

Chapter 2: Markets

1. Introduction

As we stated in the introduction to the report, it is because of the need to maintain preserved farmland as working, income-producing land that we have done this study. In this chapter, we present information on several different aspects of marketing and its contribution to the hoped-for improved vitality and viability of urban-edge farms across the country. These include data from the interviews and owner-operator surveys on:

- 1) 2005–2007 marketing systems,
- 2) the then-emerging marketing systems,
- 3) perceptions about market accessibility and profitability, and
- 4) the presence of major market assistance programs and respondents' knowledge and use of these programs.

2. Marketing in the 15 Counties

Although many results of the study are reported by region or amenity focus, when it comes to marketing there are other relevant groupings. From data on the 15 counties found in USDA's 2002 Census of Agriculture, we know that the greatest commonalities in top-ranking agricultural products across regions occur with grains and landscaping crops (Table 2.1). In Lancaster, Dakota, DeKalb, and Madison counties in the Corn Belt region, grains were the most important category of agricultural product in dollar value in 2002. In Berks, Burlington, and Orange counties in the Mid-Atlantic region, landscaping crops (such as sod, shrubs, and plants) had the largest percentage of total market value, as they also did in King County. In three counties, Dane, Carroll, and Larimer, dairy was the major product; fruit in the two California counties Ventura and Sonoma, horses in Fayette, and sugarcane and vegetables in Palm Beach County. The counties having the largest overall market value of agricultural crops in 2002 were Ventura (over \$1 billion), Palm Beach (\$760 million), and Sonoma (\$572 million) (Table 2.1). The county with the lowest market value of all farm products was Madison in Ohio (\$61 million). Sonoma and Palm Beach counties had the highest amount of land in farms—627,227 and 535,965 acres, respectively (as of the 2002 Census of Agriculture), followed by Sonoma County with 627,227 acres (Table 1.2). Ventura County was almost in the middle of the pack of counties regarding total acres, but produced high-value fruits and vegetables (Table 2.1).

Between the 1987 and 2002 censuses of agriculture, two counties recorded negative growth in the unadjusted market value of total production (Orange and Palm Beach), and seven others had increases that were less than the 57.3% increase in the Consumer Price Index (CPI) at the national level (Table 2.1).¹ That is, only six of the studied counties had growth in the current dollar values of their total sales that was greater than consumer price inflation. By far the biggest

¹ From December 1987 to December 2002, the Consumer Price Index (for "All Urban Consumers – (CPI-U), US city average: All Items, 1982-84=100") increased from 115.6 to 181.8, or by 57.3% percent (US Department of Labor, Bureau of Labor Statistics: <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.txt> [accessed November 20, 2008]).

increase occurred in Sonoma County, with growth of 173%, followed by Ventura County, with a 90% rise between 1987 and 2002.

The 2002 Census of Agriculture found, in 12 of our 15 studied counties, that the product category “Nursery, greenhouse, floriculture, and sod” ranked in the top three groupings of products, comprising from just 2.4% in Fayette County to 48.2% in King County (Table 2.1). In nine counties during the 15-year period 1987 to 2002, this category saw the highest percentage increases in gross sales: Ventura (206%), Lancaster (123%), Dakota (230%), Dane (288%), DeKalb (135%), Carroll (215%), Orange (158%), Larimer (193%), and Fayette (76%).

Vegetable crops recorded impressive growth in five counties: King (510%), Sonoma (285%), Dakota (202%), Carroll (202%), and Burlington (90%), and ranked in the top three in six counties (Table 2.1). Both this category of products and landscaping materials tended to benefit from the nearby, then-growing urban and suburban populations.

Data from our informant interviews support these census findings about landscaping products and vegetables, as well as fruits:

- From three sources in *Burlington County* we learned: “Sod, nursery, and hay are among the best crops now in their financial returns.” “Fruits and vegetables have a competitive advantage here—near to a wealthy, concentrated population.” “Many growers are now producing Asian vegetables and fruits or products specific to the Hispanic population in the area. They’re up there with the nursery growers.”
- Interviews in *Orange County* yielded these observations: “Doing the best financially are sod growers. . . . Their success is directly related to the building boom. Towns have required lawns to be seeded or established.” “There are some sod farmers, and they are doing extremely well. Grass-growing is awesome. . . . They can harvest from February through December.” “We have the consumers [for vegetables] and a way for an extended season—through greenhouses.” “Orange County has an incredibly huge market (the New York City Metro Area just to the south) that is crying for fresh local stuff.”
- In *Carroll County* we were told: “Fruits and vegetables couldn’t ask for a better market. Washington, DC, and Baltimore are within an hour’s drive. If you are organic or unique, that is great. You can do direct marketing or market with other folks cooperatively.” “Smaller farmers and newer farmers come into the market having an idea of where they can market, whether it is [marketing to] farmers’ markets or restaurants, for example. They are OK.”
- From *Dakota County*: “One thing that seems to be gaining momentum is farmers’-market-type farms and organic farms. People really are promoting organic beef, milk, and vegetables.” “There will be a trend towards truck farming . . . and local food supply.”
- From *King County*: “If you are in a segment of custom produce, it is very good to excellent. You have several organic grocers, [selling] locally grown. The thing is to create your own niche. It takes a lot of effort to do it. There is a very active farmers’ market.” “[Who is doing well?] Almost all are direct sales. . . . Many Microsoft folks² or

² The Microsoft corporate headquarters are in Redmond, Washington, which is in King County and is about 13 miles from Seattle.

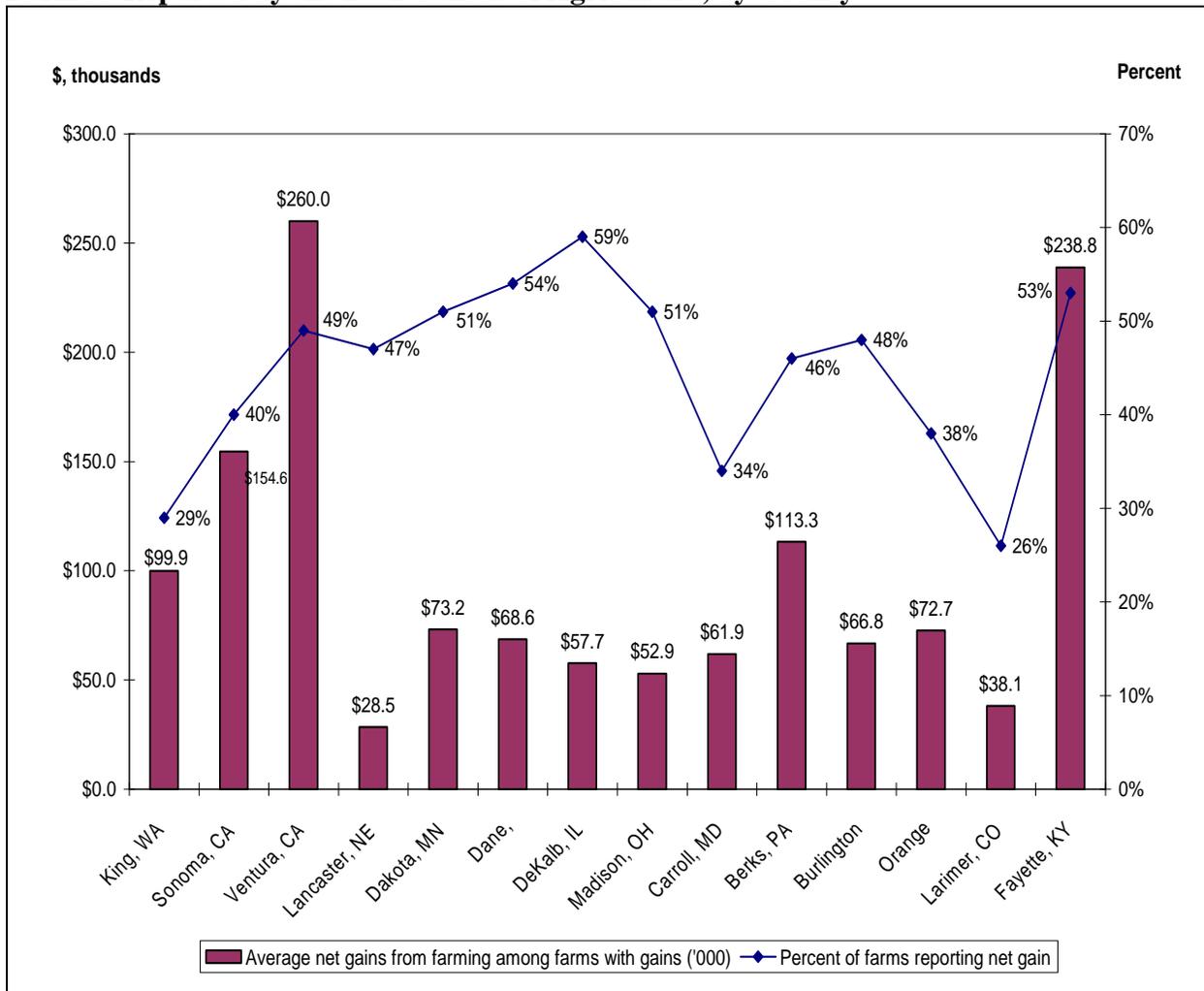
retirees [farm] as second careers. Most commercial ag is veggie crops, fruits. Less eggs, and some micro-dairies such as with goats.”

