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Shifts in Farm Products and Marketing Strategies as Influenced by Residential Development

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This study examined farm numbers and marketing strategies as influenced by residential development between 1990 and 1997 in an urbanizing county. Information was collected through farmer focus group interviews. A positive correlation ($r=0.45$, $P<0.10$) was found between housing starts and net change in farm numbers per township. There was a shift toward agricultural products and services for the retail market. In most developed townships, farmers viewed new rural residents as potential customers. This study found that farming and residential development are not necessarily incompatible. Under some circumstances, residential development may spark an increase in the number of farms.

This study examined the mix of farm products, marketing strategies and change in farm numbers as influenced by residential development between 1990 and 1997 in an urbanizing county adjacent to a large metropolitan area. Geauga County is located in northeast Ohio. The western edge of Geauga County is approximately 15 miles from downtown Cleveland. The county is made up of 16 townships laid out in a north, south, east, west grid. Each township contains approximately 25 square miles. There are no large cities in the county; however, there are a number of incorporated villages. The 1996 estimated population of Geauga County is 86,054 (Gauga County Planning Commission, 1996). In 1992 approximately 25% of Geauga's total land mass was being used for agriculture and approximately 46% of the total land mass was in woodland (Census of Agriculture, 1992; USDA Forest Service, 1992).

Throughout this study, the term "farm" shall mean any unit producing at least \$1,000 worth of agricultural product per year. This definition includes maple syrup, stables and commercial horse production.

According to the Agricultural Census, the total number of farms in Geauga County fell through the 1960's to an all time low of 544 farms in 1974. The number of farms generally increased throughout the late 1970's and early '80's to a high of 753 farms in 1982. Since 1982, the number of farms in the county has gradually decreased to a level of 622 farms in 1992 (Census of Agriculture, 1964-1992) (Figure 1).

The total "land in farms" fell in Geauga County throughout the '60's and early '70's to an all time low of approximately 65,000 acres in 1974. The land in farms dramatically increased through the late '70's and early '80's and reached a second peak of approximately 74,000 acres in 1982. Farmland acres then fell again through the late '80's and early '90's to a level of approximately 66,000 acres in 1992 (Census of Agriculture, 1964-1992). Since 1992, the land in farms in Geauga County has generally increased to a 1995 level of approximately 71,000 acres (Ohio Agricultural Statistics, 1992 - 1995) (Figure 2).

The average size of farms in Geauga County fell from 119 acres in 1974 to a low of 99 acres in 1982, and has gradually increased throughout the 1980's and '90's to 108 acres per farm in 1995 (Census of Agriculture, 1974 - 1992; Ohio Agricultural Statistics 1993 - 1995) (Figure 3).

A large portion of the farmland in Geauga County is enrolled in the Current Agricultural Use Value (C.A.U.V.) taxation program. This is a statewide program designed to benefit qualified agricultural landowners through preferred tax treatment if the land is used for farm purposes. The program is designed to discourage the conversion of land into non-farm uses. Land under CAUV is taxed at its agricultural value rather than on its developmental value. In Geauga County there is often a substantial difference between the agricultural value and the potential developmental value.

Figure 1. Number of Farms in Geauga County, Ohio.

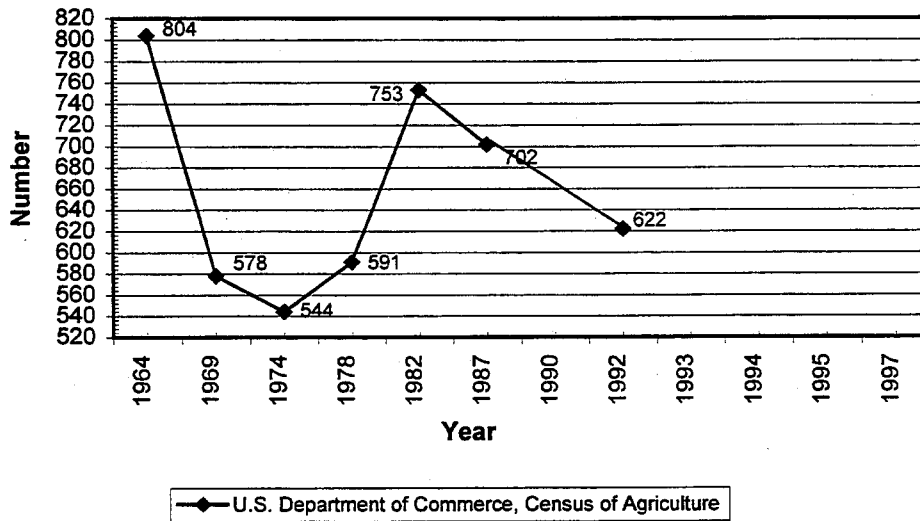


Figure 2. Land in Farms in Geauga County, Ohio.

