



News Release

Carol Flaherty

MSU News Service

416 Culbertson Hall

P.O. Box 172220

Bozeman, MT 59717-2220

Tel: (406) 994-2721, Fax: (406) 994-4102

carolf@montana.edu

<http://www.montana.edu/cpa/news>

New nitrogen fertilizer tools help wheat producers optimize profits

Summary: Web-based tools developed by Montana State University Extension specialists help Montana wheat producers optimize fertilizer rates -- and their profits.

A high resolution graphic show the Web tool is available on the MSU Web at:
<http://www.montana.edu/cpa/news/hires.php?img=2221&ArtID=6078>

7/28/2008 Contact: Clain Jones, MSU Department of Land Resources and Environmental Sciences, (406) 994-6076 or clainj@montana.edu , Duane Griffith, MSU Department of Agricultural Economics and Economics, (406) 994-2580 or Griffith@montana.edu
To: News-dailies, News-weeklies, AgMedia, News-local, News-tv, News-radio, MSU-All-News, News-internal, NatResourcesNonmedia, Producers, Web. From Carol Flaherty, 994-5136 or carolf@montana.edu. Filename: **optimizingfertilizerprofits**

Web: Agriculture/

Database: University, College of Agriculture

From MSU News Service

BOZEMAN -- Two new Web-based tools developed by Montana State University Extension specialists help Montana wheat producers optimize fertilizer rates -- and their profits.

The two tools help producers determine fertilizer application rates for winter wheat and spring wheat following fallow.

"With higher than average nitrogen and grain prices, optimizing fertilizer nitrogen rates can have a dramatic effect on the bottom line for Montana wheat growers," said Clain Jones, the Montana State University Extension soil fertility specialist who worked on the Web-based tool with Duane Griffith, MSU Extension economist.

To use the tool, growers must specify their level of soil nitrogen, organic matter and maximum expected yield, or yield goal, for a specific field. With this information, the programs estimate the additional yield and protein response resulting from additional applied nitrogen.

"With the high costs of fertilizer, producers are very interested in the economic optimal rate of fertilizer application, which is often a somewhat lower rate than if applying for maximum yield," Griffith said.

In addition to estimating yield and protein response, the Web program also estimates the total revenue resulting from increasing yields with each additional increment of applied nitrogen

minus the cost of the added increment of nitrogen. This is defined as “Net Revenue.” Net revenue provides an indication of the economic optimum level of applied nitrogen, rather than the yield maximizing level of applied nitrogen.

One possible scenario is a producer with relatively low organic matter, winter wheat prices falling to \$6 per bushel, and the nitrogen price at 60 cents per pound. The yield maximizing fertilizer rate is 140 pounds of applied nitrogen to reach a 50 bushel yield goal, but the net revenue maximizing rate is only 110 pounds. The difference is \$18 per acre of fertilizer cost saved, or \$18,000 dollars for 1,000 acres of winter wheat.

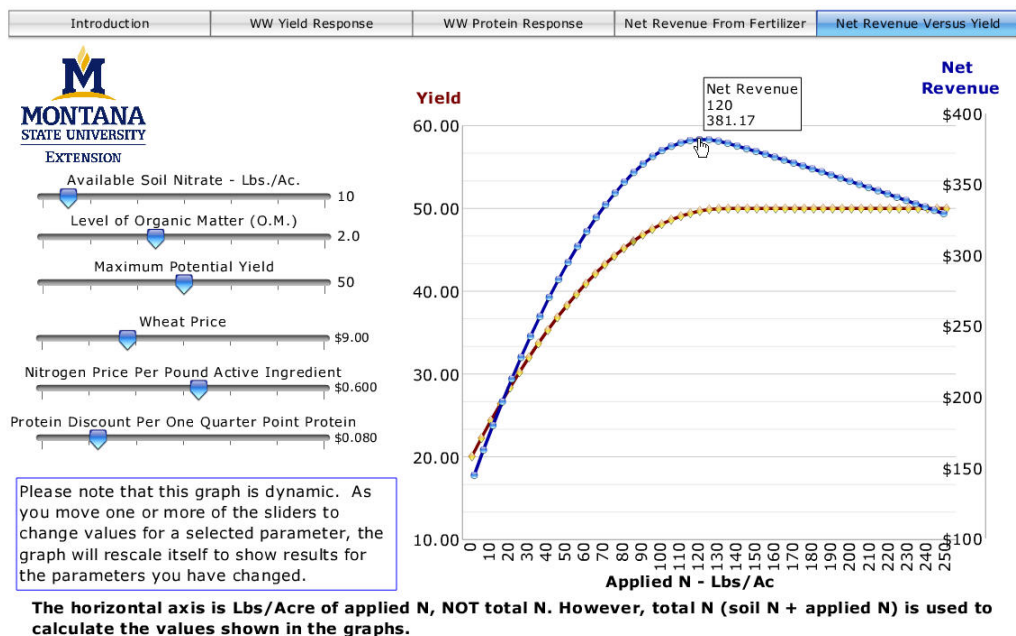
"Of course, revenue generated depends on the price per bushel and any protein premiums or discounts that may be applied," Griffith said. The program also allows the user to adjust these values to achieve an economic optimum level of fertilizer application.

The two programs are very similar and easy to use. They are menu driven and users can change values using sliders to select available soil nitrogen, level of organic matter, their maximum yield goal, expected price of wheat, expected price of nitrogen (per pound of active ingredient) and the expected protein discount, if any.

The Web tools are available on the MSU Web at:
<http://www.montana.edu/extensionecon/cropdownloads.html>

The specialists added that a similar program for barley is expected to be ready by winter.

Figure 1. Economic Analysis of Fertilizer Application on Winter Wheat.



This story is available on the MSU web at:
<http://www.montana.edu/cpa/news/nwview.php?article=6078>