

# Farm Management Update



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## Is Zoning Good for Agriculture?



Peggy Kirk Hall  
Director of Agricultural  
& Rural Law  
Swank Program in Rural-  
Urban Policy

Land is almost always the major asset of an agricultural landowner. Zoning is almost always controversial because it has the potential to interfere with that asset. Historically, agriculture in

Ohio has viewed zoning negatively, as an unwanted regulation of private property rights. But current demands and competing uses for land are forcing Ohio agriculture into zoning issues. As more and more people want to own, develop, or live near farmland, agricultural landowners may want to consider the question of what zoning can do for agriculture.

Zoning issues are prevalent in many rural Ohio communities today. For example, one county in southern Ohio is attempting to institute zoning to address the changes caused by substantial increases in residential development in the county's rural areas. Residents of a zoned central Ohio township have fought out their frustrations with a zoning ordinance that allows large subdivision developments in the agricultural area. A central Ohio county faced with the

prospect of a landfill is trying to quickly enact zoning, though it's failed on several occasions in the past. In northern Ohio, one township has recently approved a zoning ordinance that creates agricultural districts in which agriculture is the primary use permitted in the area. These examples illustrate how zoning can have significant impacts on a rural area, and how important it is for the agricultural community to understand zoning and its implications.

Legally, zoning is an attempt to make land use orderly and consistent for the purpose of protecting the health and safety of the community. Individual property rights are circumscribed for the good of the "big picture"—the public at large. The zoning process divides land into "districts" or "zones" according to land uses. Within a district, only those land uses and activities designated as permissible by the zoning ordinance may take place. Permitted land uses might also be subject to restrictions concerning setback requirements, maximum building size, or minimum lot size, to name a few.

Zoning can't exist in a rural area unless the residents of that area approve a proposed zoning ordinance by a majority vote. Even where zoning exists, however, agriculture receives unique treatment under

Ohio's zoning laws. The law provides that a county or township cannot, through its zoning regulations, *prohibit* the use of land for agricultural purposes or require building permits for agricultural buildings, with a few exceptions. This "agricultural exemption" protects agriculture from being "zoned out" of a township or county. The exemption ensures that agriculture can have a place in the Ohio landscape as long as there are agricultural landowners. It does not, as some believe, exempt agriculture from all zoning regulations.

The disadvantages of zoning are well known to agricultural landowners. Zoning limits what a landowner can do with the land, with the exception of the agricultural exemption. For an owner of farmland surrounded by development, zoning restrictions can affect the profits to be gained from selling the land for development. Procedural requirements to obtain zoning permits and administrative approvals can be burdensome, frustrating, and costly. Even where zoning exists, it may be inadequate or unfairly implemented.

But has agriculture in Ohio seriously deliberated the benefits of zoning? Zoning can create agricultural areas that protect farming from conflicting land uses. It can separate agriculture from non-farm residential development, Wal-Mart superstores, and shopping

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# Agriculture's Mission in the 21st Century: "Bioresources for a Healthy World"

It is always difficult to capture a mission in a few words, but a reasonable encapsulation of agriculture's mission since its emergence approximately 10,000 years ago is "to provide people with the basic necessities of food, clothing, and shelter." However, this mission mostly has been attained in advanced economies, such as the United States. Most strikingly, the share of expenditures that U.S. consumers spend on U.S. produced farm commodities used for food was only 1.8% in 2000, the last year for which data exists. Stated alternatively, little can happen on the farm anymore, short of a severe and widespread drought, that can noticeably impact U.S. consumers.

Given this situation, the relevancy of agriculture in the U.S. increasingly has come under scrutiny. Some have argued, such as Dr. Steven Blank in his widely-discussed book, *The End of Agriculture in the American Portfolio*, that agriculture will disappear from the United States. While this scenario is within the realm of plausible outcomes, a more likely outcome in this author's view is that the two-thirds decline in real farm prices since 1910 will create new economic opportunities for U.S. agriculture. Three potential examples of the new economic dynamics at work follow.

## Opportunity: Medical Care

Since 1929, the first year that data are available, the share of expenditures that U.S. consumers devote to medical care has increased from 4% to 18%. Medical care is now the largest U.S. economic sector when measured by share of consumer expenditures. Furthermore, its share likely will continue to increase as the baby

boomers enter the part of life when medical expenses are highest.

Food and health are closely linked; however, genetic engineering of farm products and foods for attributes that prevent or treat diseases promises an even closer link in the future. This emerging medical delivery system, often referred to as functional foods, is made possible by new technology, but it also is attractive because of the declining price of farm products. Functional foods offer the opportunity to improve health and to slow or even reverse the increase in share of expenditures devoted to medical care.

