



Harvest the wheat and chaff, but then use BOTH

— By David Granatstein, coordinator of the Washington State University Center for Sustaining Agriculture and Natural Resources in Wenatchee, Wash. —

In separating wheat from the chaff, farmers hope to reap the maximum value from their grain crops. But Saskatchewan growers who are harvesting both grain and chaff are finding it worth the effort, especially if they have livestock on the farm.

To evaluate this practice, Canadian researcher M. Olfert and colleagues conducted a survey of 50 farmers who used a chaff collection system during grain harvest. From the survey information, they were able to estimate the cost of chaff collection and the potential benefits, both as a feed substitute and the agronomic value

to succeeding crops. The results are reported in a 1991 article in the *American Journal of Alternative Agriculture* (Vol. 6, No. 4, p. 154-160).

Growers used a variety of systems to collect the chaff. Most included an auger located directly behind the combine shoe and a blower assembly to deliver the chaff into an attached wagon. When the wagon fills, the combine operator can dump the load into the field for later retrieval. Pickup systems included a chaff blower, stack wagons, push-off stackers and vacuum blowers. The cost per ton of collecting the chaff by these systems was \$24, \$21, \$15 and \$33 (Canadian dollars), respectively.

Labor is the largest variable cost component in chaff collection and exceeds fixed costs for the

machinery, a factor to be considered when evaluating this practice.

The researchers estimated that the chaff had 75 percent of the value of hay, based on nutrient analysis and digestibility. With a historical price for hay of \$67 per ton (adjusted for inflation), the mean value of a ton of chaff equals \$51, and two thirds of the time the price would be between \$37 and \$64 per ton. Thus, in this situation, the feed value of the chaff exceeds the typical collection costs for all systems studied.

In addition to these calculations, the researchers estimated costs for hauling the chaff various distances (five miles was the average for the farms in the survey), the break-even quantity needed for a given collection

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Overcoming seep: Intensive management techniques bring land back into production

— By Bryan Foster, who recently completed a 1994 summer internship with the Alternative Energy Resources Organization (AERO) in Helena, Mont. —

As a teenager, Dale Keil swam in a clear pond next to his brick house. Now, 20 years later, the pond is a gooey bowl, with a stream of brackish water wiggling through white calcium crusts.

The farmer from Conrad,

Mont., said the pond was so polluted from saline groundwater that he had to drain it 15 years ago.

Seeps have ruined more than Keil's swimming hole. Irregular muddy patches, some bald and flowing with yellow-brown water, some covered with weeds like foxtail barley, hoary cress and kochia, mottle 10 percent of his

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