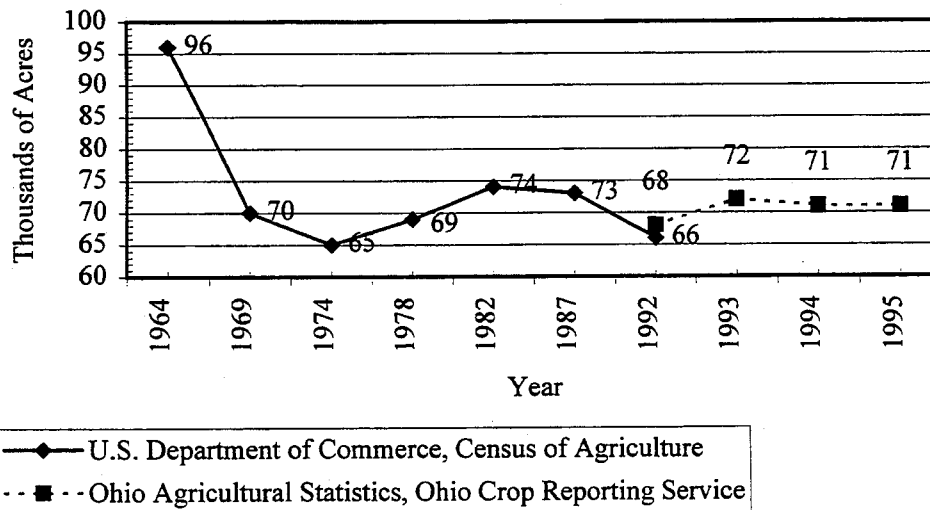
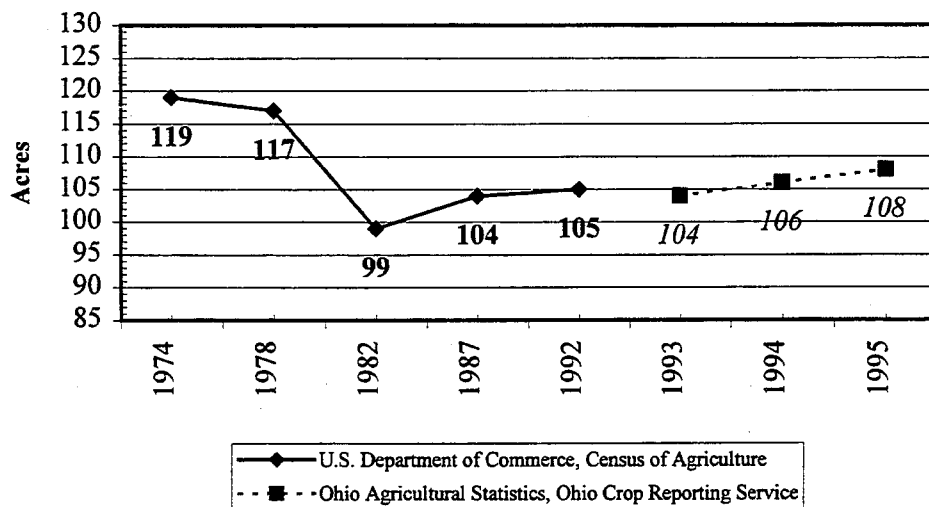


Figure 3. Average Farm Size in Geauga County, Ohio.



The average real value of farmland enrolled in CAUV per acre per township (i.e. the Auditor's assessment of the developmental value) ranged in 1996 from \$4,807 in Chester Township to \$1,037 in Thompson Township.

One measure of farm size is the gross farm sales per year. The average gross farm sales for all farms in Geauga County (excluding horses) was \$25,862. For dairy farms the average was \$39,164. For farms producing nursery and greenhouse crops, the average was \$85,513 and for farms producing other horticultural crops (vegetables and fruit) the average was \$10,159 (Census of Agriculture, 1992). Using a North Carolina State Extension horse budget and assuming that the average stable in Geauga County houses 20 horses, the estimated average gross sales for a commercial stable was approximately \$106,000 (Mowrey et al., 1995).