Table 2.1: Top Three Agricultural Products and Their Overall Market Value in 2002 and Percentage Change in Value, 1987 to 2002, By County

Studied Counties by Region	Top Three Agricultural Products by Market Sales (Percentage of Total 2002 Market Value)	Total Market Value of Agricultural Products (\$ millions) in 2002 and Percentage Change in Total Value (1987–2002)
<i>Pacific Coast</i>		
King County, WA	1. Nursery, greenhouse, & floriculture (48.2%) 2. Dairy products (24.1%) 3. Vegetables (10.1%)	120.1 (+63%)
Sonoma County, CA	1. Fruits (64%) 2. Dairy products (13.5%) 3. Nursery, greenhouse, & floriculture (9.9%)	571.7 (+173%)
Ventura County, CA	1. Fruits (53.5%) 2. Nursery, greenhouse, & floriculture (27.5%) 3. Vegetables (17.5%)	1,018.9 (+90%)
<i>Corn Belt</i>		
Lancaster County, NE	1. Corn, soybeans, sorghum, & wheat (60.1%) 2. Cattle & calves (11%) 3. Poultry (8%)	71.3 (+28%)
Dakota County, MN	1. Corn, soybeans, wheat, & oats (37%) 2. Nursery, greenhouse, floriculture, & sod (19.8%) 3. Cattle & calves (17.8%)	112.0 (+74%)
Dane County, WI	1. Dairy products (36.3%) 2. Corn, soybeans, wheat, & oats (22.7%) 3. Nursery, greenhouse, floriculture, & sod (3.5%)	287.6 (+33%)
DeKalb County, IL	1. Corn, soybeans, wheat, & oats (49.4%) 2. Hogs & pigs (24.5%) 3. Cattle & calves (20.1%)	174.5 (+22%)
Madison County, OH	1. Soybeans, corn, & wheat (73.2%) 2. Hogs & pigs (9.3%) 3. Dairy products (4.8%)	60.8 (+8%)
<i>Mid-Atlantic</i>		
Carroll County, MD	1. Dairy products (31.4%) 2. Nursery & greenhouse (18.1%) 3. Corn, soybeans, wheat, & barley (15.5%)	69.0 (+23%)
Berks County, PA	1. Nursery, greenhouse, & floriculture (33.7%) 2. Poultry (24.7%) 3. Dairy products (20.9%)	287.0 (+71%)
Burlington County, NJ	1. Nursery, greenhouse, floriculture, & sod (46.0%) 2. Fruits & berries (20.3%) 3. Vegetables, melons, & potatoes (12.7%)	83.3 (+50%)
Orange County, NY	1. Nursery, greenhouse, floriculture, & sod (29.7%) 2. Dairy products (28.8%) 3. Vegetables & potatoes (25.8%)	66.2 (-10%)
<i>Highly Scenic</i>		
Larimer County, CO	1. Dairy products (36.8%) 2. Cattle & calves (23.8%) 3. Nursery & greenhouse products (14.8%)	101.1 (+12%)
Fayette County, KY	1. Horses (87.7%) 2. Tobacco (4.4%) 3. Nursery, greenhouse, & sod (2.4%)	178.9 (+36%)
Palm Beach County, FL	1. Sugarcane & vegetables (27.3%) 2. Nursery, greenhouse, & sod (21.7%) 3. Fruits (3%)	759.9 (-11%)

According to the 2002 Census of Agriculture, from 26.1% of the farm operations in Larimer to 58.7% in DeKalb reported net gains from their agricultural sales (Figure 2.1). Comparisons between the 1987 and 2002 censuses showed that 14 of our 15 counties experienced increases (of 1.0 to 22.2 points) in the *percent* of total farms reporting gains. And all 15 saw improvements (of 14.3% to 276.3%) in the *dollar* profits per farm with a gain. Finally, all except three of those percentage increases in net gains were greater than the percentage rise in the general Consumer Price Index over the same 15 years. A metro-area location did not, therefore, preclude a significant increase in an agricultural sector’s total net earnings.

Figure 2.1: Percentage of Total Operations with Net Gains and Average Net Gain per Farm as Reported by the 2002 Census of Agriculture, by County



As we move from census data and start to look at data from our agland owner surveys, we point out again (see Chapter 1) that only landowners who lived in the county we were studying were contacted, that on average 55.2% of the owners were also operators (from 43.1% in Dane County to 89.3% in King County), and that most of our analyses included only owners who were operators and knowledgeable non-operator-owners, not those who reported that they lacked “detailed information” about how the farm was operated. Another caveat is that because we sampled from farmland owners, the percentage of our surveyed owners who reported being

owner-operators and who said farming was their principal occupation was usually lower than the percentage for the operators surveyed by the 2002 census. This ranged from a +3 percentage-point difference in Dane County between our survey sample and the ag census to a -32 percentage-point difference in Fayette County, where only 29% of the sample were operators (see Table 2.2). The median percentage-point difference was -9.

Table 2.2: Differences in Percentage of Farm Operators Reporting Farming as Principal Occupation: Farm Operators Enumerated by the 2002 Census of Agriculture Versus Those Surveyed by This Study in 2006, By County			
County	Percentage from 2002 Census of Agriculture	Percentage from 2006 Survey (Numbers in Parentheses)	Percentage-Point Difference: Survey versus Census
King	53	20 (92)	-33
Sonoma	56	47 (90)	-9
Ventura	57	60 (89)	-17
Lancaster	53	42 (81)	-11
Dakota	60	58 (88)	-2
Dane	56	59 (75)	+3
DeKalb	77	67 (82)	-10
Madison	64	51 (51)	-13
Carroll	56	47 (72)	-9
Berks	64	37 (62)	-27
Burlington	56	37 (95)	-19
Orange	68	65 (93)	-3
Larimer	48	28 (88)	-20
Fayette	61	29 (89)	-32
Palm Beach	54	52 (90)	-2

Not surprisingly, our samples of agland owners yielded owner-operators who differed from the census's findings about operators in other respects. For example, in 14 of the 15 counties we netted relatively fewer operators of very small farms—those recording less than \$10,000 in gross sales (Table 2.3). However, our main purpose in conducting the agland owner survey was not to compete with the every-five-year Census of Agriculture, but to learn landowners' attitudes and other traits relevant to decisions they made affecting the viability of agriculture in their counties. As discussed in Chapter 1, such attitudes included their intentions (if any) to have their land developed, to make agricultural investments on their land, and to develop succession plans for ownership and operating the farmland. A critical set of traits shaping such intentions are their experiences with, and opinions of, the adequacy of markets for the agricultural products raised on their land.

Table 2.3: Differences in Percentage of Farm Operations with Gross Sales of Less Than \$10,000: Farm Operators Enumerated by the 2002 Census of Agriculture Versus Those Surveyed for This Study in 2006, By County

County	Percentage Found in Census	Percentage Found by Survey	Percentage-Point Difference
King	75.5	69.3	+6.2
Sonoma	50.1	30.1	+20.0
Ventura	39.0	14.6	+24.4
Lancaster	59.1	29.2	+29.9
Dakota	48.9	15.6	+33.3
Dane	54.6	16.7	+37.9
DeKalb	23.2	13.7	+9.5
Madison	44.8	24.4	+20.4
Carroll	62.9	46.6	+16.3
Berks	47.5	50.0	-2.5
Burlington	63.4	51.8	+11.6
Orange	47.3	6.3	+41.0
Larimer	75.4	67.1	+8.3
Fayette	45.8	43.0	+2.8
Palm Beach	57.4	29.5	+27.9

3. Market Outlets, Accessibility, and Profitability

Wholesale Marketing

Tables 2.4 and 2.5 present survey data on the types of market outlets used in 2005 by the responding owner-operators who chose to answer the questions about outlets. In each of 10 of the 15 counties, on average more than 50% of these respondents' total sales were made through wholesale outlets (Table 2.4). The top four counties by this measure were in the Corn Belt—Madison, Lancaster, DeKalb and Dakota—with 80.7% to 85.7% of total sales marketed wholesale. On average, their surveyed farmers sold most of their products through private grain elevators or growers' co-ops plus elevators (Table 2.4). Respondents from Ventura County marketed almost 80% of their crops through wholesale outlets (especially growers' co-ops). Dane County's wholesale percentage was at 79%, which included a substantial amount of milk processed by dairies. Respondents in four counties—Burlington, King, Larimer, and Fayette—sold less than 40% of their production wholesale. The other six counties averaged between 49% and 62% of their ag goods going to wholesale outlets.

