

# PLANTING THE SEEDS OF SUSTAINABLE ECONOMIC DEVELOPMENT: KNOX COUNTY'S LOCAL FOOD SYSTEM

## SOCIAL RESPONSIBILITY INITIATIVE TOPICAL REPORT 09-04, AUGUST 2009

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Social Responsibility Initiative

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### KEY FINDINGS AND RECOMMENDATIONS

- Knox County has a substantial and vital food and farming system.
- There are economic opportunities for the food and farming system to be developed to meet local and regional food demand.
- Opportunities may exist to expand local farm production to serve local retail outlets.
- Knox County is well positioned to incubate farms and business all along the chain of firms that link farm production to the consumer's table.
- Knox County is well positioned within the regional market to develop a quality brand and identity that may enhance demand and value of Knox County farm and food products.
- Knox County is well positioned to foster a culture of food system entrepreneurship to serve both local and regional markets.
- A holistic approach to food system development in Knox County is capable of having substantial positive job, income and wealth impacts.

### STUDY BACKGROUND AND PURPOSE

This report details an assessment of select features of Knox County's food and farming system, with primary attention to identifying some of the opportunities and impacts of increasing local food production to be consumed locally or regionally. The approach draws on a number of economic development tools available at The Ohio State University, including the Retail Market Analysis program and the Business Retention and Expansion program of Ohio State University Extension and the Department of Agricultural, Environmental and Development Economics as well as survey and demographic data compiled by the Center for Farmland Policy Innovation and the Social Responsibility Initiative in the College of Food, Agriculture and Environmental Sciences (CFAES).

This research began in the summer of 2008 and data collection and preliminary analysis was completed by winter 2009. The findings in this report are based on a variety of data sources, including U.S. Census of Agriculture, Census of Population, specialized business and retail data, local Knox County documents, and interviews with Knox County businesses and local informants.

The report is divided into several sections, focusing on different aspects of Knox County and its local food and farming sector (as well as the regional food system). Key findings are provided at the beginning of each section and summary conclusions of the overall findings are also provided in the conclusions.



## KNOX COUNTY AGRICULTURE

### Key Findings

- Knox County has a relatively large agriculture and food cluster, which accounts for 13 percent of the county's total gross domestic product and 20 percent of the county's jobs.
- A large number of farms are in Knox County, although a large proportion of these farms are relatively small and many of the farm operators work off farm part-time or full-time.
- Nearly two-thirds of the county's total farm sales are associated with corn, soybeans, or milk and dairy products.
- While farm sales directly to consumers account for a very small proportion of Knox County's total agricultural sales, over 9 percent of the farmers in the county report having some direct sales.
- The average sales per Knox County farm is only two thirds of the average for Ohio farms (\$62,642 versus \$93,200).

There are several ways to assess and evaluate the significance and structure of Knox County's Agriculture and Food system.

According to 2003 research by Ohio State agricultural economists<sup>1</sup>, Knox County's agricultural and food cluster (comprised of such businesses as crop and grain farming, farm machinery, food service, and food wholesale and retail sales) accounts for 13 percent of the county's gross domestic product (or \$140 million) and accounts for 20 percent of the jobs located in the county.

### AGRICULTURAL SALES

To understand some of the basic characteristics of Knox County agriculture, data from the U.S. Census of Agriculture were reviewed. In 2007, 1,270 farms were identified in the county which is slightly more than the 1,258 identified in 2002, an increase of 1 percent. From 2002 to 2007, the total number of farms identified in Ohio declined by 2.5 percent.

<sup>1</sup> See the Knox County entry for OHFOOD at <http://osuedc.27lima.com/profiles/> for Knox County data computed by Tom Sporleder at Ohio State University.

