

# Incorporating Condensed Corn Distillers Solubles into an Integrated Pasture and Drylot Finishing System for Feedlot Steers

M. Peter Hoffman, professor  
Purevjav Tsengeg, graduate student  
Roy Edler, graduate student  
Department of Animal Science  
Wayne Roush, superintendent

## Introduction

The need to improve production efficiency continues to mount as livestock producers search for methods to maintain profitable livestock enterprises. Feed costs are a major component of production costs; thus, seeking feeds that are less costly and still meet nutritional requirements is paramount. With the development of the corn processing industry producing ethanol and sweeteners, several by-products derived from the manufacturing process have been shown to be affordable and to have feeding potential for growing-finishing cattle. One such product is condensed corn distillers solubles (CCDS). Because of its nutrient content, palatability, and ability to be mixed with low quality roughages, CCDS may be of interest to producers as a feed for cattle. Therefore, the objective of this study is to evaluate the use of CCDS mixed with ground corn stalks in a pasture and drylot growing-finishing beef cattle program.

## Experimental Procedure

Initially, 112 Angus and Angus crossbred steer calves averaging 592 lb were placed either in drylot or on bromegrass pasture in May. Four treatments were applied with four replications (7 hd/rep) per treatment. Two drylot treatments consisted of feeding an 82% concentrate diet consisting of corn grain and chopped corn stover mixed with CCDS or chopped alfalfa hay. Two pasture treatments involved placing calves on rotational bromegrass pastures from May to September with one treatment being

supplemented with chopped corn stalks and CCDS. Following pasture, the cattle were placed in drylot with the supplemental cattle continuing on the corn stover and CCDS diet and the unsupplemented pasture cattle receiving the alfalfa hay diet or the same diets that were being fed to the cattle initially placed in drylot.

## Results and Discussion

Presented in Table 1 are current cattle weights and ADG. To more completely reconcile the ADG, feed intake information needs to be available. Even though the daily diets were prepared to be nearly isocaloric and isonitrogenous, if actual feed intake differed from projected intake, ADG would be impacted. When cattle were removed from pasture on September 2, cattle on pasture supplied CCDS had gained .5 lb/day more than the nonsupplemented cattle. Though this advantage did not continue into the drylot, this might be a function of daily energy intake. Also, with alfalfa hay being more expensive than stover and CCDS, it will be interesting to determine if the added gain offsets the additional cost for hay. For the cattle fed in drylot throughout the feeding period, it will be of interest to learn if the added hay costs will be compensated by the added gains and how much of the difference in ADG might be due to differences in daily energy intake.

Preliminarily, it seems reasonable to assume that chopped corn stalks mixed with CCDS provides a good and suitable alternative cattle feed. The impact on carcass composition and economic return will be evaluated as data become available.

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**Table 1. Effect of diet on daily gain.**

	Pasture		Pasture + corn stalks and CCDS		Drylot + alfalfa hay		Drylot + corn stalks with CCDS	
	Wt.	ADG	Wt.	ADG	Wt.	ADG	Wt.	ADG
May 27	591	---	593	---	593	---	592	---
Sept. 2	704	1.16	758	1.69	817	2.67	791	2.37
Jan. 5	1171	2.60	1121	2.37	1295	3.15	1228	2.85