Table 2.4: Among Surveyed Owner-Operators Reporting on Market Outlets for Their Ag Products, Average Percentage of Total Sales in 2005 by Type of Wholesale Outlet

County	N	All Wholesale Outlets	Private Grain Elevator	Processor (Cannery, Dairy, Winery)	Growers' Cooperative	Super-market or Chain Buyer	Livestock Feed Company	Distributor, Broker, or Handler	Other Wholesale Outlets
Percentage									
Madison	43	85.7	56.7	7.0	15.0	0.0	1.3	4.7	1.2
Lancaster	62	84.7	37.1	9.3	27.9	0.0	3.6	0.0	8.6
DeKalb	70	83.8	62.8	12.7	3.6	0.0	1.9	0.6	2.2
Dakota	80	80.7	50.7	17.7	2.9	0.2	2.4	1.6	6.1
Ventura	78	79.6	0.0	9.9	40.3	0.4	1.3	15.9	11.8
Dane	55	79.0	30.9	28.6	11.3	1.6	1.2	0.0	5.3
Berks	46	61.6	17.3	20.0	2.7	0.0	6.4	1.3	13.9
Sonoma	69	58.2	0.0	46.1	1.3	2.0	1.5	1.2	6.2
Carroll	53	54.9	23.3	12.7	0.2	0.5	3.9	0.0	16.1
Palm Beach	69	54.8	0.0	2.3	8.1	1.2	4.0	5.7	33.6
Orange	72	48.5	0.3	22.4	2.5	6.0	0.6	6.3	10.4
Burlington	82	39.8	9.4	3.1	3.7	0.1	0.6	4.6	18.3
King	55	39.6	0.0	7.2	14.7	0.0	8.4	3.7	5.0
Larimer	66	30.4	1.7	6.4	0.3	0.0	9.7	0.0	12.4
Fayette	51	24.1	2.9	3.9	1.1	0.0	4.7	0.0	12.8

Table 2.5: Among Owner-Operators Reporting on Market Outlets for Their Ag Products, Average Percentage of Total Sales in 2005 by Type of Direct Marketing Outlet

County	N	Total Consumer Direct	Direct On-Farm, Farm Stand, U-Pick	Farmers' Markets	CSAs	Mail Order	Other Consumer Direct	Total Direct to Retail	Other Ag Enterprises
Larimer	66	47.2	29.0	1.5	0.0	0.0	19.7	2.7	12.6
King	55	40.1	21.8	4.2	1.7	0.7	11.2	2.1	12.0
Orange	72	34.2	13.4	8.1	0.5	0.1	12.3	4.6	12.3
Carroll	53	29.2	14.5	5.7	0.0	0.0	9.1	3.1	4.5
Burlington	82	29.1	18.1	0.7	1.1	0.0	9.2	5.1	21.9
Fayette	51	23.6	5.0	2.4	0.0	0.0	16.3	8.3	39.1
Berks	46	22.6	12.7	0.1	2.2	0.0	7.6	0.3	3.8
Sonoma	69	17.1	6.0	6.0	0.0	0.1	5.0	7.9	14.7
Dakota	80	11.3	5.9	1.3	1.0	0.0	3.0	1.1	8.5
DeKalb	70	11.2	9.7	0.0	0.0	0.0	1.4	0.0	1.5
Ventura	78	10.6	4.0	3.5	0.0	0.1	3.0	0.3	9.8
Madison	43	10.1	7.8	2.3	0.0	0.0	0.0	4.2	6.5
Lancaster	62	9.8	7.9	0.02	0.0	0.0	1.9	1.5	2.3
Dane	55	8.7	3.1	0.3	0.1	0.0	5.3	3.5	4.1
Palm Beach	69	8.7	3.5	1.4	0.03	0.3	3.5	7.5	27.0

Direct Marketing

Among the surveyed owner-operators who gave information about their marketing outlets, their average percentages of direct sales to consumers ranged from only 8.7% in Dane and Palm Beach counties to 47.2% in Larimer County (Table 2.5), with a median of 17.1%. All of the top five counties by this measure—Larimer, King, Orange, Carroll, and Burlington—had sizable populations of their own (170,260 to 1.8 million in 2006), belonged to metro areas with at least 1 million inhabitants (Table 1.2), or were positioned right next to such areas (Denver and New York City). The interview data presented on the second page of this chapter supported our

supposition that proximity to large population concentrations promoted relatively high levels of direct-to-consumer sales.

The leading (or tied-for-first) category of direct-to-consumer sales in 13 of the counties was on-farm marketing (e.g., farm stands and U-pick operations). This type of market outlet ranged from an average of 3.1% in Dane County to 29% in Larimer, and its median value was 7.9%. The share of farmers' markets averaged varied from zero among the relevant respondents in DeKalb County to an average of 8.1% in Orange County, with a median of just 1.5%. CSAs (Community Supported Agriculture) were less important—ranging from zero to 2.2%, with the median average being zero. The category “Direct to retail” (e.g., to stores rather than to wholesalers who supplied retail outlets) varied from zero in DeKalb County to 8.3% in Fayette County. Our final category, “Other agricultural enterprises,” accounted for relatively large percentages in Fayette (39.1%), Palm Beach (27%), and Burlington (21.9%) counties. In those three cases, virtually all the “other” enterprises were horse-related.

Market Accessibility

The surveyed owner-operators were asked about their satisfaction with the accessibility and profitability of their marketing outlets. Among those choosing to respond to these questions, the percentage selecting the “very satisfied” option for *access* varied from 18% in Berks and Orange counties to 45% in Fayette County (Figure 2.2). When we add the percentages of “moderately satisfied” farmers, the combined totals increase to a range of 38% in King County to 82% in Madison County, with a median of 63%. For 12 of the 15 counties, at least 52% of these respondents were either “very satisfied” or “moderately satisfied” with accessibility (Figure 2.2).

We had a separate measure of accessibility—a survey question that asked, “Please estimate the percentage of the farm operation’s total gross sales of agricultural products in 2005 that you . . . transported to points of sale that were: within a one-hour trip from your farm [and] more than one hour away from your farm.” Four Corn Belt counties—Lancaster, Madison, Dane, and Dakota—were among the top five by average percentage of total products (79.9% to 87.6%) sold no more than an hour away (Table 2.6). The same four were also among the first four in percentage of respondents being either “very satisfied” or at least “moderately satisfied” with accessibility (Figure 2.2). However, regression analysis found that percentage of sales conducted within an hour of the farm was a statistically significant predictor of satisfaction with market access in only five of the 15 counties: Ventura, Dakota, DeKalb, Carroll, and Berks counties (Table 2.7). For many of our surveyed farmers, “access” must have had more dimensions than distance to points of sale. Even if close-by buyers took most of their products, there were probably other potential customers—farther away or just as close—to whom many respondents would have liked to sell, but could not for product-quality, quantity, price, or other issues.

Type of marketing outlets qualified as predictors in more counties. In six cases, the higher the percentage of total sales marketed via wholesale outlets, the *more* likely the respondent was to be “very satisfied” or at least “moderately satisfied” with accessibility of markets (Table 2.7). Three counties recorded that same relationship with direct marketing. However, in Ventura County’s case, the greater the percentage from direct marketing, the *less* likely the farmer was pleased. Full-time farmers in Burlington and Palm Beach counties were *more* likely to be pleased, perhaps because they had more incentive to learn how to optimize their marketing choices. And

in three counties, if the surveyed owner-operator raised one of the counties' top three ag products, his/her chances of being satisfied were higher. We hypothesized that, the more important the kind of product in that location, the better the marketing facilities were likely to be.

Figure 2.2

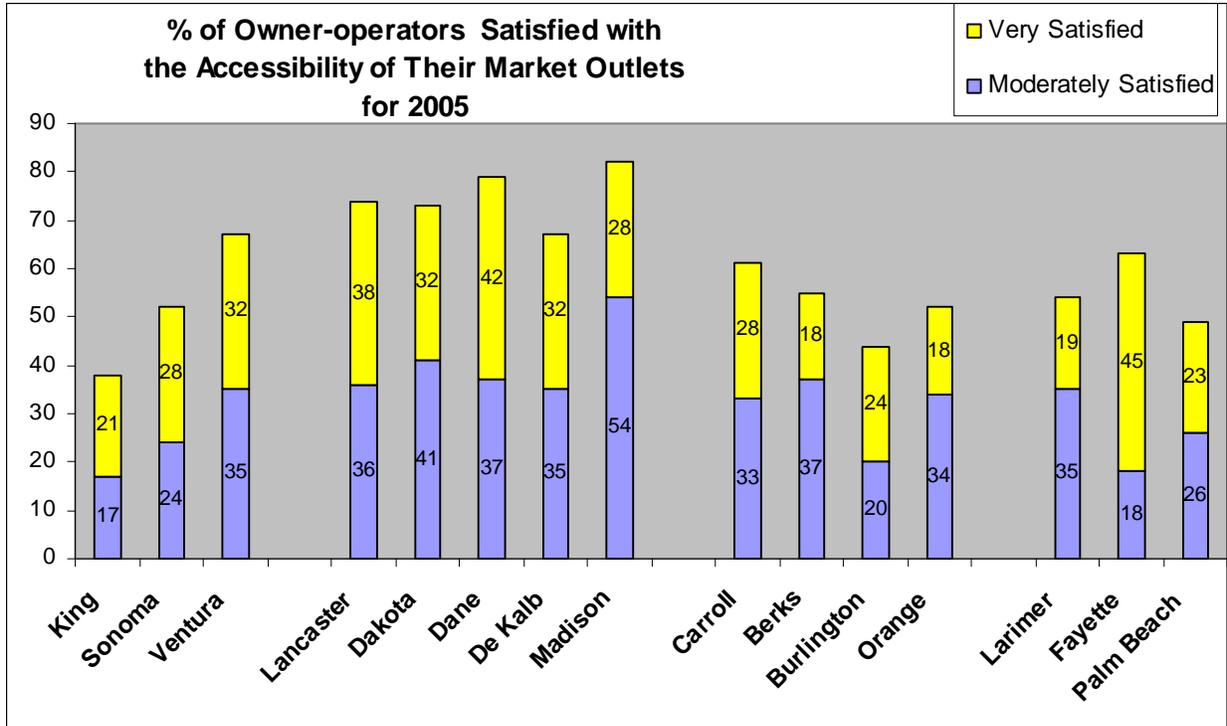


Table 2.6: Among Owner-Operators Answering Question about Distance from Farm to Points of Sale for Products They Raised, Average Percentage Sold within a One-Hour Trip and Average Percentage Sold More Than One Hour Away, By County

County	Average for Sales within One-Hour Trip from Farm	Average for Sales More Than One Hour Away	N
	Percentage		
Lancaster	87.6	11.4	66
Madison	85.2	11.3	45
Fayette	83.3	10.1	51
Dane	81.3	9.3	56
Dakota	79.9	16.5	73
Larimer	78.7	14.7	59
Berks	76.7	14.0	39
Carroll	77.3	11.8	48
Sonoma	73.3	22.4	71
Ventura	70.8	29.3	65
DeKalb	68.1	30.3	65
Burlington	67.7	18.9	60
Palm Beach	66.6	28.6	53
King	66.0	25.4	42
Orange	51.1	41.5	58