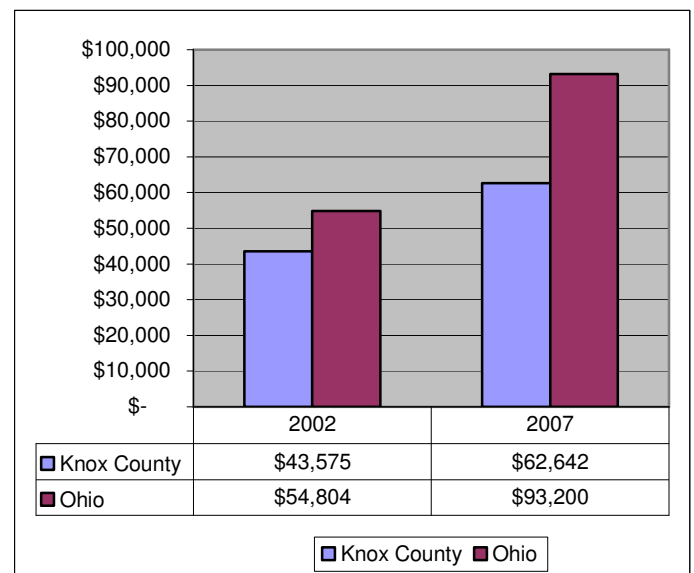
In 2007, according to the U.S. Census of Agriculture, the value of total agricultural sales in Knox County was \$79.5 million, up from \$54.8 million in sales in 2002. The top commodities in terms of sales included corn (\$22.6 million), soybeans (\$16.3 million), and milk and other dairy products (\$11.2 million). Other leading Knox commodities with more than 1 million in sales included cattle and calves (\$5.6 million), hogs and pigs (\$3.8 million), nursery, greenhouse, floriculture and sod (\$2.1 million), wheat (\$1.4 million), sheep, goats and their products (\$1.4 million), and fruits, tree nuts and berries (\$1.2 million).

### FARM SALES

The average sales per Knox County farm in 2007 was \$62,642, up 44 percent from 2002. The average sales per Ohio farm in 2007 was \$93,200, up 70 percent from 2002 (Figure 1).

The average sales per Knox County farm was two-thirds the average sales per farm in the state of Ohio in 2007. In 2002, average farm sales for Knox County was about 80 percent of the state average.

FIGURE 1: AVERAGE SALES PER KNOX AND OHIO FARM, 2002 & 2007.



### SALES DIRECT TO CONSUMERS

According to the 2007 Census of Agriculture, 116 Knox County farmers had some sales directly to consumers, nearly 9.1 percent of county farms. In 2002, 130 farms reported sales directly to consumers or 10.3 percent of all farms in the county.

The total value of sales directly to consumers was reported as \$566,000 (or .7 percent of total sales in the county), down from \$830,000 in 2002 (or about 1.5 percent of total agricultural sales).

## FARM SIZE

The average farm in Knox County is 156 acres. The median farm size (the point at which half the farms in the county are bigger and half are smaller) is 58 acres. In both cases, Knox County farms are modestly smaller than the state average (184 acres) and median (66 acres). In 2007, 576 farms were less than 50 acres in size up from 494 identified in 2002. The number of farms greater than 500 acres grew from 90 in 2002 to 97 in 2007. The number of farms between 50 and 500 acres declined from 674 farms to 597, with the greatest drop in the number of farms being those between 50 and 179 acres in size.

## OFF-FARM EMPLOYMENT

Nearly 73 percent of Knox County farmers reported working off farm in 2007, up from 67 percent in 2002. Also, nearly 48 percent of Knox County farmers reported working off-farm over 200+ days a year, a proportion similar to what was the case in 2002 when 50 percent of farmers indicated working off farm 200+ days per year. Statewide, the proportion of Ohio farmers working off-farm in 2007 was 67 percent, with 44 percent working off-farm 200+ days a year.

## BACKGROUND ON KNOX COUNTY & REGION

### Key findings

- Although Knox County is a rural county, it is relatively close to three large urbanized areas (Columbus, Newark, and Mansfield).
- Contrary to our expectations, a large proportion of Knox County residents reside and work within the county, with just under 30 percent of workers commuting outside the county to work in 2000.
- Being at the rural-urban interface, there may be substantial opportunities to develop the agriculture and food cluster in the county to serve regional needs and markets.
- A strength of the county is the existence of a local economic base that can employ workers locally,

