



Learning for life

New Bt Corn Decision Aid for Wisconsin Farmers

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A new decision-making tool is available for Wisconsin corn farmers and professional consultants to estimate the expected net benefit from Bt corn for controlling European corn borer (ECB). Bt corn provides essentially complete control of the ECB, but corn borer pressure each year is uncertain. The tool uses Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) pest survey data to estimate typical ECB populations for each crop reporting district and the associated yield loss.

The tool is a spreadsheet with an accompanying bulletin, both available on the internet. To use the spreadsheet, the farmer enters 4 numbers: 1) his expected corn price, 2) his expected corn yield, 3) the added cost for the Bt trait for the hybrids he buys, and 4) his planting density. The farmer then uses a pull down menu to choose his region, one of the nine USDA-NASS crop reporting districts in Wisconsin. The tool then uses these responses to predict 1) his expected net return (\$/ac) from planting Bt corn and 2) his break-even probability (%). The expected net return is the increase in expected (average) returns, net of the additional cost for Bt corn. The break-even probability is the probability that the value of the yield saved by planting Bt corn will equal or exceed the additional cost for Bt corn. Most importantly, the tool uses the farmer's yields and prices, so the expected net benefit and break-even probability are specific to the farmer.

The bulletin "The Expected Net Benefit and Break-Even Probability for Bt Corn in Wisconsin" ([http://www.aae.wisc.edu/mitchell/Economics of Bt Corn in WI.pdf](http://www.aae.wisc.edu/mitchell/Economics%20of%20Bt%20Corn%20in%20WI.pdf)) explains the process and how the tool works, plus provides a worksheet and tables that a farmer can use to estimate his expected net benefit for Bt corn and break-even probability without a computer. The bulletin also explains what the tool does not do and provides caveats for those using it.

The spreadsheet ([http://www.aae.wisc.edu/mitchell/Economics of Bt Corn in WI.xls](http://www.aae.wisc.edu/mitchell/Economics%20of%20Bt%20Corn%20in%20WI.xls)) accompanying the bulletin makes the process quite easy, since it performs all the calculations of the expected net benefit and break-even probability once the farmer enters his numbers and chooses his crop reporting district.

Remember that Bt corn has a refuge requirement to slow the development of resistance to the Bt toxin so that farmers can enjoy the benefits of Bt corn for several more years. Currently, these requirements include planting enough non-Bt corn refuge within a half mile so that no more than 80% of your corn acres are Bt corn. Refuge is also an excellent way to evaluate your actual benefit from planting Bt corn and compare it to the estimated expected benefit predicted by the spreadsheet.

If you have questions, comments, or suggestions on the bulletin or spreadsheet, please contact the author: Dr. Paul D. Mitchell, Agricultural and Applied Economics, University of Wisconsin Extension, telephone (608) 265-6514, email pdmitchell@wisc.edu, Extension homepage <http://www.aae.wisc.edu/mitchell/extension.htm>.