Table 2.7: Predictors of Whether Owner-Operators Who Answered Questions about Adequacy of Markets Reported They Were “Very Satisfied” or at Least “Moderately Satisfied” with “Accessibility of . . . Marketing Outlets for Your Farm Goods,” by Predictor Trait	
Predictor Trait¹	Counties in Which the Trait Qualified as a Predictor
Percentage of total gross sales in 2005 that was transported to points of sale within a one-hour trip from the farm	The higher that percentage, the <i>more</i> likely the farmer was satisfied with market access: Ventura, Dakota, DeKalb, Carroll, Berks
Percentage of total gross sales sold via wholesale outlets that year	The higher the percentage, the <i>more</i> likely the farmer was satisfied with market access: King, Dane, DeKalb, Burlington, Larimer, Palm Beach
Percentage of total gross sales sold via direct marketing	The higher the percentage, the <i>more</i> likely the farmer was satisfied: Burlington, Orange,² Palm Beach The higher the percentage, the <i>less</i> likely the farmer was satisfied: Ventura
Whether the respondent was a full-time farmer	Full-time farmers were <i>more</i> likely to be satisfied: Burlington, Palm Beach
Whether one of the top three ag products (according to 2002 Ag Census) was produced on respondent’s owned land	If one of these types was produced, the <i>more</i> likely the farmer was satisfied: Dane (grains), Madison (grains), Orange (landscaping, vegetables)
Value of gross sales	The higher the total value, the <i>more</i> likely the farmer was satisfied with market access: Carroll, Berks, Fayette

¹These predictors were identified through logistic regression analysis. The models by county are presented in Appendix 1 to the report.

²Percentage of sales sold directly to consumers.

Profitability

We asked the surveyed owner-operators about satisfaction with the profitability of their markets (Figure 2.3). The highest percentage of respondents answering that they were “very satisfied” or “moderately satisfied” was recorded for Dane County (at 51%), followed by Fayette County (49%) and Madison County (48%). The owner-operators were most dissatisfied in King and Berks counties (14% and 25%, respectively).

The regression analysis on profitability found these predictors that were statistically significant in at least two county samples at a level of .10 or lower:³

- Respondents in Ventura, Berks, and Orange who raised vegetables on their land were (other things being equal) *more* likely to be satisfied.
- In five counties’ samples, satisfaction was *more* likely if the surveyed operators reported that at least one of the types of labor used on their land in 2005 had been available (when needed) “always” or “most of the time”: Ventura, Lancaster, Dane, and Burlington, and Palm Beach.⁴
- In three counties (DeKalb, Madison, and Carroll), the likelihood of satisfaction tended to *increase*, the higher the percentage of the operator’s total sales marketed through direct outlets, while in three others (King, Dane, and Palm Beach), relatively greater proportions of total sales through wholesale channels predicted profitability.
- Respondents in three counties (Ventura, Dane, and Orange) were *more* likely to be satisfied if they perceived their local governments to be “even-handed” when dealing

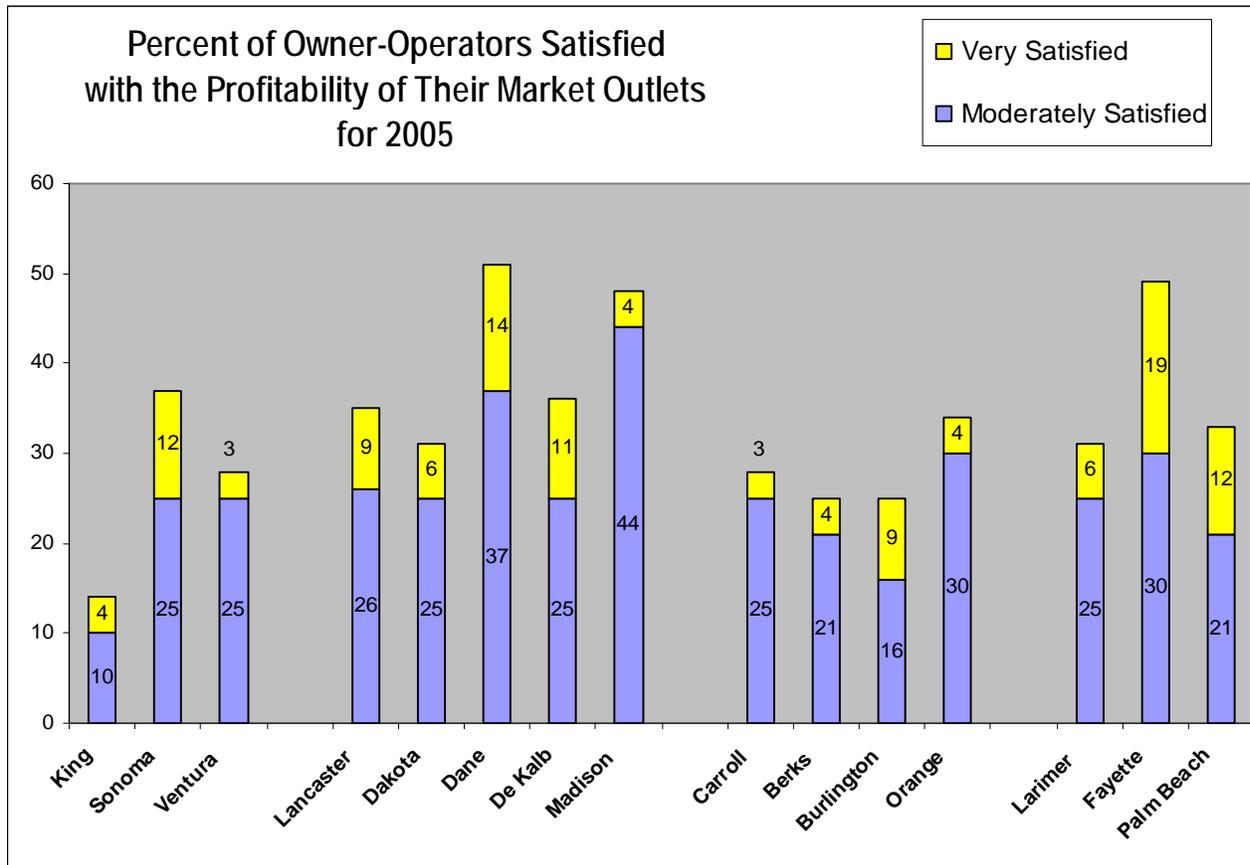
³ That is, a Wald test estimated that there was no more than a 10 in 100 chance that in the population of all farm operators for that county the measure of association would be zero.

⁴ The four types (not mutually exclusive) were: family labor, nonfamily labor, seasonal, and year-round.

with conflicts between farmers and non-farmer neighbors. In a fourth county, Palm Beach, the likelihood of being satisfied tended to *decrease* if the farmer believed local authorities sided with the neighbors. Presumably, farm operators in the three counties could apply profitable practices that, in less friendly political contexts (like the fourth), neighbors could block or restrict.

- In two counties each, satisfaction was predicted if operators had relatively high total gross sales (Sonoma and Fayette), were at least 55 years old (Berks and Fayette), believed that local government zoning was effective “in maintaining an adequate supply of land for farming” (King and Dakota), and among those who believed that their state’s right-to-farm legislation was “very” or at least “moderately helpful” in “protecting farmers against unfair nuisance complaints” (Sonoma and Dakota).

Figure 2.3



Interview Findings

Through the informant interviews, we were able to get a more extensive look at the issue of satisfaction with markets. However, some care should be taken in applying the results of these interviews because the number of interviewees varied by county and not all interviews covered the same topics and products. For instance, in some counties the results could be based upon only two or three informants instead of a larger sample.

The counties include a range of marketing systems: from those counties that still primarily marketed traditional commodities such as grains (e.g., Lancaster, DeKalb, and Madison) to those that seem to be transitioning to marketing systems that feature alternative products, including landscaping crops such as in Berks and Burlington counties, wine grapes in Sonoma County, and thoroughbred horses in Fayette County. Between the 1987 and 2002 ag censuses, the total value of Berks County's nursery and other landscaping crops increased 67% to \$96.8 million. In the same period Sonoma County's fruit sales (mostly grapes) soared 400% to \$366 million, and Fayette County's equine sector grew 49% to \$156.8 million. There are also counties that seem to be in between these two extremes (e.g. Dane, Orange, and Larimer), with significant growth in newer crops, but not as great changes in dollar terms (compared to Berks County, etc.), while long-established products (dairy, beef cattle) remained important. Thus, we review the adequacy of markets across counties by type of agricultural product as described by the informants who discussed them.

Grains

In those counties with substantial grain production, most of the informants in a county who discussed marketing outlets described their grain markets as still adequate for farmers; these include Lancaster, Dane, Dakota, DeKalb, and Madison counties. Farmers there had choices of marketing outlets, including local grain elevators, growers' co-ops, and buyers out-of-county. For example, two informants in Madison County told us:

- “More farmers are doing contracting, more out of grain storage. They use their own trucks to haul grain to the best buyer.”
- “Farmers deal directly with elevators. They seem to be satisfied—have ample outlets. They own their own semi-trucks, so have great mobility. If the price is better in Cincinnati, they sell there.”