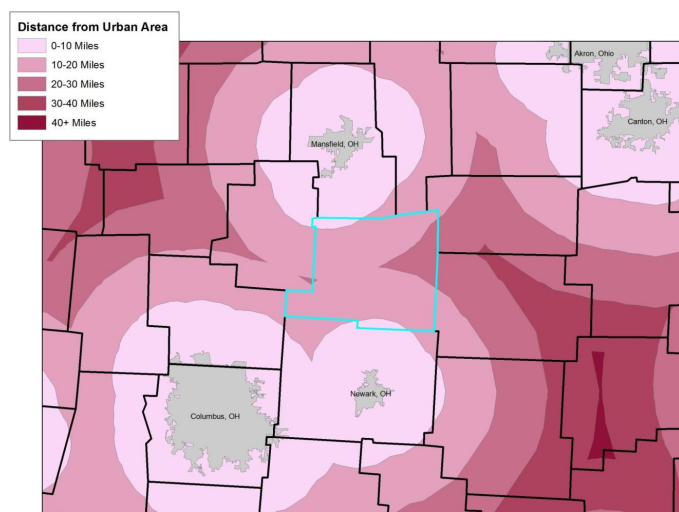
but a long-term challenge may be retaining that employment base as Knox County residents also have access to substantial employment opportunities in neighboring urban areas.

To evaluate the opportunities for further developing Knox County's Agriculture and Food Cluster, it is important to appreciate Knox County's position in the region. Two important features of Knox County are noted in this report, the proximity of Knox County to larger urban areas in the region and the pattern of Knox County workers commuting out of the county.

## PROXIMITY TO URBAN MARKETS

While Knox County is not technically part of any metropolitan statistical area (MSA), it is located in close proximity to several larger urbanized areas such as Columbus, Columbus suburbs, Newark and Mansfield (Figure 2). Given the residential and commercial development on the north side of the Columbus metropolitan area over the last decade, one might expect Knox County to become increasingly linked to this growing urban region to meet employment and retail needs. This proximity might also create market opportunities for Knox County farm production and food products.

FIGURE 2: KNOX COUNTY WITHIN THE REGION



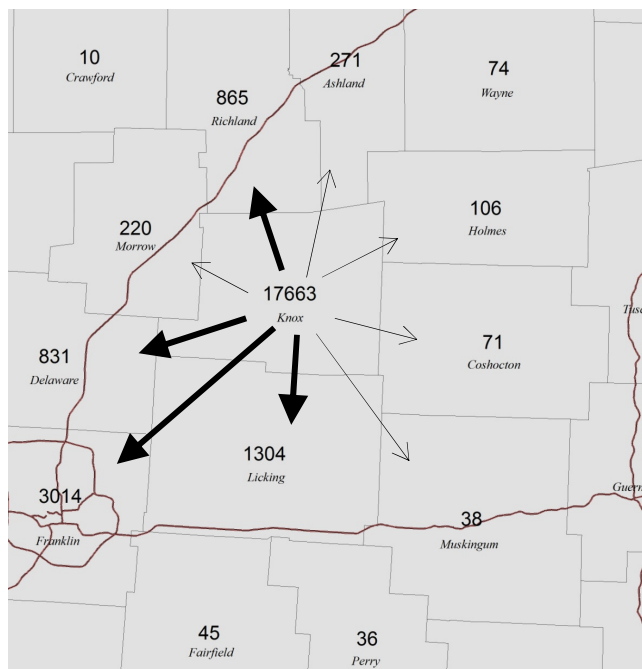


## KNOX COUNTY EMPLOYMENT COMMUTING

Given the proximity of Knox County to several large metropolitan areas, commuting data was reviewed to assess the extent to which Knox County is dependent on the larger region for employment. Based on previous work with rural counties located at the rural-urban interface, it was anticipated that a substantial proportion of Knox County's workforce commutes outside the county for employment, which has implications for local development. Contrary to expectations, it was found that a large proportion of Knox County residents reside and work within the county. In 1990, 24 percent of the employed residents commuted outside the county, rising to 29.5 percent in 2000 (accurate data for more recent years is not yet available). This pattern is significant because with fewer residents commuting outside the county, it may limit the amount of retail sales occurring outside of the county as residents are more rooted locally.

