplementation of DDGS to heifers reducing ADG by 10.5% compared to DAILY. In the current study, pre-biomass of CON was lower when compared to DAILY (P < 0.01; Figure 1). Similarly, post biomass was reduced in control treatments compared to the supplemented treatments (P < 0.01; Figure 1) thus CON treatment may have consumed more forage than the supplemented treatments.

Conclusion

Providing supplemental DDGS increases ADG compared to non-supplemented steers, while infrequent supplementation reduces gain compared to daily supplementation by approximately 10%. Forage intake of supplemented steers is likely reduced compared to non-supplemented steers which may allow producers to increase the stocking rate of a pasture system. The economic and logistical viability of daily supplementation depends on the cost and availability of labor required to provide the supplement.

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NOTES

1. Treatments included daily DDGS supplementation fed daily 5.6 lb DM per steer, alternate DDGS supplementation fed 3x per week 13.0 lb DM per steer, and a non-supplemented control

Pre: ALT vs CON P = 0.07, ALT vs DAILY P = 0.36, CON vs DAILY P < 0.01
Post: ALT vs CON P = 0.003, ALT vs DAILY P = 0.042, CON vs DAILY P < 0.01