

An Economic Study of 19 Organic Vegetable Farms

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Growing great produce is not the biggest hurdle facing most fresh market vegetable growers; earning a reasonable living poses the greatest challenge. From 2002-2004, the Center for Integrated Agricultural Systems worked with a group of 19 fresh market vegetable growers on a participatory, farmer-led study. The growers collected data on sales, labor and other aspects of their businesses. They then created financial ratios that allowed them to compare small, medium and large operations in a way that respected their confidentiality. Their goal was not a standard economic analysis, but to create a basis for comparisons between farms and discussions of how to forge a quality livelihood from farming. Growers wanting a standard economic analysis of their farms can use balance sheets, financial statements, and cash flow statements.

This is a very brief summary of a longer report titled *Grower to grower: Creating a livelihood on a fresh market vegetable farm*. The report can help guide growers as they set financial and quality of life goals for their farms and structure their operations to realize those goals. The averages and ranges for some measures and ratios used in the study are shown here. The growers used additional ratios, described in the full report. This case study involved a small number of farms that were not randomly selected. The results, therefore, may not be generalized.

	<i>Market Gardens < 3 acres</i>		<i>Market Farms 3-12 acres</i>		<i>Veg. Farms >12 acres</i>	
	Range	Average	Range	Average	Range	Average
Gross/Acre	\$8,888 - \$25,605	\$15,623	\$6,267 - \$15,276	\$11,121	\$6,750-\$14,466	\$10,810
Net cash income/Acre	\$1,892-\$9,487	\$5,664	\$1,331-\$8,547	\$4,679	\$1,103-\$7,430	\$3,757
Net cash/Gross	9% - 57%	36%	16%-57%	40%	16%-51%	31%
Owner hourly wage	\$3.32-\$6.57	\$4.96	\$2.26-\$16.92	\$7.45	\$3.46-\$14.90	\$11.36

Labor: Labor hours on the market gardens with fewer than three acres ranged from 933 to 2,994 hours per acre, and averaged just under 2,000. Payroll amounted to between 0% and 42% of gross sales. Labor on the 3 to 12 acre market farms ranged from 402 to 1,443 hours per acre and averaged just under 850. Payroll expenses consumed as much as 34% of gross sales on these farms. Labor on the four large-scale organic vegetable farms ranged from 462 to 613 total hours per acre and averaged 554. Payroll expenses consumed between 19% and 41% of sales.

Gross sales per acre: Small plantings of organic, fresh market vegetables, herbs, flowers and berries can garner large gross sales. The farms in this study realized three-year average annual gross sales between \$6,267 and \$25,605 per acre. The most impressive sales per acre were seen

at the smallest scale. These figures are based on the land being used for cash crops in a given year. If land in cover crops or fallow were included, these figures would be lower for most farms.

Net cash income per acre: Expenses, especially labor costs, can quickly eat into gross sales on a vegetable farm. Net income matters most in terms of financial sustainability. The term 'net cash income' is used here to describe gross sales minus all current year cash expenses. Depreciation and opportunity costs were not included. In the growers' own words, they wanted to know “how much cash they had at the end of the season to provide for themselves and their households.” Three-year average net cash income for the farms in this study ranged from under \$2,000 to over \$8,000 per acre. Under 3-acre market gardens experienced more year-to-year variation in net cash income per acre than the two larger farm types. Community Supported Agriculture (CSA) appeared to help stabilize income. CSA farms are assured relatively steady sales because members pay for their share of the harvest at the beginning of the year. Other marketing strategies are subject to the vagaries of the marketplace and weather.

Comparing net cash income to gross sales: Dividing net cash income by gross sales results in a net cash to gross ratio. Higher net cash to gross ratios were strongly associated with farms that concentrated on CSA. The smaller farms with higher net cash to gross ratios had lower payroll expenses, with the farmer doing the bulk of the work. Some larger farms maintained high net cash to gross ratios through careful training and management of labor crews.

Livelihood and quality of life

Most of the small market gardens provided part-time livelihoods for the growers. For most of the market farmers and all of the vegetable farmers, farming represented a primary or full-time livelihood. All of the growers in this study reported that they were generally, but not overwhelmingly, pleased with their quality of life. They said that they would like more personal time, health insurance and retirement security. The mid- and large-scale growers felt that dedicated, skilled employees would improve their quality of life.

Special challenges

There are many challenges faced by vegetable growers that may vary with scale of production. Some of the most common are: (1) finding affordable land near urban markets, including enough for crop rotations, (2) achieving a scale of production meeting income needs without extensive paid labor, (3) balancing hand labor with scale-appropriate, inexpensive tools and machinery, (4) finding employees who are a good match with the farmer's management style and who stay longer than a single season, and (5) balancing the demands of a farm with personal time, health considerations, personal relationships, raising children, and, in some cases, off-farm jobs.

Applying the findings to your operation

There is no ideal size for a fresh market vegetable farm; growers need to use their management skills and economic analysis tools to figure out the scale and level of mechanization that makes the most sense for them. To learn more about the financial information and ratios described here, please see the full report *Grower to grower: Creating a livelihood on a fresh market vegetable farm*. This report is available from CIAS at the address above and at www.cias.wisc.edu.