

Small grain nitrogen fertilizer calculator

Summary: The on-line calculator to optimize nitrogen fertilizer application rates for small grains has been revised.

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To: News-dailies, News-weeklies, AgMedia, News-local, News-tv, News-radio, MSU-All-News, News-internal, NatResourcesNonmedia, Producers, Web. From Sara Adlington, (406) 994-4602
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BOZEMAN – As this year's grain harvest winds down, thoughts may already be on nitrogen needs for next year's crop. A Montana State University Extension web-based decision tool to help calculate optimal nitrogen fertilizer rates for small grains has been revised and is ready for use.

The calculator is available for winter wheat, spring wheat, and barley produced after fallow. Users enter soil nitrate level, organic matter, yield goal, as well as anticipated wheat price, nitrogen fertilizer price, and protein discount and premium. With that information, the calculator provides estimates for yield and protein response to applied nitrogen. It also suggests the amount of nitrogen to apply for maximum net revenue, using models that are based on multi-year field trials in several locations across Montana.

Clain Jones, Extension soil fertility specialist in the Department of Land Resources and Environmental Sciences at Montana State University, says this is a starting point for calculating fertilizer nitrogen. However, "because of differences in soil depth, texture, climate, and management practices, actual nitrogen needed to optimize yield and/or revenue on your farm may vary from what is predicted here," Jones said.

This program has been available online since 2009. It was upgraded this summer by Kate Binzen Fuller, Extension agriculture economics specialist. The original version of the tool was funded by the Montana Fertilizer Advisory Committee.

The program is available at <http://www.msuextension.org/econtools/nitrogen/>. Contact Jones or Fuller if you have questions about this tool. Also consider looking at the soil fertility website for information on nitrogen application timing, including split applications, nitrogen sources, and how to maximize nitrogen use by the crop and minimize nitrogen loss to the air and leaching. Jones can be reached at clainj@montana.edu or 994-6076. The soil fertility website is <http://landresources.montana.edu/soilfertility>. Fuller can be reached at: kate.fuller@montana.edu or 994-5603.