Figure 3 shows that 17,663 Knox County residents reside and work within the county. The most popular destinations for Knox County residents to work outside the county include Franklin (3,014 workers) and Licking County (1,304 workers).

FIGURE 3: KNOX COUNTY OUT-COMMUTING



## FOOD RETAIL MARKET ANALYSIS

### Key findings

- There may be opportunities for expanding retail food sales in the county to better serve local demand.
- It is important for Knox County to monitor food retail developments in nearby counties as regional competition can draw food retail dollars away from its existing food retailers.
- The proximity of Knox County to several larger urban areas with substantial food retail sectors suggest Knox County might explore strategies for supporting and developing local producers, distributors, and processors that serve the regional markets outside the county.
- Further, Knox County might also attract underserved residents of neighboring counties to local restaurants or grocery outlets.
- As issues of quality and food safety become critical considerations for consumers and if consumer interest in local foods continues, there may be a tremendous opportunity for Knox County to position itself as a quality leader in the region. Efforts at developing a Knox County brand or identity that attracts consumer interest and garners their trust might be one strategy for enhancing Knox grown and/or processed goods in the marketplace.

A central component of the agriculture and food system is food retailing. Analysis of the food retailing sector within Knox County as well as within the regional food sector was conducted to identify possible opportunities for further developing the local food retailing sector as well as to identify opportunities in the regional retail sector.

A focus on the county's food retail sector acknowledges that there can be economic benefits to keeping more food dollars circulating locally. Capturing more dollars locally might occur through the development of local processing, distribution, and retail. We focus on retailing, specifically sales through grocery and specialty food stores as well as in restaurants and bakeries.

METHOD OF FOOD RETAIL MARKET ANALYSIS

To evaluate the food retailing sector in Knox County and the surrounding region, we first focus on the extent to which county retailers are meeting resident’s needs. We then focus on food retailing in the region.

We adapted techniques of Ohio State University Extension’s Retail Market Analysis program to estimate the value of food demanded by Knox County residents (potential sales) and the value of food supplied within Knox County (actual sales). To determine potential and actual sales, we used data made available by InfoUSA (a private research company that compiles estimates of retail sales data) and the Census of Population. Actual sales are estimated for 2006. Potential sales are calculated by estimating sales that could be achieved in the county if all the population living within the county only shopped within the county.

We then compared actual sales to potential sales. If actual sales exceed potential sales, a sales **surplus** exists. A surplus implies either that (i) people travel from outside Knox County to shop or (ii) people living within Knox County consume more than would be typically expected given their income levels.

However, if actual sales are less than potential sales, Knox County suffers a sales **leakage**. A leakage indicates that either (i) people living within the county shop outside the county or (ii) people living within Knox County consume less than would be expected given their income levels. A leakage does not imply that retail businesses are failing—on the contrary, these businesses may be doing quite well. A leakage simply means that total sales within the local area are not as much as they could be based on the local area’s population and income. In other words, a leakage suggests there may be an opportunity for local businesses to better serve demand and capture more retail dollars from local residents.

ANALYSIS OF KNOX COUNTY FOOD RETAILING

Our analysis of food retail surpluses and leakages in Knox County reveal that, overall, Knox County grocers are meeting local demand with a surplus of \$6.3 million (see Table 1). Within the retail grocery sector, supermarkets have a substantial leakage of an estimated \$18.47 million. Even if you take into account the number of college students and other

Knox County residents that may be obtaining their meals in an institutional setting (3,462 residents in the 2000 census), the leakage persists. It may be that residents are purchasing more of their staple goods at smaller local food retailers, or visiting supermarkets outside of the county. Sales at specialty outlets, convenience stores and smaller groceries exceed estimated local demand, perhaps because of a lack of supermarkets, or a local preference to shop in these types of outlets.

TABLE 1: KNOX COUNTY RETAIL GROCERY SURPLUS AND LEAKAGE FINDINGS

Retail Grocery Types	Potential Sales (000)	Estimated Sales (000)	Surplus/ Leakage* (000)
Specialty	5,450	15,020	9,569
Convenience	8,857	15,994	7,137
Small Grocery	13,403	21,476	8,073
Supermarket	73,071	54,600	-18,470
Total	100,782	107,090	6,308

\*A positive value indicates estimated sales were in excess of expected potential sales, a negative value indicates estimated sales were less than expected potential sales.