## Opportunity: Energy and Industrial Feedstock

Since the early 1970s, the price of farm products has declined by over two-thirds relative to the price of fuels. The debate over ethanol and its public subsidies has obscured the growing economic attractiveness of farm products as a source for energy and industrial feedstock.

## Opportunity: Environmental Quality

As the United States became wealthier, concerns about the environment and the economic resources devoted to addressing these concerns have increased. Farming's impact on the environment is omnipresent as over half of the 1.5 billion acres of nonfederal land in the United States is used for farm-related activities. The growing importance of environmental programs in the social compact known as the farm bill documents that the day is drawing closer when the



Carl Zulauf  
McCormick Professor  
of Agricultural  
Marketing and Policy

general citizenry of the United States will view their well-being as impacted more by farmers as environmental stewards than as producers of farm

products used for food. This shift in consumer wants will allow agriculture to sell its environmental assets, such as open space, the ability to improve air and water quality, and potentially even scenic views of corn, cows, and barns.

## Summary

The decline in farm prices is usually seen as a bane by farmers, farm leaders, and the farm press. However, these declining prices generate new opportunities, including medicinal foods, energy and industrial feedstock, and environmental benefits. These new opportunities will expand agriculture's scope beyond the basic necessities of food, shelter, and clothing. Thus, a more inclusive view of the hopes and aspirations that the general citizens of a country of wealth have for agriculture in the 21st Century is "Bioresources for a Healthy World." ■

*The author thanks Constance Jackson, Allan Lines, and Luther Tweeten for their comments on and insights on earlier versions of this paper.*

*A version of this article will appear in THE FUTURIST, September-October 2003 ([www.wfs.org](http://www.wfs.org)). This version emphasizes the changing relationship between agriculture and the U.S. economy and the implications of this changing relationship for the U.S. economy in the 21st Century.*

# Ohio Farm Computer Usage

Computers have become an everyday tool for office workers and managers in many sectors of the economy. The U.S. Department of Commerce reported that in 2000 about 54 percent of the U.S. population used a computer at least occasionally. One might question if a parallel adoption of computers has occurred on farms. This research addresses this question using data from a March 2003 mailed survey of a random sample of all Ohio farmers.

Just over 44 percent of sampled farmers responded that they use an office computer in their farm business (Table 1). This is up from 32.1 percent in 1991. The adoption rate varied significantly by size of farm, age of operator, level of operator education, and with off-farm employment of the operator. For farms in the smallest sales category, only 36 percent of the

operators had adopted an office computer. However, for farms with over \$500,000 of sales, computer adoption was nearly 72 percent. Computer adoption tended to be negatively related to the age of operator. The average adoption rate for farmers who were age 50 or younger was significantly greater than for farmers older than 50. About 54 percent of farmers 50 or younger had adopted a computer, whereas only 39 percent of farmers older than 50 had adopted. On the other hand, there was a positive association between operator education level and computer adoption. Just over 31 percent of those with high school education or less had adopted a computer, but more than 67 percent of those with a post high school education were computer adopters.



Marvin T. Batte and D. Lynn Forster  
Department of Agricultural, Environmental,  
and Development Economics

Computer adoption was significantly lower for farm operators who did not work away from the farm (38%) than for those who worked away from the farm (54%). Perhaps the higher adoption for farmers working away from the farm is due to the computer exposure/training that they receive in their off-farm employment and their transfer of this technology to the farm business.

The surveyed farmers were also asked to indicate the extent to which they felt the computer had improved their business either by saving time or providing better information (Table 1). Farmers responded to a five item scale, where one represented no improvement, two indicated little improvement, and five represented much improvement. The average response for all computer adopters was 3.5. Average usefulness score increased with gross sales, and was significantly higher for farmers with post high school education levels. Farmers working full time on the farm also reported higher usefulness scores for computer use. Usefulness scores increased for younger operators, and were significantly higher for the farmers who were 35 or less.

