

# Calculating the Learning Curve for Farmers



Maria Boerngen, a doctoral student in the Department of Agricultural and Consumer Economics at the U of I, wanted to find out more about the number of hours a farmer spends learning about farming. "Farmers transitioning from conventional to organic have to build a new set of skills," she said. "A measure of the time spent learning about organic practices could be useful in calculating conversion subsidies that could be offered to encourage farmers to make the transition." □

Boerngen developed a survey that was mailed to 1,000 farmers. She received 109 completed surveys from reduced chemical and organic farmers and 101 from conventional farmers. She presented a summary of the responses at a recent organic production workshop at the Extension Center on the Illinois State Fairgrounds in Springfield.

"We learned that the transition to organic management requires a total learning investment of 260 to 520 hours before organic practices are adopted," said Boerngen. "Once transition is complete, the difference in 'everyday' learning time is small, but statistically significant."

The survey responses showed that the learning time investment during the transition to reduced-chemical farming

was 2.9 hours per week, while during the transition to organic farming it was 5.2 hours per week. This transition period lasted one to two years.

After that transition time was past, Boerngen refers to "everyday learning time" — that is, the ongoing learning that takes place for all producers. "The survey revealed that conventional farmers spend 3.3 hours per week in continuing education about farming, while reduced-chemical and organic farmers spend 3.9 hours per week," she said.

"A lot of past studies have concluded that reduced-chemical farming is just as profitable as conventional farming," said David Bullock, professor in the Department of Agricultural and Consumer Economics, and Boerngen's advisor. "But that leaves us with the question of why it seems so difficult to convince farmers to lower their chemical input levels. Our results show that there's a significant cost to learning how to be a profitable low-chemical-input farmer. Studies that don't account for that cost may be missing an important part of the picture."

Boerngen's survey also demonstrated significant differences when demographics were factored in. "When there was an incremental increase in the level of education, the probability that a farmer adopted reduced-chemical or organic practices increased by 29 percent," Boerngen said. "And a 10-year increase in the age of the farmer decreased the farmer's total weekly 'everyday' learning time by 1.25 hours."

She concluded that it is important to place a wage value on farmers' time in order to measure the actual costs of learning, and that these learning costs should be included in research studies that look at profitability.

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