In contrast to its retail grocery sector, Knox County’s local restaurant sector may not be meeting potential local demand (Table 2). Again, even if we were to take into account Kenyon and other residents served in institutional settings, Knox County appears to be relatively well served by non-chain, local restaurants, reporting a modest surplus (about \$2.2 million), but there is substantial leakage in the chain restaurant categories and bakery and café category. Overall, \$12.5 million of restaurant sales (including bakeries and cafes) – or 18.2 percent of estimated potential sales do not occur within the county. These results indicate there may not be enough establishments to service potential traffic. When considering bakeries/cafes, it is interesting that even with the nearby student population, sales are 30 percent less than projected.

TABLE 2: KNOX COUNTY RESTAURANT SURPLUS AND LEAKAGE FINDINGS

Restaurant Type	Potential Sales (000)	Estimated Sales (000)	Surplus/Leakage* (000)
Bakery/café	2,222	1,552	-670
Chain Restaurant	43,079	29,000	-14,079
Nonchain/Local Restaurant	23,562	25,760	2,198
Total	68,683	56,312	-12,551

\*A positive value indicates estimated sales were in excess of expected potential sales, a negative value indicates estimated sales were less than expected potential sales.

### ANALYSIS OF REGIONAL FOOD RETAILING

In a second set of retail market analyses, we expand the market region and modify our analytical strategy to examine whether counties outside of Knox County's traditional market region are meeting their food retailing needs. We compute (i) the proportion of food purchased for home consumption by county residents compared to estimated grocery sales within

that county, and (ii) the amount of food purchased away from home by county residents with estimated restaurant sales in that county.

Our analysis finds that the food retailing needs of residents in several counties, particularly the more rural counties, may not be being met locally (see Figure 4). In the figure, columns above the horizontal line (the point at which potential sales equal actual sales in the county) indicate that the county has a surplus of sales in that category; columns below the line indicate the existence of leakages in the county.

Coshocton County is meeting less than half of its estimated potential grocery sales needs and only 80 percent of its potential restaurant sales. The restaurant sector in Morrow County only fulfills 57 percent of its potential sales and Licking County fails to meet 21 percent of its potential grocery sales and 10 percent of its restaurant sales.

Underdeveloped food retailing in rural counties is not unexpected, as grocery and restaurant industry restructuring, particularly the rise of mega-marts and chain restaurants at the expense of mom-and-pop outfits may disadvantage places with small

FIGURE 4: RETAIL SURPLUSES AND LEAKAGES FOR THE REGION:



populations. These counties might simply not have the total demand needed to draw in this newer type of retailing.

There may be an opportunity for Knox County food retailers to draw in customers from the neighboring counties poorly served by their existing food retailers. Knox County appears to have a solid foundation of smaller and specialty retail groceries and also considerable nonchain local restaurants that might be able to serve more extra-local customers from these food deficit counties. An additional benefit of increasing Knox County food retailing activity might be an expansion of the opportunities for local farmers to supply the specialty or small grocers or nonchain restaurants as these businesses often have the flexibility to source product from local sources.

While this surplus and leakage analysis of neighboring counties reveals some opportunities for attracting extra-local customers to the county, a very significant fact revealed by the analysis is the sheer volume of food retailing that takes place in other counties, particularly Franklin County (Figures 5 and 6). A strategy of food system development that focuses on primarily serving Knox County food retailers has merit, but the potential sales in Knox County pales in comparison to the potential sales in nearby urban counties. In Figure 5, the total estimated grocery sales in 2006 for Knox County and neighboring counties is identified. In Figure 6 the estimated restaurant sales for Knox County and neighboring counties are reported.

