



**Western Beef**  
Development Centre  
Division of PAMI

# **NEWS RELEASE**

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Humboldt SK

Immediate Release

## **Feeding Beef Cows in the Field**

Don't haul that chaff home to feed beef cows, says the Western Beef Development Centre (WBDC). Feed it in the field to save on fuel now and on the fertilizer bill next year.

Many beef producers are using chaff or chaff plus straw to supplement their short hay supply this year. When supplemented with an energy source, cereal crop chaff is an economical alternative for beef cow diets in fall and early winter. Some chaff collection systems make piles behind the combine that can later be hauled to the yard to feed beef cows.

Dr. Bart Lardner, Sr. Research Scientist with WBDC, says that more nitrogen (N) and phosphorus (P) can be returned to the soil by grazing chaff piles in the field. WBDC compared barley straw and chaff piles made with a *Whole Buncher*<sup>™</sup> attached to a John Deere 9600 combine to feeding hay to beef cows in a pen from October to January. The straw/chaff pile grazing was supplemented with 6 lb/head/day of a range pellet (14% protein and 78% TDN) to give equal quality diets to both groups. Straw/chaff grazing cost \$0.40 per day per cow less than pen feeding. As a bonus, N and P nutrients were returned to the crop land by the cows. "Cows recycle 90% of the N in their diet," says Lardner, "but most of the N in drylot manure is lost to volatilization before it can be spread on the land." "When fuel and fertilizer prices were low, it didn't make that much difference," Lardner continued. "Today it does."

In one study, on an old grass pasture with low soil N, up to 140 lb N/ac was gained by feeding in the field. In a second study on barley stubble where soil N was high, straw/chaff grazing in the field resulted in better soil P distribution with up to 120 lb/ac P in low slope positions. The effect on soil N was not as dramatic in the second study because the soil N was already high from fertilizer application. A third study has been started in 2008 to look at N and P movement across a small watershed with in-field feeding.

Chaff utilization was improved by restricting access with electric fencing. Four days of feed can be provided to beef cows by moving the hot wire.

“There was only a slight increase in soil compaction from grazing for nearly 3 months on barley stubble,” says Lardner. “The soil was frozen for most of the grazing period.” Next year, harrowing prior to spring seeding will be required to spread residual chaff and straw and improve the uniformity of crop emergence.

Bale grazing in the field is another option. Bale grazing costs more than chaff grazing but also returns nutrients to the soil more efficiently than spreading pen manure.

To summarize, in-field feeding of chaff, or straw plus chaff, is not only cheaper than feeding hay in the yard, but it improves soil N and P uptake from manure and provides more of those nutrients to subsequent crops. “It’s a win-win situation for both beef production and crop production,” Lardner states. He added that feed testing is required to ensure adequate nutrition.

It should be noted that field grazing of cattle in the winter requires wind protection during cold temperatures and access to water or snow. Portable wind breaks were used at WBDC for in-field grazing studies. Bush or shelterbelt windbreaks could also be utilized.

For more information call Dr. Bart Lardner, Western Beef Development Centre, 306-220-9179. You can also check out these results in factsheets on the WBDC website at [www.wbdc.sk.ca](http://www.wbdc.sk.ca).

- 30 -

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