The rate of residential development is a major concern of farmers, public officials and the general public in Geauga County. While the county has struggled to maintain its rural atmosphere, its proximity to Cleveland continually fuels residential development, which changes the appearance and in some ways the character of the county. One of the best ways to quantify residen-

tial development is by tracking housing starts. As would be expected, from 1990 to 1996 the townships on the western side of the county (closer to Cleveland) experienced substantially higher numbers of housing starts than the townships in the more rural eastern side of the county. During this period they ranged from a high of 499 housing starts in one western township to a low of 64 housing starts in an eastern township (Gauga County Planning Commission, 1996).

Methodology

Fifteen Boards of Township Trustees contacted by letter, phone and/or visit, a group of farmers to invite them to participate in a focus group meeting in each township. Middlefield Township Trustees requested that the researchers make the contacts for their meeting.

The sixteen township meetings were held between February 20 and May 1, 1997. At the beginning of each meeting, the researchers explained that the purpose of the meeting was to discuss the following issues:

1. How agricultural land is being used in the township.
2. How agriculture is changing the township.

3. How farmers feel about land use and property rights.
4. How the economic viability of the agricultural community can be maintained.

The group was led through an exercise in which farms and the commodities they produced in 1990 were located on a township map. They next identified farms that were lost/gained along with changes in commodities produced between 1990 and 1997, and any vacant parcels of land which could be brought into production. A farm/farmer was defined as anyone producing over \$1,000 of gross agricultural sales per year. Horse farms were included. Rented agricultural land was considered part of the farm of the operator who rented farmland. If a farm had previously been farmed by the owner but was now being rented to another farmer, that farm was counted as a farm loss. Farms, commodities, and vacant land were identified based solely on the knowledge, memory and estimates of the individuals in the group.

The discussion leader then presented a series of questions, allowing ample time for discussion of each question. The other researcher served as the recorder capturing highlights of the discussion on a laptop computer. After the discussion, the recorder read back her notes to the group for them to approve or amend. After all 16 township meetings were completed, the researchers reviewed the records of each meeting, compiled simple descriptive statistics, prepared a synopsis of the discussion, and made individual township recommendations. Township reports were then mailed to township trustees and participants. A county report was then compiled providing officials, farm organizations and farmers a synopsis of county results and researcher recommendations.

Results

This study found that there were 764 farms in Geauga County in 1990 and 745 farms in 1997 resulting in a net loss of 19 farms. Over that period, the county gained 85 farms and lost 104 farms (Table 1). Five of the seven townships in the western half of the county (those closest to Cleveland) experienced a net gain in the number of farms. Eight of the nine townships in the eastern half experienced a net loss of farms.

Table 1. Changes in Farm Numbers and Agricultural Products in Geauga County, Ohio in 1990 & 1997.

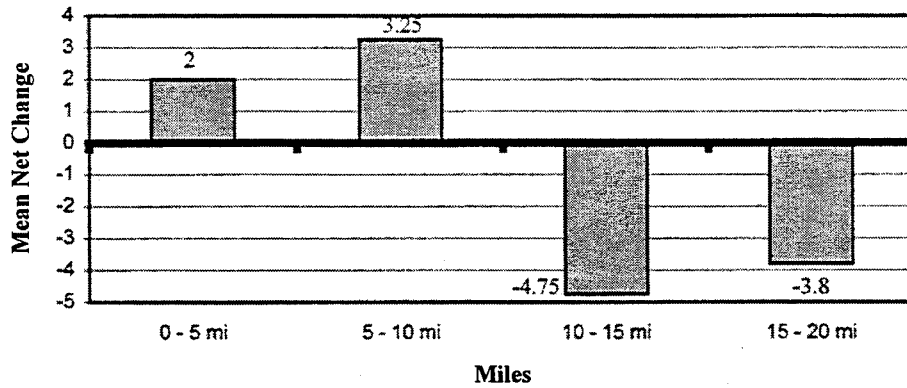
Number of Farms 1990:	764		
Number of Farms 1997:	745		
Net Change in No. Farms:	-19		
Number of Farms Gained:	85		
Number of Farms Lost:	104		
Number of Farms Producing Various Agricultural Products:			
	<u>1990</u>	<u>1997</u>	<u>Net Change</u>
Horse	159	171	+12
Dairy	208	154	-54
Cash Grains/Hay	145	142	-3
Beef	104	100	-4
Maple	89	89	0
Nursery/Greenhouse	73	85	+12
Vegetable/Herbs	52	60	+8
Sheep	27	33	+6
Fruit	36	28	-8
Swine	28	23	-5
Dairy Heifers	5	12	+7
Llamas/Alpacas	7	11	+4
Poultry	10	11	+1
Deer	4	7	+3
Goats	6	7	+1
Ostrich/Emu	4	5	+1
Specialty Commodities*	17	16	-1