FIGURE 5: ACTUAL GROCERY RETAIL SALES FOR KNOX COUNTY AND SELECT NEIGHBORING COUNTIES

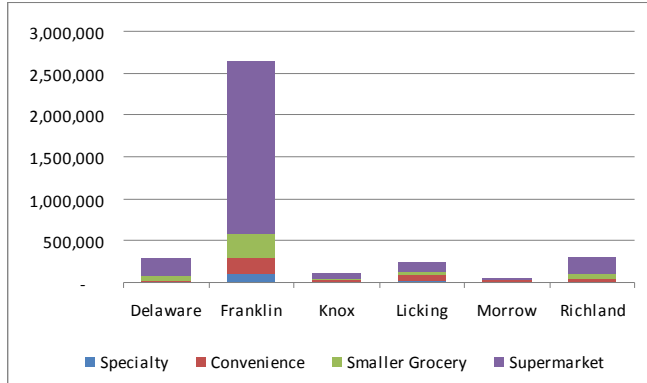
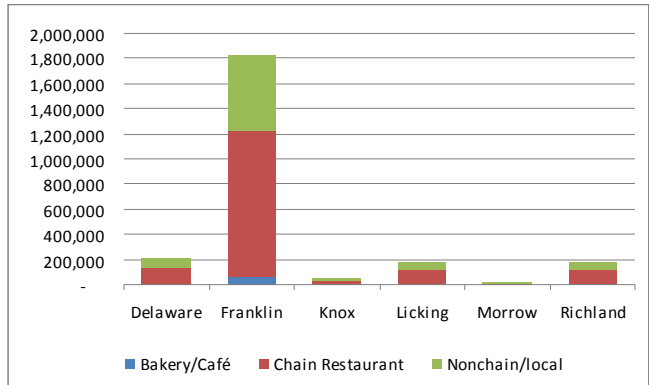


FIGURE 6: ACTUAL RESTAURANT SALES FOR KNOX COUNTY AND SELECT NEIGHBORING COUNTIES



### CHALLENGES TO LINKING LOCAL PRODUCTION AND RETAILING

#### Key Findings

- Based on interviews with Knox County retailers, some retailers see no reason to aggressively market locally grown foods as Knox County residents have many ways to meet seasonal local food needs through local and informal channels.
- The convenience and logistics of working with traditional food distributors (who likely source internationally and nationally) is attractive to many retailers compared to some of the perceived challenges of working with numerous small, local producers.
- Knox County food retailers may not be able to pay the same for locally grown products as retailers in nearby and more affluent urban markets.

To investigate the possibilities of developing and expanding the sale of locally produced foods in Knox County restaurants and groceries, face-to-face interviews were conducted with representatives of nine local retail food firms.

While analysis of retail and production data from a distance might suggest opportunities, these interviews were intended to consider local perception of these possibilities.

While Knox County has a food policy council and Kenyon College is widely regarded for the creative ways it links to local food production, among many of the retailers interviewed there was little interest in innovating through greater use of local foods.



One theme that emerged among some retailers might be referred to as the rural retailer local food dilemma, which is the perception that with abundant seasonal locally produced foods (from sources such as gardens, family members, Amish, etc.) there is little incentive to compete with those sources. Most of the retailers interviewed also did not perceive a strong demand among their customers for locally produced foods (perhaps because the customers felt adequately served by local informal sources).

A number of concerns or barriers were identified, similar to concerns identified in previous retailer studies in Ohio, including: questions about the convenience of purchasing local, purchasing adequate quantities, challenges of sourcing from multiple producers, and a need for local production outside peak season. Price was also perceived as a problem as some Knox County retailers were unable to pay the same price as retailers in nearby markets such as Columbus.

Finally, food safety and regulatory matters were noted as difficulties related to the sourcing of local foods. For example, requirements regarding food labels on Amish baked products had been a barrier for one retailer. Also, several retailers noted that it was simply easier to purchase food through normal distributors and some also felt there was a gain in liability protection when dealing with these distributors.

**SELECT SUPPLY AND DEMAND MARKET CALCULATIONS FOR KNOX COUNTY**

Key Findings

- Of the three products examined in this report (apples, sweet corn, and potatoes), Knox County does produce enough to meet total annual demand in two of them (apples and sweet corn).
- Because production occurs only during some parts of the year, season extension and/or storage are issues for producers in providing timely supply as the market demands.
- The real opportunity for Knox County producers may be in serving seasonal demand in the larger region.