Implied in this second quotation was that Madison County benefited from proximity to river barge shipping on the Ohio River. It was an advantage reported also for Dakota County (on the Mississippi River) and DeKalb County (near the Illinois River). Carroll County is close to Baltimore's harbor. However, informants mentioned both the closing of an important Cargill harbor facility there and increased consolidation of grain buying (to the advantage of one main buyer).

Livestock

In terms of livestock, informants across counties were mixed in their review of these markets. Carroll County reported a decrease in traditional beef operations. A common problem was the lack of nearby slaughtering facilities. Beef farmers in Carroll County had to take their animals to market about 50 miles away. Hog producers could sell locally, but a buyer told us he was running out of farmers supplying him with cattle. By contrast, hog farmers in Dane County were compelled to ship to buyers out of state, 300 miles away by one estimate. Their counterparts in DeKalb County faced a trip of at least 160 miles, unless they had contracted with a closer processor. DeKalb County cattle farmers sold in three markets, all out of county: “Distance is an issue. It is 225 to 400 miles to enter the next regional market. We have an isolated region around DeKalb County.” We were told that the last slaughtering facility in King County was scheduled to close, and the closest facility for Orange County farmers—“two hours north”—was also expected to be shutting its doors soon. An Extension adviser there told us: “Farmers are again

calling me to see where they can take these animals. This is a major stumbling block for producers who want to venture into alternative livestock enterprises [e.g., goat meat for ethnic markets or fallow deer for venison meat].”

Larimer County had at least one slaughtering facility, but overall cattle production was trending down. Between the 1987 and 2002 ag censuses, the total sales of cattle and calves dropped by 50%. Informants in Fayette County, however, said that markets for cattle or other livestock (horses) were doing very well: “There is a very strong livestock stockyard—the largest east of the Mississippi.” There were positive assessments also for marketing certain livestock products in Berks County. One helpful condition was, “We do a lot of processing for out-of-state products,” including pork and dairy. Another informant was fairly upbeat about poultry marketing in Berks County except that the number of processors had declined from five to three.

Informants in King, Dakota, and Orange counties reported low profitability in markets for *milk*. Prices had not kept up with inflation. Buyers preferred to deal with members of producers’ cooperatives rather than with individual farmers because “of the greater flexibility in getting the supply.” Another dairyman (from Orange County) told us: “I am more likely to get a [dealer’s] truck since I belong to a marketing coop. I would not want to be sitting here as an independent looking for a dealer to come and get me.” The results were more mixed in Berks County, where some informants thought that dairy producers had a good choice of marketing outlets, while others raised concern about the excessive power of dairy cooperatives in the county. Opinions were also mixed in Carroll and Sonoma counties.

In some counties—including King, Sonoma, Dane, and Orange—dairy farmers were experimenting with the development of high-value niche products (like hormone-free milk and specialty cheeses), but few informants viewed this as a panacea for the profitability problem. Dane County was the only county in which informants evaluated the dairy markets as adequate; dairy was still a key agricultural sector for the county:

- “They have survived because they chose to specialize in dairy, and they hire quality consultants and have kept their operations modern.”
- “Dairy is the backbone of our ag economy. It has avoided corporations and is still family owned.”

Fruits and Vegetables

Informant opinions about the adequacy of wholesale markets for fruit and vegetables were mixed across counties. The most important studied county by far for this combination of types of crops was Ventura. In 2007 its ag sector’s top four products in market sales (each above \$100 million) were strawberries, nursery stock, lemons, and celery. They were followed by tomatoes, raspberries, and avocados (\$53 million to \$86 million--Agricultural Commissioner, Sonoma County, 2008). Buyers for large retail chains needing sustained supplies of produce liked to do business with Ventura County farmers because of the county’s Mediterranean climate, good soils, and normally adequate irrigation water: “Companies like Wal-Mart and Costco have figured out it’s better to contract with large suppliers. . . . They set a reasonable price, and then push the production risk and inventory control back to the farmer.” Irrigation supports vegetable production also in Larimer County, where at least one large producer and “some satellite farms”

sold much of their output wholesale. Other vegetable growers tended to be small and produced for niche markets.

In Orange County, which has the huge New York City market close by, both fruit and vegetable sales declined significantly between the 1987 and 2002 ag censuses—by 38% and 74%, respectively. They had difficulty competing with production areas that could harvest year-round, although special greenhouses (“high tunnel”) extended their growing seasons. The county still had packinghouses for vegetables to which producers could sell. However, several knowledgeable observers expected proportionally more sales via direct marketing—both to consumers within the county and to farmers’ markets and restaurants in the greater New York City area. An Extension adviser estimated that 50% of her farmer clients were marketing directly and that their total dollar sales were about half direct.

In Sonoma County, apples used to be a major commodity but had declined 30% in “bearing” acres, to 2,901 acres, between 1998 and 2007; and by the latter year there was only one apple processor left in the county. However, in the same time period the total market value of the county’s apple sales grew by 20% to \$7.1 million. The changes in the wine grape sector were more impressive. In the same 11-year time period, the total “bearing” acreage expanded by 55% to 54,862 acres and total sales by 80% to \$416.5 million (Sonoma County Agricultural Commissioner, 2000, 2008). Many growers had enlarged their planted acres of grapes over time, and numerous small “trophy” vineyards had been started. Grapes were produced mainly under contract, and there had been an oversupply earlier in the decade. Most informants thought the markets for grapes were adequate, although one informant described a consolidation in distributors and wholesalers for grapes, making it harder for smaller vineyards.

Direct Marketing

In most of the studied counties our informants reported recent increases in direct marketing. However, the importance of direct sales varied considerably. In 2008 Fayette County had six farmers’ markets operating a total of seven separate sessions per week. Vendors there were blessed with customers “with good money to pay the premium prices.” Direct sales of farm goods were substantial also in King County, where Seattle and other urbanized areas in the county supported 33 farmers’ markets, and which comprised “a very wealthy area that will pay the price premium. You need that price to remain viable.” However, a good climate for fruits and vegetables, a large population, and high disposable incomes did not necessarily translate into considerable direct marketing. Ventura County had those three positive features, but relatively few farmers’ markets (four markets open a total of four days in 2008); and informants told us that there was “very little direct marketing,” “very small community interest and support,” and “most producers look for buyers before they plant.” The explanations offered by two other informants suggest that local direct markets could not compete well against high-value products sold wholesale: “We have maintained a commodity agricultural sector.” “Ventura County is dominated by fresh, premium products,” such as strawberries, raspberries, and nursery goods.

Then there were counties like DeKalb and Madison, with populations too small (about 100,000 and 41,500, respectively, in 2006) to sustain much direct marketing to consumers, restaurants, or stores (Table 1.2). For example, in DeKalb County, “some producers have sweet corn and vegetable stands or take part at farmers’ markets. . . . [T]he total number of people who can do

this is limited.” That county had one market, operating only on Thursdays. One or two farmers provided goods to local stores, like the one grower who contracted to supply Wal-Mart with sweet corn. Madison County in Ohio also appeared to have just a single farmers’ market. Of course, these numbers of separate markets per county are only suggestive of differences across counties, since a single market might have more total sales than several.

Larimer and Lancaster counties, both with about a quarter million in population (Table 1.2), reported higher levels of direct marketing compared to those for DeKalb and Madison counties. In 2008 Lancaster County’s farmers’ markets totaled six in number, each operating one day per week, while Larimer had two, one of which was open twice each week and the other, once. In 2005–2006 Lancaster County had four CSAs (subscription direct marketing), while 10 operated in Larimer County.

In 2008 Berks and Carroll counties had four and five separate markets, respectively, while 12 operated in Orange County. Information about on-farm marketing is harder to gather, as are those for CSAs and farm-to-school and farm-to-restaurant programs. We know that both of the latter two types of programs were functioning in Larimer and King counties. And farm-to-school programs were found in Dane, Carroll, and Orange counties. In Fayette County, however, both farm-to-school and farm-to-hospital initiatives were tried, “but they did not go very well; they were not successful” (as of 2005).

During 2005–2007 what kinds of ag products were being sold via direct marketing in the counties we studied? Vegetables and fruits were reported for every county, including Ventura, where informants reported sales of herbs, specialty vegetables, flowers, and heritage varieties of oranges. DeKalb County, with its 2006 estimated population of 100,139, had an estimated 30 farmers then selling fruit and vegetables “out of their yards.” In Burlington County, part-time farmers used an “honor system” to sell from their front yards while they and their spouses worked off-farm. The stands were restocked every day, and customers placed their payments in a box. Lancaster County had a limited number of u-pick operations for strawberries and apples, while Fayette County farmers were switching from growing tobacco to raising wine grapes, goats, llamas, and alpacas, among other goods. Other niche livestock products we encountered included: lean beef, no hormone meat, raw milk eggs, and horses for recreation and competition.

Many, if not most, of the direct-marketing and/or niche producers appeared to be small in overall sales and be part-time farmers. In Fayette County these types of operators were described as having “more the small farm acreages,” in Larimer County as being “small acreage farmers,” in King County as “small diverse agriculture,” in Dane County as “smaller farmers selling fruits and vegetables,” and so on. The survey data support these perceptions. Among the 267 owner-operators in our sample who reported at least 10% of gross sales being directly marketed, a total of 76% grossed less than \$50,000, and 45% grossed less than \$10,000. Moreover, 61% of the total classified themselves as part-time farmers.