* Less than 5 Producers in the County

(Commodities include: rabbits, bees/honey, fish, buffalo, donkey, game birds & veal)

Due to the historic township boundaries, county townships are set up in a grid-like fashion with each one being a five-mile square containing 25 square miles. Therefore, townships can be grouped according to their distance from the Cuyahoga County (Cleveland) line. Chester, Russell and Bainbridge Townships are adjacent to Cuyahoga County and had a mean net increase of 2 farms per township. Chardon, Munson, Newbury and Auburn, those lying 5-10 miles from the Cuyahoga County line, had a mean net increase of 3.25 farms. Further east, 10 to 15 miles from the county line, the townships of Hambden, Claridon, Burton and Troy had a net mean decrease of 4.75 farms per township. The easternmost townships of Thompson, Montville, Huntsburg, Middlefield and Parkman experienced a mean net loss of 3.8 farms. Those townships in the most rural half of the county tended to be losing farms, while those townships closer to Cleveland tended to be gaining farms (Figure 4).

Figure 4. Mean Net Change in Number of Farms from 1990-1997 in Relation to Distance from Cuyahoga County Line (West to East).



TOWNSHIPS: 0-5 miles = Chetser, Russell, Bainbridge
 : 5-10 miles = Chardon, Munson, Newbury, Auburn
 : 10-15 miles = Hambden, Claridon, Burton, Troy
 : 14-20 miles = Thompson, Montville, Huntsburg, Middlefield, Parkman

Figure 5. Correlation Between the Number of Housing Starts and the Net Change in Number of Farms for Townships in Geauga County, Ohio, 1990-1996.

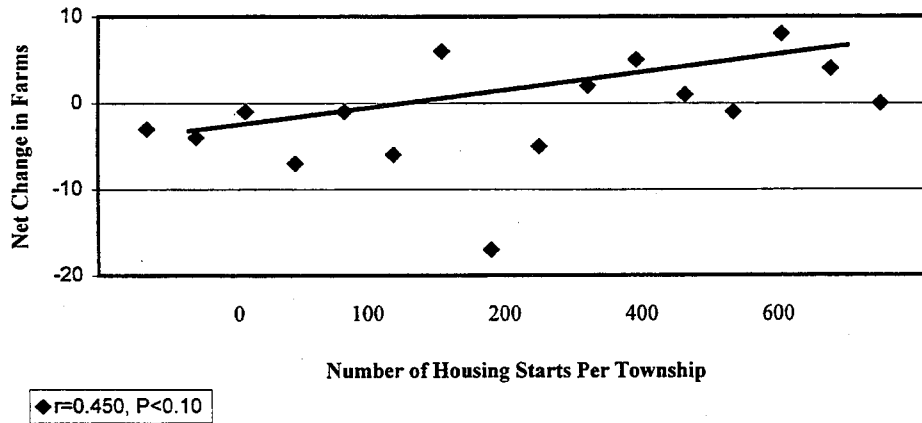
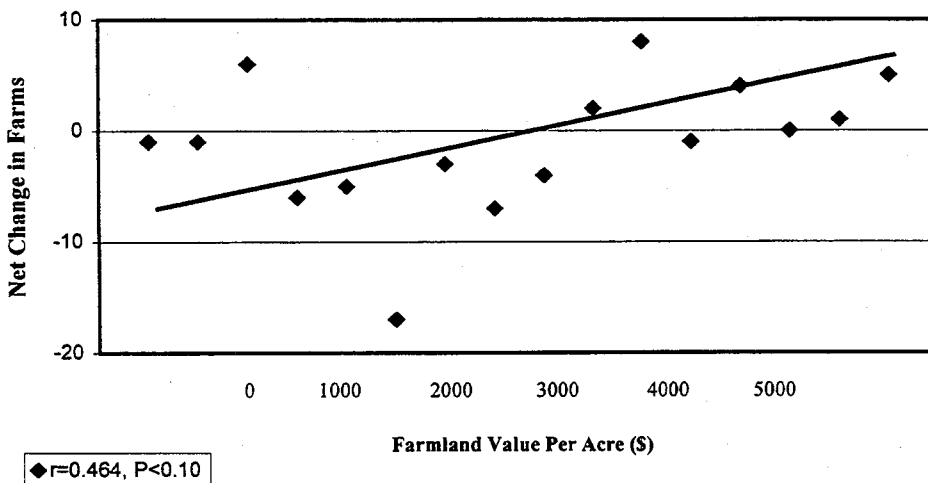


Figure 6. Correlation Between Farmland Value Per Acre and the Net Change in Number of Farms for Townships in Geauga County, Ohio, 1990-1996.