Another question related to the linking of production and consumption is simply whether Knox County producers have the capacity to meet local demand. Answering this question may help in identifying opportunities for further development.

Following the example of the Iowa Produce Market Calculator, which is supported by the Leopold Center for Sustainable Agriculture at Iowa State University, production and consumption statistics were generated for Knox County in three food items, fresh apples, sweet corn, and potatoes. Drawing on production and consumption data maintained by USDA and OSU Extension, it is possible to estimate the annual demand for these products as well as estimate the amount of their local production.

Table 3 identifies the estimated national per capita demand for these products as estimated by the U.S. Department of Agriculture. It may be that Knox County residents eat more or less of these products, but the national per capita demand statistic does provide at least a baseline for estimating local demand.

TABLE 3: ESTIMATED KNOX COUNTY PRODUCTION AND CONSUMPTION OF SELECT FOOD PRODUCTS

	Apples	Sweet Corn	Potatoes
Per capita demand (lbs)	16.4	9.2	39.1
Total Demand (000 lbs)	967	542	2,305
Acres planted	127	70	9
# of farms	18	22	19
Yield per acre (lbs)	19,200	9,000	32,500
Total Production (000 lbs)	2,438	630	293
Surplus/Deficit (000 lbs)	1,471	88	-2,012



Table 3 also identifies the estimated total demand of Knox County residents for these products, by multiplying per capital demand by the 58,961 residents estimated to reside in Knox County in 2007.

Table 3 also reports information about production of these commodities, including the total number of farms producing a particular product (as reported in the 2007 Census of Agriculture), acres planted, average yield per acre (according to Census of Agriculture or OSU Extension sources) and total estimated production in 2007.

Finally, it is possible to determine whether annually Knox County is producing sufficient apples, sweet corn, or potatoes to meet local demand. Note, though, that Knox County production of these items occurs during a shorter time period and would require appropriate storage or season extension technologies to truly meet year round demand.

Regardless, we do find that Knox County is currently producing enough apples and sweet corn to meet local seasonal demand (say 120 days) but this is not the case with potatoes. Whether Knox County production is actually being consumed locally or outside the region is not possible to determine.

An important observation from this analysis and probably the case with several other fruits and vegetables is that Knox County demand can be met through relatively small acreages of production. As a result simply focusing on expanding production to serve county markets may be inadequate in truly developing urban oriented production. Again, as previously noted, the real opportunity for Knox County production may be in serving regional markets where substantial deficits may exist in meeting the seasonal demand of quite large populations.

## ESTIMATING THE PAYOFF OF DEVELOPMENT IN THE FARMING AND FOOD SYSTEM

### Key Findings

- There are many different strategies for developing Knox County’s food system, including: 1) efforts to increase on-farm production and direct marketing opportunities; 2) expansion of food retailing in the county by focusing on better serving local, county demand or by attracting consumers into the county from the larger region; and 3) expanding or developing food processing or distribution businesses in the county.
- I/O analysis confirms that any agricultural-based development would make a net contribution to the local economy. A focus solely on increasing production capacity, however, does not generate as much benefit as would a focus on expanding retailing and/or processing.

### IMPACT OF THREE DEVELOPMENT SCENARIOS

We developed three scenarios that encapsulate elements of the opportunities for developing Knox County’s agriculture and food system, including:

- Increasing Knox County’s higher value specialty crop farm sales by 5 percent.
- Expanding Knox County’s retail food sales (restaurant/grocery) by 10 percent.
- Adding a new food processor in Knox County that creates 20 full time jobs.

### INPUT/OUTPUT ANALYSIS

We employed input/output analysis (I/O) to estimate the economic effects of these three scenarios on the overall Knox County economy. Developed by Wassily Leontief in the 1960s, I/O attempts to measure how changes in one industry within an economy might impact the various other sectors within that area’s economy. For example, five new jobs created in one sector impacts a multitude of other businesses in the community; those five new employees make purchases at local restaurants or stores, utilize local health care and other local services, and may rent an apartment or purchase a house in the community. This additional new spending in the local economy might compel the owner of a local business to hire

additional help and/or make new business investments, which again grows demand for local goods and services – thus creating a ripple of additional economic expansion in the county.