Some of the local experts whom we interviewed were hesitant about these markets. Their products might have been bringing high-value crops to the county, but informants questioned the overall potential of these products to preserve a viable agricultural sector (Berks and Dane counties) and/or noted that direct marketing still accounted for small proportions of total sales (Berks, Dane, and Fayette counties). In Carroll County, relatively few of the county’s farmers

were taking advantage of the direct-to-consumer markets. One explanation was the lack of customers willing or able to support the prices needed to cover local producers' costs: "There are four farmers' markets in Carroll County [as of 2005], but they are not doing very well. People in this county expect things like big beets for cheap prices. . . . So, the concept of the new customer has not arrived yet." In another studied county, a representative of a group that teaches "low-income families how to shop for food to get the most nutrition for their money" admitted, "[We] do not advise them to go to the farmers' markets. They can get much more for their money at the grocery store."

Fayette County is unique in our sample in that the county is transitioning from tobacco, historically a very important and well-paying commodity, to other products. With funding assistance available from Kentucky's share of the National Tobacco Settlement (Hall, Snell and Infanger, 2000), these farmers tend to move into specialty crops like those discussed a little earlier (e.g., goats, llamas, etc.). Informants viewed the markets (including direct and niche outlets) for these products to be satisfactory.

A number of informants in different counties reported other important alternative marketing opportunities related to suburban development. These include *hay* (often for equine operations) in Burlington, Orange, Carroll, and Larimer counties and *nursery* products in Ventura, Carroll, Burlington, Orange, Larimer, and Fayette counties. For both of these two types of products in almost all the relevant counties, we gathered informant opinions that markets were satisfactory.

Finally, *equine* operations were also noted as increasing in importance in King, Sonoma, Carroll, and Fayette counties.

4. Programs to Improve Marketing

If farming is to be viable in the future, there must be a good deal of help for new and beginning farmers, as well as resources for planning, training, and value-added infrastructure. Our interviews with agricultural leaders in all 15 counties detailed a number of programs that were attempting to do this. Note that we are not presenting an exhaustive list since it was developed from the interviews and not from a census of these programs.

Informants in several counties mentioned the availability of loans from the USDA's Farm Service Administration (FSA) to *beginning farmers*. However, interviewees in Dane, Madison, and Larimer counties said that few people were taking advantage of the program. One program officer explained: "Nobody really uses it because it would be ineffective due to the price of the land. . . . No feasible way to buy the land." A knowledgeable observer in the same county said, "There is a federal program [through] FSA, but people don't really use it. This is mostly because farming is shrinking." There were FarmLink programs in King and Sonoma counties, among others, that aimed to match persons interested in farming with current operators looking for help, if not successors. In Dane County there was the Grow Wisconsin Initiative (GWI) for beginning dairy farming. New York State has a Small Farm and Beginning Farmer program in which some farmers from Orange County participated.

Diversifying farm production and operations is an obvious path to increasing income through multiple income streams. Perhaps Fayette County is the epitome of this, as it and much of the

rest of Kentucky is changing from tobacco into many other crops and enterprises. The tobacco settlement had funded the state's Agricultural Development Fund to provide technical assistance, research, and other assistance to tobacco growers intending to switch to different crops. A New Crop Opportunity Center in the county was also trying to help farmers diversify. In Wisconsin the GWI offered grants to help dairy farmers add value to their milk production, and the Center for Integrated Agricultural Systems at the University of Wisconsin provided education and technical assistance to many dairy farmers (new and established). However, a knowledgeable observer cautioned that this grant program had "minimal impact . . . [in Dane County] because of the urbanization." With land prices so high, many potential clients for this program chose "to sell their land and move their farming operation to a more rural area." In Burlington County the Cooperative Extension service had programs to help farmers diversify vegetable production, and in Lancaster County USDA Rural Development grants helped with choices for alternative crops and value-added activities.

Among the programs to help farmers with *processing their ag products* was the University of Kentucky's "training and outreach programs [that aimed to] introduce [farmers] to good practice rules, to teach farmers about using cost-effective equipment and how to use their equipment to be in compliance with public safety regulations." In Lancaster County operators could benefit from the University of Nebraska's Center for Food Processing that assisted food companies and individuals with manufacturing and marketing of products. Dane County used funds from the GWI to help dairy farmers to modernize their operations, introduce new products, and implement innovations in their supply chains. Orange County producers tapped into the State Department of Agriculture and Markets' Agricultural Development grants to build on- and off-farm processing infrastructure. From the Rural Development Center in Larimer County, "the most frequent use of credit or loans" was for processing "a raw product—let's say cherries, raspberries." The Agricultural Enhancement Council in Palm Beach County advised the county commissioners on grant requests for new agricultural projects such as assistance with diversification.

The type of assistance programs most frequently mentioned in the interviews related to *marketing*. Informants talked about state- or county-supported programs to *encourage purchase of locally grown food*: "Puget Sound Fresh (western Washington State), "Buy Fresh, Buy Local" (Nebraska), "Minnesota Grown," "Jersey Fresh," and "Pride of New York." These efforts included media advertising, placing labels on participants' food, and signs on roads alongside their farms. Other state government efforts to promote marketing included financial aid from the Kentucky Governor's Office for Agricultural Policy (using tobacco settlement money), from the Pennsylvania Department of Agriculture's Center for Dairy Excellence, and from the Washington State Department of Agriculture's Agricultural Marketing Grant program. Related programs were "Farm to Table" (King County), as well as "Farm to Restaurants" and "Farm-to-Schools" (e.g., "New York Harvest for New York Kids."). There were also informational programs like the Mid-Atlantic Direct Marketing Conference: "We go every year and gain a lot out of that. That is a great educational program. And we think the marketing and educational programming coming out of Cooperative Extension [in Berks County] are also helpful and timely." Orange County Extension had a program of "business management and production education to commercial vegetables growers" that could help diversify their products.

According to our informants, Cooperative Extension at the county and state level was a prominent player in at least half of the counties in providing technical assistance, business training, research, and overall moral support for *alternative markets* and *value-added activities*. County-level economic development agencies were another useful source of assistance in several places, including Fayette and Carroll counties. Nonprofits were mentioned in four counties as providing needed assistance (Larimer, Lancaster, Berks, and Carroll). USDA's Natural Resources and Conservation Service helped livestock farmers to cope with water-quality regulations in King, Dane, Orange, and Larimer counties, among presumably others.

The types of program that the largest number of informants listed as providing marketing assistance were those that promoted *farmers' markets*. As mentioned earlier, although these outlets represented a very small percentage of total sales for our surveyed owner-operators, they were—according to our informants—of growing importance in some counties.

Use and Usefulness of Programs

Toward the end of the survey, we asked respondents about the existence and usefulness of, in each of their counties, any of seven types of farmer assistance programs: for marketing directly to consumers, to retail, or to wholesale markets; developing alternative agricultural enterprises (e.g., ag tourism or horseback riding); diversifying or adding new products; developing value-added products; and processing their crops or livestock. Most impressive in the answers is that across all counties, large percentages of responding operators were unaware of, or had no opinions about, assistance programs that informants had described to us as functioning in the county. For example, 55% of the farm operators surveyed in King County answered that either no programs for “marketing directly to consumers” were functioning in the county or that they were “not sure” of their usefulness. The corresponding combined percentage in Fayette County regarding programs for “diversifying or adding new products” was 45%. That is, they did not know or offer an opinion of the help available to diversify away from tobacco production. Knowledge of the processing programs in Orange County was more widespread; only 35% of the owner-operators responded “not operating in the county” or “not sure.” Nevertheless, there seemed to be a dearth of awareness of, or interest in, these programs. More informed outreach should help.

Among the respondents who had opinions about assistance programs in their counties, the type they found most useful across the 15 counties were those focusing on marketing directly to consumers. From 39% of the Dakota County sample to 77% in King County found it “very useful” or at least “moderately useful,” and the median value was 59% (Table 2.8). Ranking second was assistance for wholesale marketing—with a range of 21% to 82% and a median of 52%. The least appreciated were programs for developing value-added products, where the approval rate ranged from 13% to 79%, and the median was just 33%.

When looking at ratings by owner-operators in the same county across the seven different types of aid, the most positive evaluations were in Ventura County. More than half (51% to 82%) of the farmers there who gave opinions found six of the seven types to be either “very useful” or “moderately useful” (Table 2.8), and the median value for all seven categories was 57%. The second-most positive set of ratings was recorded for Carroll County, with a median of 55%.

Table 2.9 presents the opinions of surveyed farmers about the kinds of assistance that “should be in [the county] to assist farmers.” Programs for “diversifying or adding new products” earned the highest percentages of “yeses”—at least 40% in 13 of the 15 counties, with an overall median of 49% and an average of 48.3%. Second was “marketing directly to retail markets” (stores, restaurants, etc.), with a median of 47% and a mean of 45.8%. Assistance for “direct-to-consumers” was very close behind, with a 46% median. The least-supported type was “developing value-added products (bagging, packaging, bundling, precutting, etc.)” Across the 15 counties, it attracted “yeses” from 16% to 55% of the farmers answering this set of questions, and the median was 30%.