Farmers who have adopted computers were asked to indicate those tasks for which the computer was used. Financial record keeping was the primary computer task in 1991 and remains so today. Eighty-nine percent of farmers with computers used their computer for financial record keeping. More than 76 percent indicated they

**Table 1. Computer adoption, computer usefulness, and computer usage levels by various farm and farmer characteristics.**

Measure	Computer Adoption Percent	Computer Usefulness <sup>a</sup>
Full Sample	44.4	3.5
Gross farm sales		
\$50,000-99,999	35.7	3.3
100,000-249,999	46.0	3.4
250,000-499,999	55.9	3.7
Over \$500,000	71.7	3.9
Age of operator		
35 or Less	53.6	4.0
36-50	52.6	3.5
51-65	46.5	3.5
65 and over	21.9	3.2
Education level of operator		
Less than High School	9.5	2.7
High School Graduate	36.6	3.4
Some College	58.7	3.5
College Graduate	79.0	3.8
Post Graduate Education or Degree	64.0	3.4
Operators Working off the Farm		
None	38.0	3.6
Seasonally	52.1	3.3
Year Around	53.9	3.4

<sup>a</sup>Farmers who have adopted computers were asked to indicate the extent to which the computer has improved the business by either saving time or providing better business information. Five response categories were offered, where 1 = Not at all and 5 = Very Much.

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centers—land uses that make farming more difficult, more expensive, or more subject to scrutiny. Zoning can create certainty in land availability, a benefit increasingly important for a state that is second in the nation for conversion of agricultural land to non-agricultural uses.

Zoning won't be good for agriculture, though, if it doesn't address agriculture. Research indicates that the "best" zoning is based upon a comprehensive assessment of a community's needs and resources, and a clear foresight of the community's future. However, most zoning regulations in Ohio fail to consider the needs of agriculture and leave agriculture to coexist with other land uses that

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used the computer for e-mail correspondence. Production (crop and livestock) record keeping and word processing were reported by 76 percent of computer users.

The use of the internet for information gathering and transactions is now an important application of the farm computer: Nearly 55 percent of farmers reported price tracking on the internet, 29 percent performed online banking or bill paying, 26 percent reported the purchase of farm inputs using the internet, 16 percent traded stocks, bonds or other financial instruments online, 13 percent sold farm products over the internet, 9 percent reported online trading of agricultural commodity contracts, and 73 percent use the internet for general information searches.

In summary, computer adoption is increasing on farms, but perhaps not as fast as for off-farm individuals.

ultimately create problems for the long-term viability of farming. Addressing agriculture requires that we approach zoning as "zoning for agriculture" and not as zoning that can't zone out agriculture because of its legal exemption.

If the agricultural community wants "good zoning," it will have to participate in the development and implementation of zoning regulations. Public participation is a legal requirement of the local zoning process. Community residents have a right to create, tailor, or object to zoning. And so the one certainty we can state about zoning and agriculture is this: if agriculture is to have a say in whether zoning is "good" or "bad," agriculture's understanding of and participation in the zoning process is imperative. ■

Relative to 1991 benchmarks for Ohio, computer adoption increased from 32.1 to 44.4 percent. For computer adopters, computer usage intensity also increased slightly during this same period, from 14.6 to 16.4 hours per month. Financial accounting remains the most often used task of farm computers. However, the use of the internet for communication, for transactions processing, or for information retrieval more broadly, is now used by about 80 percent of farmers with computers. The value of the computer as a tool of management does vary among farm operators. Computer usefulness evaluations rose with increased farm gross sales, diminished with increased age of the operator, and were higher for farmers who used the computer for financial or production recordkeeping or who gathered information from the internet. ■

**2003 Policy and Outlook Meetings**

The Ohio State University Agricultural Outlook and Policy Program is based in the Department of Agricultural, Environmental, and Development Economics. It features a regular series of information meetings updating the status of food, farm, and environmental policies and markets related to those areas. The following is the schedule of meetings for this year's series. For more information contact your local Extension office or go to: <http://aede.osu.edu/programs/outlook/>.

November 20	Chillicothe, evening
November 24	Marysville, 5:30 pm
November 25	Greenville, 7:00 am
December 3	Willard, 11:00 am
December 3	Archbold, evening
December 4	Van Wert, morning
December 4	New Bremen, lunch
December 4	Piqua, evening
December 8	Lancaster, lunch
December 8	Mt. Vernon, evening
December 11	Urbana, 10:00 am
December 17	Canton, 9:30 am
December 17	Wooster, evening

**Regional Agricultural Law Conferences Planned**

"Farmers and Neighbors: Legal Issues" is the theme for two conferences planned by OSU's Agricultural & Rural Law Program and OSU Extension. The conferences will take place on January 12 at the Der Dutchman restaurant in Waynesville and on January 14 at the Miami Valley CTC in Trotwood. The programs, which will run from 3-9 pm, will include sessions on nuisance law, premises liability, fence law, noxious weeds, drainage law, living with neighbors without litigation, and an overview of the legal system. For further information, visit the Agricultural & Rural Law Program's website at [www.aede.osu.edu/programs/aglaw](http://www.aede.osu.edu/programs/aglaw) or contact Peggy Hall at (614) 247-7898.

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Extension Agent,  
Agriculture and Natural Resources