

Survey Says Precision Guidance Tops For Ohio Farmers

URBANA, ILL.

An Ohio State University survey shows nearly 55 percent of commercial farmers have adopted the use of at least one piece of precision farming equipment. Precision guidance systems and yield monitors were the most frequently adopted precision farming equipment, with about 32 percent of all commercial farmers adopting them to date. Guidance systems, like real-time kinetic (RTK) auto steer, continue to be one of the top precision agriculture components of choice for Ohio farmers, and the most rapidly adopted precision equipment.

Marv Batte, an agricultural economist with the Department of Agricultural, Environmental, and Development Economics, surveyed 2,500 farmers in 2007 with sales of \$50,000 or more to determine the rate of precision agriculture adoption among 17 components. The survey, which resulted in a 58 percent response rate, is a continuation of similar surveys conducted in 1999 and 2003. The results of these surveys have been a part of the University of Illinois Extension Regional Tillage Seminar series for the past two years.

Precision guidance systems have been adopted by farmers most readily over the past eight years. Since 1999, adoption rates have jumped 27 percent. Adoption rates of yield monitors increased 15 percent since 1999. "Precision guidance systems are popular because they are easy to use, are getting more inexpensive, improve efficiency, save time and labor, and can be used for a variety of field work," said Batte. "With precision guidance equipment, the potential savings are numerous and immediate."

Other precision agriculture components being rapidly adopted by Ohio farmers include georeferenced grid soil sampling; satellite GPS receiver; boundary mapping; variable rate application of lime, phosphorus and potassium; and aerial or satellite field photography.

"The rate of adoption and what precision agriculture component is adopted is dependent on a number of factors including farm size, annual sales and what kind of crops are being grown, like high-value fruits, vegetables, corn and soybeans or low-value crops like hay or pasture,"

said Batte. "We found that adoption is seven times larger for the largest farm class than for the smallest class of commercial farmers."

According to the survey, the least adopted precision agriculture equipment is variable rate application of pesticides and micronutrients. Batte said that the precision agriculture technology with the most potential is variable rate seeding. The adoption rate of the equipment has increased nearly 5 percent since 1999. "The idea behind the technology is a machine that can change seeding varieties and rates across a field based on soil type, geography and planting conditions," said Batte.

Survey results also found:

- Nearly 85 percent of the largest farmers have adopted at least one of the precision agricultural component technologies.

- The highest net benefits were for variable rate application of lime and phosphorus and for precision guidance technology.

- More than half of the farmers adopting precision agriculture technology said that benefits exceed costs. The evaluations were nearly equal among small and large farmers, meaning that even though small farmers were less likely to adopt precision agriculture technology, when they did they were just as happy with the system as their larger-farm colleagues.

- In 1999, most farmers felt that precision agriculture technology was a break-even or losing proposition. Since 2003, they have more frequently viewed the technology as a profitable venture.

"Although similar survey data is not available for Illinois, participant responses in the Tillage Seminars would also indicate high interests in such technologies", says John Church, University of Illinois Extension Educator, Natural Resources, Rockford.

To learn more about the results of the precision farming survey, log on to http://aede.osu.edu/programs/VanBuren/pdf/Precision_Farming_Survey_2007.pdf, or contact Marv Batte at e-mail batte.1@osu.edu. For more information you may also contact U of I Extension in Ogle County at (815) 732-2191, or at www.extension.uiuc.edu/ogle.



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