



*Northern New York
Agricultural Development Program News 2013*

Award-Winning Adapt-N Farm Tool Has Northern New York Roots

Farmer Reports \$20,000 in N Cost Reduction, Credits Tool Developed with NNYADP Help

The Adapt-N software named the Best New Product of the Year 2012 by AgProfessional magazine has its roots in Northern New York. The online tool helps farmers and crop consultants know when the application of additional nitrogen (N) to grow corn crops may not be needed.

That saves farmers money. The tool also helps indicate how much additional may be needed in other instances.



Photo: Brian P. Whattam

Lewis County dairyman Bernie Gohlert with Cornell University intern Allison Jones-Brimmer.

Cornell University researchers developed the computational tool with the help of field trials underwritten in part by the farmer-driven Northern New York Agricultural Development Program (NNYADP). The trials are among the NNYADP-funded research trials at the Cornell Willsboro Research Farm located along Lake Champlain at Willsboro, NY.

“Eighteen years of field research on long-term no-till and plow-till corn production trial plots at the Cornell research farm in Willsboro in Northern New York sparked the idea for this new precision application tool that accommodates year-to-year and field-to-field variability,” says Cornell University Crop and Soil Sciences Professor Harold van Es.

Adapt-N factors in the significant impact of weather on nitrogen availability, using high-resolution weather data for individual fields, plus the interactions of weather with soil type, tillage and crop rotation practices, the crop maturity class, planting date, and manure applications.

The Adapt-N tool works with any device with Internet access. Users can receive daily updates by text or email with nitrogen application recommendation alerts based on changing weather or irrigation patterns.

In 2011 and 2012, the Adapt-N tool was tested on privately-owned farms in Northern NY and across New York State with funding provided by the New York Farm Viability Institute.

Lewis County dairy farmer Bernhard Gohlert of Lowville, NY, says, **“I have seen upwards of \$20,000 in savings from not using unnecessary nitrogen based on the Adapt-N recommendations.”**

Northern New York Agricultural Development Program News: Adapt-N Project

Photo: Mike Hunter/CCE Jefferson County



In 2012, Gohlert tried the Adapt-N recommendations based on the advice of crop consultant Peg Cook, an avid student of NNYADP research developments to help her clients. Cook says, "With the Northern New York foundation of the Adapt-N research and the promise of substantial savings, it made sense to encourage farmers here to try it."

The researchers reported that Adapt-N use increased corn profits by an average \$26 per acre in 2011 trials and \$32/acre in 2012 trials, with an increase

in participating grower profit in 81 percent of the 56 trials to date. The savings and profit figures are calculated relative to farmers' chosen nitrogen rates, which, in part due to uncertainty about N needs, and the high cost of underfertilizing, are sometimes considerably higher than standard Cornell-based recommendations. The Cornell research team urges farmers to factor their own field experience into the use of Adapt-N recommendations.

Corn growers in Iowa began using Adapt-N after seeing its early application on New York farms. In June 2012, Cornell announced that Adapt-N had been expanded to include Minnesota, Illinois, Indiana and Wisconsin in the Midwest. Other Corn Belt states have also been involved in beta-testing Adapt-N on farms in their states.

Researchers continue to refine the Adapt-N online tool; updates are posted on the Adapt-N users blog at <http://blogs.cornell.edu/adaptn>. The Adapt-N Users Manual, an in-depth webinar training, and additional information is online at <http://adapt-n.cals.cornell.edu>. User ID and passwords are available from adapt-n@cornell.edu.

On-farm research trials funded by the Northern New York Agricultural Development Program for 2013 involve grain and silage corn strip trials in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties. The goal is to help farmers reduce costs, mitigate losses, and better adapt to climate impact.



NNYADP is on the Web at
www.nnyagdev.org

The Northern New York Agricultural Development Program provides research, technical assistance and outreach with practical real-world results to the diverse agricultural sectors in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties.

The farmer-driven small grants program has funding support from the New York State Senate to meet the critical needs of farmers in the NNY region.

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