Table 2.8: Among Surveyed Owner-Operators Who Gave Opinions about Usefulness of Assistance Programs They Knew to Be Operating in Their County, Combined Percentage Finding Each Type “Very Useful” or At Least “Moderately Useful,” By County

County and Number of Owner-Operators	Direct-to-Consumers	Direct-to-Retail	Wholesale	Develop New Ag Enterprises	Diversify and Add New Products	Develop Value-Added Products	Processing Products
Percentage of Surveyed Owner-Operators							
<i>Pacific Coast</i>							
King County, WA	77% (31)	21% (14)	21% (14)	21% (28)	19% (21)	19% (16)	18% (22)
Sonoma County, CA	69% (42)	53% (34)	67% (43)	51% (37)	33% (24)	36% (25)	70% (27)
Ventura County, CA	51% (45)	56% (36)	82% (44)	31% (35)	57% (47)	79% (38)	60% (26)
<i>Corn Belt</i>							
Lancaster County, NE	42% (60)	36% (59)	35% (57)	29% (62)	31% (61)	33% (61)	33% (57)
Dakota County, MN	39% (28)	31% (26)	56% (34)	36% (25)	31% (29)	19% (21)	50% (36)
Dane County, WI	48% (31)	37% (27)	52% (27)	41% (22)	39% (26)	26% (19)	42% (31)
DeKalb County, IL	44% (36)	28% (25)	59% (32)	29% (35)	41% (29)	35% (26)	29% (31)
Madison County, OH	44% (18)	31% (13)	46% (13)	31% (13)	23% (13)	17% (12)	39% (13)
<i>Mid-Atlantic</i>							
Carroll County, MD	59% (32)	43% (21)	55% (20)	67% (21)	39% (18)	23% (13)	62% (26)
Berks County, PA	74% (27)	38% (24)	63% (27)	44% (18)	38% (21)	13% (15)	52% (21)
Burlington County, NJ	67% (36)	57% (30)	49% (35)	60% (30)	40% (30)	33% (18)	22% (18)
Orange County, NY	63% (56)	51% (41)	51% (45)	42% (53)	54% (50)	55% (44)	35% (43)
<i>Highly Scenic</i>							
Larimer County, CO	56% (39)	32% (25)	44% (25)	47% (32)	52% (25)	40% (20)	50% (24)
Fayette County, KY	71% (38)	50% (24)	44% (27)	38% (32)	49% (33)	32% (19)	46% (26)
Palm Beach County, FL	62% (26)	52% (23)	76% (25)	43% (30)	56% (25)	42% (24)	40% (20)

Table 2.9: Among Surveyed Owner-Operators Who Answered Questions about Which Assistance Programs “Should Be in [the County] to Assist Farmers,” Percentage Who Answered “Yes,” By Type of Program and County

County and Number of Owner-Operators	Direct-to-consumers	Direct-to-retail	Wholesale	Develop new ag enterprises	Diversify and add new products	Develop value-added products	Processing products
Percentage of Surveyed Owner-Operators							
<i>Pacific Coast</i>							
King County, WA (n = 84)	40	33	30	31	31	16	32
Sonoma County, CA (n = 88)	49	48	48	40	42	28	44
Ventura County, CA (n = 82)	31	34	44	29	52	43	32
<i>Corn Belt</i>							
Lancaster County, NE (n = 74)	42	42	38	35	53	37	50
Dakota County, MN (n = 86)	35	36	41	21	35	24	38
Dane County, WI (n = 71)	48	47	49	25	42	28	41
DeKalb County, IL (n = 78)	47	49	49	39	49	41	55
Madison County, OH (n = 48)	33	29	33	23	46	25	42
<i>Mid-Atlantic</i>							
Carroll County, MD (n = 63)	64	52	49	40	52	27	54
Berks County, PA (n = 59)	70	63	56	48	53	39	64
Burlington County, NJ (n = 90)	46	49	44	44	44	36	39
Orange County, NY (n = 88)	68	64	57	57	63	55	55
<i>Highly Scenic</i>							
Larimer County, CO (n = 84)	42	37	35	44	51	29	39
Fayette County, KY (n = 80)	70	64	68	58	69	45	60
Palm Beach County, FL (n = 83)	43	40	40	43	42	30	30

5. Comments

Some of the benefits of farming close to urban areas were mentioned at the beginning of the report. One is access to larger populations of consumers/eaters. By our choice, all the studied counties were in areas belonging to one of two classes: metro areas with more than 1 million people or metro areas with fewer than 1 million people. And according to a USDA Economic Research Service study of 1990 census data, the 15 counties were subject to “medium urban influence” or “high urban influence” for 48% (Sonoma County) to 100% of their land surface (Dakota, Madison, Carroll, Berks, Burlington, and Fayette counties—Table 1.2).

A second complementary benefit to a large population base is the ability to do more direct marketing to consumers and institutions. In our survey of owner-operators, Larimer, King,

Orange, Carroll, Burlington, and Fayette counties had the biggest percentages of respondents with relatively high average percentages of gross sales from direct marketing (32% to 50%). The other nine counties had 25% or less.⁵ When key informants in the counties were asked whether they believed that direct marketing would increase significantly, those in the nine counties tended to say “yes.” However, some of them cautioned that the increases would be small and/or that direct marketing would continue to account for limited proportions of total farm sales. Among the five Corn Belt counties, the outlook for direct marketing was more optimistic in Lancaster and Dane counties.

Small Farms

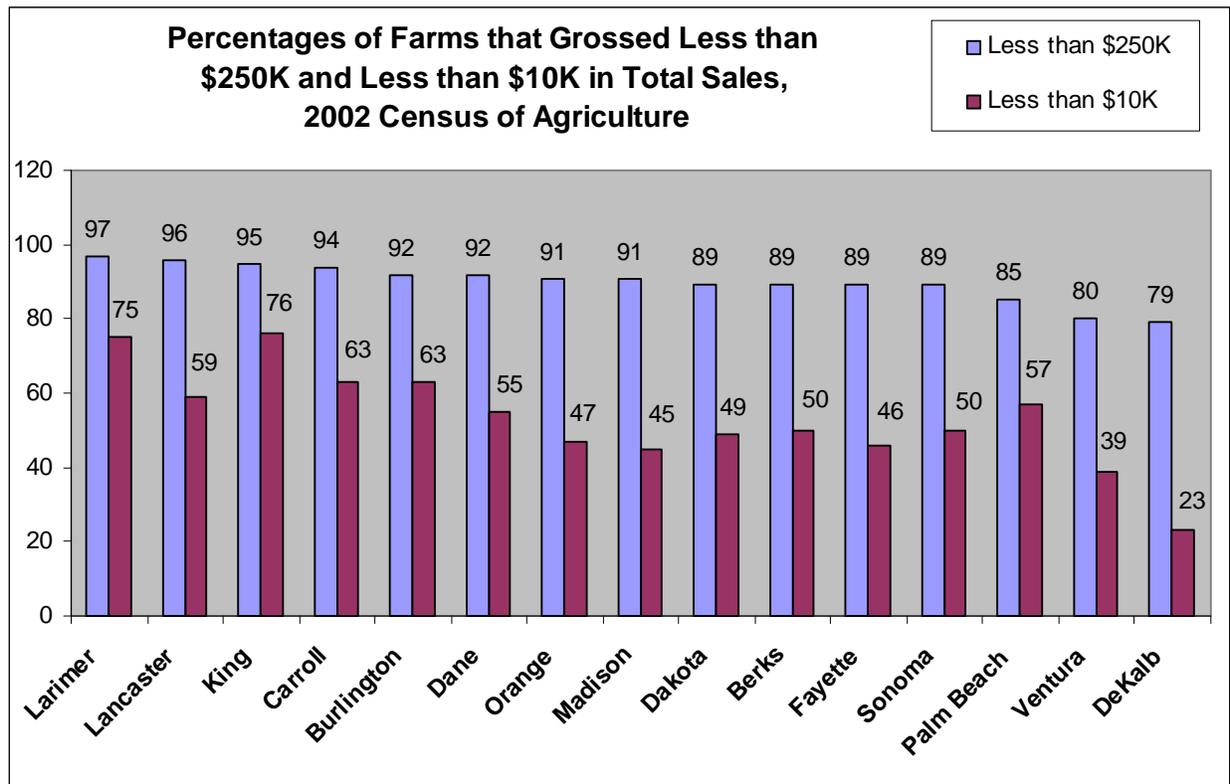
Small farms (defined by USDA as having less than \$250,000 gross sales) are dominant in the US agricultural landscape. In the counties covered by this study, the percentages of small farms fell into three groups, as shown in Figure 2.4 and Table 2.10. According to the 2002 Census of Agriculture, Larimer, Lancaster, King, and Carroll counties (group A) had the largest percentages of small farms thus defined—an average of 95.5%, according to the 2002 Census of Agriculture (and a mean of 88.9% in our survey samples for the same counties). The census entries for eight other counties—Burlington, Dane, Orange, Madison, Dakota, Berks, Fayette, and Sonoma (group B)—averaged 90.3% small farms (81.1% in our samples). Palm Beach, Ventura, and DeKalb counties (group C) had the lowest percentage of small farms (averaging 81.356% in the census and 63% in our samples). Because we studied only peri-urban areas, we have a particular interest in the smallest farms. Those farms with less than \$10,000 gross sales averaged 68.3% of the farms in group A (53.1% in our samples), 50.6% of group B on average (29.7% in our samples), and 40% in group C (19.3% in our samples).

Among the total of 1,064 surveyed operators who provided information on gross sales and acres farmed, as their gross sales increased, the average number of acres (both owned and rented) tended to rise. For example, the average size of farms grossing less than \$10,000 in sales was 51 acres; for those earning \$50,000 to \$99,999, the mean acres in the farm were 254, and for operators reporting \$500,000 or more in sales, the average was 1,354 acres.⁶ King, Burlington, and Palm Beach counties stand out for their small average acres until the gross sales reached \$250,000. Below that mark the average size in King County was 52 acres. Above it, the mean grew to 684 acres. The corresponding values for Burlington County were 54 and 681 acres, while for Palm Beach County they were 44 and 675. In all three counties high-valued crops could achieve good revenues on relatively small acreages.

⁵ The average percentages cited here are the sums of the entries for “Total Consumer Direct” and “Total Direct to Retail” found in Table 2.5 above.

⁶ The Pearson correlation coefficient for these two measures of farm size was .369, with a significance level of .000 in a two-tailed test.