Using I/O software, it is possible to model growth scenarios and estimate the anticipated economic effects of such scenarios beyond simply the hiring of some specified number of workers. We used IMPLAN software as a way to model the effects of these three scenarios. The results are found in Table 4.

The results confirm that expansion of Knox County’s ag-based sectors can play a role in enhancing the Knox County economy. Of the three scenarios, the effects of growing the food retailing (Scenario #2) and food processing (Scenario #3) sectors have the greatest potential to impact the Knox economy, with an estimated combined potential to support nearly 340 new jobs, increase sales tax collections by roughly \$450,000 and add nearly \$5.5 million to the \$1.7 billion annual personal income of Knox County residents.

Even the most conservative growth scenario, a modest increase in specialty crop farm sales (Scenario #1), could support an estimated 11 new jobs, increase sales by over \$1.1 million, and add nearly \$160,000 to employee earnings.

Given the size and scope of the Knox County economy (\$1.5 billion) the economic impact of enhancing its ag-based sectors given the three scenarios above may be quite modest in some regards (the three combined scenarios have an impact of roughly 1 percent on the Gross County Product), but the employment gains are not inconsequential for a relatively rural county. Further, the food and farming sector is a county strength and asset that may have substantial long-term and incremental development potential.

TABLE 4: ESTIMATED IMPACT TO KNOX COUNTY

	Scenario #1	Scenario #2	Scenario #3
\$ in 000s			
Sales	\$1,158	\$12,793	\$15,857
Employee Earnings	\$159	\$3,917	\$1,687
Sales Tax	\$14	\$344	\$98
Proprietor Income	\$111	\$269	\$255
Employment	11 jobs	243 jobs	96 jobs

### CONCLUSIONS

Communities have many choices regarding how they might encourage local economic development. Based on this analysis, Knox County has a number of strengths that suggest development of its food and farming sector may have potential for growing and expanding economic activity in the county. The existence of a relatively diverse and large food and farming sector with a large number of farmers and firms, proximity to large urban populations, and an existing small retailer and local restaurant sector are all strengths that the county might build on.

There are challenges, though. Many Knox County farms are small and many farmers work full or part-time off farm, which may limit their ability to pursue new production opportunities. Local retailers have existing relationships with distributors and may see many impediments to increasing their sales of local foods in season. Finally, Knox County’s local retail sector may face increased competition from grocers, retailers, and restaurants outside the county as Columbus continues to grow northward.

These challenges, though, present opportunities to think about how to encourage local food and farming entrepreneurship, incubate new firms that add value to existing production or fill important niches that might facilitate additional food system growth, or develop a quality label for Knox County that keeps purchases local and attracts external interest.

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## RESOURCES

For additional resources related to food and farming development, see the following.

Center for Farmland Policy Innovation

<http://cffpi.osu.edu/>

Community Food Security Coalition

<http://www.foodsecurity.org/>

Inwood, S., L.A. Bergman, D. Stinner. 2003. *Building Capacity for Local and Organic Ohio Proud Foods for Retail and Restaurant Distribution in Ohio*. Available on-line at:

[http://sri.osu.edu/pdf/Building\\_Capacity\\_for\\_Local.pdf](http://sri.osu.edu/pdf/Building_Capacity_for_Local.pdf)

Kenyon College's Rural Life Center

<http://rurallife.kenyon.edu/>

Leopold Center for Sustainable Agriculture  
Marketing and Food Systems Initiative

<http://www.leopold.iastate.edu/research/marketing.htm>

Ohio Department of Agriculture's Food Policy  
Council

<http://www.agri.ohio.gov/divs/FoodCouncil/foodcouncil.aspx>

Ohio Business Retention and Expansion Initiative

<http://localecon.osu.edu/brnel/>

OSU Extension Retail Market Analysis

<http://laede.osu.edu/programs/rmal/>

Social Responsibility Initiative

[www.sri.osu.edu](http://www.sri.osu.edu)

Social Responsibility Initiative Local Food and  
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United States Department of Agriculture Census of  
Agriculture

<http://www.agcensus.usda.gov/>

College's Rural Life Center, The Center for Farmland Policy Innovation, and OSU Extension.

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