Contrary to what might be expected, a positive correlation ($r = .45, P < 0.10$) was found between the number of housing starts per township and the net change in farms per township. In other words, those townships which experience the greatest increase in residential development (housing starts) also tended to have the greatest increase in number of farms (Figure 5).

In addition, a positive correlation ($r = 0.46, P < 0.10$) was found between the real value of farmland per acre by township as established by the Geauga County Auditor and the net change in farms per township. In other words, those townships with the most expensive land tended to gain farms while those townships with the least expensive land tended to lose farms from 1990 to 1996 (Figure 6).

It was observed that between 1990 and 1997, Geauga County farms shifted toward agricultural products and services that are normally sold directly to the consumer, such as horses, nursery/greenhouse crops, and vegetables and away from those agricultural products and services that are ordinarily sold through wholesale market such as dairy, cash grain, and beef (Table 1). Further, during the focus groups, farmers were asked about the impacts of residential development on their township and their farm. In general, those farmers

on the eastern side of the county (more rural), most of whom were involved in production of wholesale products, tended to focus on the many problems such as trespassing, increased traffic, etc. associated with residential growth. Those farmers in townships on the western side of the county (more developed), many of whom were producing for the retail market, acknowledged the difficulties in coping with residential development but focused on the market potential of those new residents.

The following paragraphs are pulled from a synopsis of the focus group discussions with Geauga County farmers in all 16 township groups. Statements do not indicate consensus but rather capture some of the major points of discussion which were raised throughout the county. Actual quotations express the views of individual farmers.

Many farmers throughout the county identified the economic advantages of having more customers close to their farm businesses. Farmers identified a shift away from farm products which are sold on the wholesale market (dairy, beef, cash grain) to those products sold directly to the customer through retail operations (vegetables, landscape/nursery, horses, maple and other specialty crops and animals). One farmer said, "In our area

we are seeing a shift away from dairy and toward vegetables. Vegetables will bring a fair market value at the wholesale produce auction or at roadside stands." An eastern township farmer said, "Agriculture in the area is shifting to vegetables." Many western township farmers see development as a way to increase their business. "Farms which haven't been farmed since the 80's are now being farmed." Farmers in these townships identified new residents as customers for horse boarding stables, locally grown hay, straw, produce and other farm products. One farmer said, "We have people around us who shop at our operation." Another pointed out that "Chester (western township) is prime agricultural retail land." The market in the area is for high-value crops grown on high-value land. "It's the people that keep us going. They are classy and will spend money."

Conclusions

This study has revealed a surprising picture of the changes in Geauga County's agricultural industry in the 1990's. The total acreage of land in farms has increased. While the county has lost some farms, some townships are gaining farms. These new farms are located in the most densely populated and rapidly developing western townships on some of the most expensive land in the county. Farms in these townships most often produce horse and horticultural products which are marketed directly to consumers. These farms are likely to be financially larger than the farms that are being lost in the less developed eastern townships in the county. Farms located in these more rural townships tend to be involved with dairy and other farm products that are typically sold on the wholesale market.

Farmers in western townships acknowledged the problems of residential development, but focused on the positive customer potential of new non-farm residents. Farmers in the more rural eastern townships focused almost exclusively on

the problems brought on by residential development.

Geauga County's agricultural industry is shifting away from products for the wholesale market and toward products sold directly to consumers. This is particularly true in the more developed western half of the county. Politicians, farm organizations and the general public need to consider policies and programs that capitalize on this shift from wholesale to retail. The goal of these policies and programs would be to maintain the current growth in agriculture in western townships and to induce agricultural expansion in some of the eastern townships as they continue to experience residential development.

Most of the information found in this study would be invisible if only county data was considered. Further research is needed to determine if Geauga County is unique or if, as these researchers suspect, its townships are representative of many townships in developing counties across the nation. Farmland preservation efforts have largely concentrated on purchase of development rights programs or some form of agricultural zoning. This study suggests that some communities experiencing urban sprawl may also be able to capitalize on retail market forces to maintain their agricultural industry.

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