Figure 2.4



Farm Revenue’s Share of Total Household Income

There is a lot of missing data for the survey variable measuring percentage of household income supplied from farming. The most frequently chosen category for those owner-operators who did provide the information is 1% to 24%. Across the 15 counties, this response option accounted for 41.1% of the choices, and it ranged from 23.3% for Orange County to 68% in Larimer County. Across the 15 counties, 12.5% of respondents said that farming provided zero percent of their household income. The highest percentage for this response option was the King County sample’s 44.3%; and Madison County had the lowest at 2.3%. Not surprisingly, there was a rather strong, significant relationship between gross sales and the percentage of the operators’ household income derived from farming.⁷

⁷ The Pearson correlations coefficient for these two measures of farm revenue was .601, with a significance level of .000 in a two-tailed test.

Table 2.10: Gross Farm Sales of Surveyed Owner-Operators, By Ranges and By County						
Studied County	Less than \$10,000	\$10,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 and above
	Number (and Percentage) of Owner-Operators with Sales in the Indicated Range					
King	52 (69.3%)	10 (13.3%)	1 (1.3%)	1 (1.3%)	2 (2.7%)	9 (12.0%)
Sonoma	25 (30.1%)	18 (21.7%)	12 (14.5%)	11 (13.3%)	5 (13.3%)	12 (14.5%)
Ventura	12 (14.6%)	14 (17.1%)	10 (12.2%)	13 (15.9%)	10 (12.2%)	23 (28.0%)
Lancaster	21 (29.2%)	18 (25.0%)	9 (12.5%)	16 (22.2%)	4 (5.6%)	4 (5.6%)
Dakota	12 (15.6%)	10 (13.0%)	9 (11.7%)	21 (27.3%)	11 (14.3%)	14 (18.2%)
Dane	11 (16.7%)	15 (22.7%)	8 (12.1%)	14 (21.2%)	12 (18.2%)	6 (9.1%)
DeKalb	10 (13.7%)	9 (12.3%)	9 (12.3%)	15 (20.5%)	15 (20.5%)	15 (20.5%)
Madison	10 (24.4%)	8 (19.5%)	6 (14.6%)	12 (29.3%)	4 (9.8%)	1 (2.4%)
Carroll	27 (46.6%)	16 (27.6%)	5 (8.6%)	4 (6.9%)	4 (6.9%)	2 (3.4%)
Berks	28 (50.0%)	14 (25.0%)	3 (5.4%)	7 (12.5%)	2 (3.6%)	2 (3.6%)
Burlington	44 (51.8%)	16 (18.8%)	9 (10.6%)	9 (10.6%)	2 (2.4%)	5 (5.9%)
Orange	5 (6.3%)	20 (25.3%)	3 (3.8%)	26 (32.9%)	7 (8.9%)	18 (22.8%)
Larimer	49 (67.1%)	13 (17.8%)	4 (5.5%)	1 (1.4%)	2 (2.7%)	4 (5.5%)
Fayette	34 (43.0%)	15 (19.0%)	12 (15.2%)	9 (11.4%)	4 (5.1%)	5 (6.3%)
Palm Beach	23 (29.5%)	15 (19.2%)	9 (11.5%)	8 (10.3%)	4 (5.1%)	19 (24.4%)
TOTAL	363 (33.7%)	211 (19.6%)	109 (10.1%)	167 (15.5%)	88 (8.2%)	139 (12.9%)

The final analysis we did was of the difference in use of market outlets between the smaller and larger farms. As expected, the ratios of average percent marketed wholesale to mean sold via direct outlets grew as gross sales increased. Across the studied counties, that ratio was 0.80 for farms with less than \$10,000 gross sales; 5.8 for farms with gross sales from \$50,000 to \$499,000; and 5.9 for farms selling more than \$500,000. Some counties had very small numbers of farms in the smaller gross sales categories. For counties that had at least 10 respondents with gross sales of under \$10,000, the mean of the county averages was 36.1% through wholesale and 41.5% through direct marketing. In contrast, for farms with gross sales between \$100,000 and \$249,999 (there had to be at least 10 farms in this category for a county to be included in the analysis), the mean percentages for wholesale averaged 78.9% while 13.3% on average went via direct outlets.

One of the places where small farms are likely to find useful outlets is in farmers' markets. However, in our 15 counties, the average percentages of operator sales through such markets in 2005 ranged from zero in DeKalb County to 8.1% in Orange County (Table 2.5). The mean of the 15 averages was 2.5%. As discussed earlier, several interviews with local experts supported this finding of limited agricultural sales through farmers' markets. Another example was from an

interviewee in Lancaster County who said that the largest market there had had 160 stalls in 2005, but that about half of them were occupied by non-farmer vendors (e.g., artists and artisans).

Our key informants were asked to look forward 10 years from the time of their interviews (2005–2007) and predict changes, if any, in the types of farm operations that would be found in their counties. An analysis of their responses is presented more fully in Chapter 5. In nine of the counties, at least a quarter of the informants who addressed this question expected more small operations (Table 5.9).

It is obvious that certain crops and livestock can achieve much more agricultural success than others: horses in Fayette County, wine grapes in Sonoma County, and high-value fruits and vegetables in Ventura. Horse-related enterprises were part of many counties' agricultural picture and will likely continue to be important unless the number of wealthy families declines in these communities. Hay was a good crop in many places, although it may be a small part of total farm income. If used for horses or other livestock it would be a viable crop; if used as straw for construction it will do fine as long as development is robust.

The future of the landscaping-products sectors of the studied counties will probably also be influenced greatly by the amount of new development. Among those categories of crops with at least \$1 million in sales per county in the 1987 ag census, this category of crops recorded the highest growth in market value between then and the 2002 census in nine of our studied counties—ranging from an increase of 76% in Fayette to 288% in Dane. In another four counties, it registered the second-highest growth rates—from 27% in Palm Beach to 194% in Burlington.

Dairy presented perhaps the most pessimistic sector in our study. In all of the six counties in which dairy recorded the first or second largest volume of sales in the 2002 Census of Agriculture (King, Sonoma, Dane, Carroll Orange, and Larimer counties), our key informants expected declines because of low profits, problems with succession (e.g., price of land too high for new entrants), and environmental conflicts (such as over manure odors and flies). For example, interviewees in King County told us, “We are losing dairy; [the farms] are smaller and smaller.” “There will be a decrease in dairy farms and a decrease in milk processing.” “Some dairy will stick around but will be mostly gone [in 10 years].” From Dane County we received these opinions: “There will be a continued loss of dairies; we need new strategies to deal with manure.” “Dairy is affected by manure ordinances that could eliminate dairies.” “With greater herd sizes, there is more manure; therefore, you need to lease more land.” “No new dairies because of price of land. You have to be in an established family, either via birth or marriage.”

For Sonoma, Dane, Carroll, Orange, and Larimer counties there were predictions of fewer but larger dairy operations and more specialty products like organic milk. One issue raised by many informants in regard to livestock in general was the impact of increasing suburbanization and urbanization; that is, as more people move to these agricultural areas, there seemed to be less toleration of large livestock operations, causing many of their operators to be pessimistic about the future of livestock production in these areas. Of interest is that only one of the key informants in any county mentioned the presence or possibility of grass-fed animal production.

Overall, key informants were mixed with regard to their predictions regarding organic production in the future. Most said that because of high consumer demand, there would be continued growth of this sector in their counties (such as milk in Dane County and vegetables in Lancaster County). In Madison County, on the other hand, most of the interviewed experts did not see any or much increase in organic production.

For some time, one of the foci of agricultural development has been value-added food processing as a way for farmers to capture more of a commodity's food value (Cowan, 2001). In our interviews we were told that in most counties that there was not much processing infrastructure, except for traditional enterprises like dairies and slaughterhouses, and that these were declining. Berks County seemed to be an exception, with its sizable variety of locally processed farm goods, including mushrooms, flour, pretzels, and other baked goods, milk, meat and poultry, and jams and jellies (among others). In three counties—King, Sonoma, and Lancaster counties—nine to 15 experts believed that there would be increases in-county processing of locally grown ag products (and none or only one informant per county predicted declines or was unsure). Sonoma County interviewees anticipated more cheese from milk and wine from grapes. Informants in Lancaster County mentioned processing of corn and soybeans (for fuel) and milk into cheeses. In King County, more animal processing was expected, including through “a mobile slaughtering unit.” There were obstacles. In a county where farmers had multiple opportunities to increase their income from processing, an informant complained, “They [local farmers] are very slow to change.” Another reported that processing plants were not welcome because of expected nuisances (odors, noise, truck traffic). We do note that, across the 15 counties, from 30% of the surveyed owner-operators in Palm Beach County to 64% in Berks answered “yes” to the question of whether there should be programs to assist farmers with processing in their counties (Table 2.8).

In 2005-2007 a number of states (many of them in the Northeast) were addressing the economic security of farmers through a variety of agricultural viability efforts. For example, the New Jersey State Development and Redevelopment Plan included policy objectives for suburban and fringe areas designed to meet the needs of the agricultural industry “for intensive packaging, processing, value-added operations, marketing exporting and other shipping” (Heinrich-Schilling, 2004). Maryland, New York, and Virginia were in the forefront of supporting agricultural development specialists through Cooperative Extension to provide technical assistance for multiple value-added activities. The interest among those we surveyed in having these programs in their county was quite high, although it is clear that many farmers did not avail themselves of the assistance that was already in place. Given the marketing challenges we have described here, urban fringe counties need to increase their efforts to maintain a viable agricultural sector. This would include greater outreach to farmers, funding for programs, and, perhaps most importantly, a commitment of city, county, and state politicians and other leaders to keep their agricultural farms and related enterprises healthy.