Staff Paper P03-11 December 2003

STAFF PAPER SERIES

RESULTS OF A FARM AND MARKET SURVEY FOR HMONG SPECIALTY CROP FARMERS IN THE MINNEAPOLIS, ST. PAUL METRO AREA

by
Kent Olson, Vang Yang, Nigatu Tadesse,
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UNIVERSITY OF MINNESOTA

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Results of a Farm and Market Survey for Hmong Specialty Crop Farmers in the Minneapolis, St. Paul Metro Area[1]

EXECUTIVE SUMMARY

This report is part of a larger project, "Risk Management Education and Farm Management Development Program for Hmong Specialty Crop Farmers in the Minneapolis, St. Paul Metro Area," funded by the Risk Management Agency, U.S. Department of Agriculture. The project was designed to assist Hmong farmers in the Twin Cities area in improving their production and management practices so they are able to increase their economic viability and reduce their exposure to risk. As part of the overall project, 62 Hmong farmers and 69 customers at farmers markets were surveyed to determine the local specialty crop production and market conditions. The findings of these 2 surveys are summarized below.

The most common reason for these Hmong to become a gardener or farmer was because it was a hobby or part of their culture. Almost half of the farmers surveyed have been farming for 2-5 years in the U.S. Over 80% were farming for 10 years or more in another country. The median size of the surveyed farms is 3 acres in both 2002 and 2003. For those who rented land, the median rent was $200 per acre in 2002 and $250 in 2003. Almost two-thirds of the farmers indicated that the total amount of the land they farmed had remained the same in the past five years. Those farmers surveyed had farmers all over the Twin Cities metropolitan area but over half of the farmers said their farm or garden was in Dakota County. Washington County was the county with the next highest percentage.

Half of the farmers surveyed use a walk behind roller tiller for plowing, cultivating, and seedbed preparation. The most common method used for weed control was hand hoeing. The most common method for controlling insects is insecticides.

Thirty percent of farmers indicated their total production costs in 2002 ranged from $3,000 to $4,999. Two-thirds of the farmers said their costs were less than $1000 for seed and transplants. A third of the responding farmers indicated their expenses for insecticides, herbicides, and other pesticides were less than $500. Forty-nine percent said their fertilizer costs were less than $500. Seventy-nine percent said their hired labor costs were less than $500. Only 35% of the 54 farmers responding keep records on costs and returns from their crops. The median cash wage (including benefits) was $6 per hour for the 15 farmers responding.

Forty-two percent of those farmers responding reported total farm product sales between $3,000 and $8,999. Another 40% reported sales between $9,000 and $14,999. Fifty-eight percent of the farmers reported that vegetables and herbs constituted between 1-25% of their total sales. Seventy-one percent of the farmers said they had sold 40% or less of the vegetables and herbs they had grown in 2002. The median number of crops grown by an individual farmer in 2002 was 13. Over two-thirds of the farmers grew tomato, pepper, green bean, bitter melon, cilantro, squash, green onion, eggplant, and long bean. Over half the farmers grew slicing cucumber, lettuce, and potato.

Fifty-eight percent of the farmers responding said the market price was the most important reasons for selecting vegetable crops. Ninety-six percent of the farmers responding said they marketed their fresh produce at farmers' markets. Sixty-two percent of the farmers responding said they had sold their crops at 3 to 5 market locations in 2002. The median number of market locations per week was 4 for these farmers. The median number of days selling at farmers' markets was 5 per week for these farmers in 2002. For the farmers surveyed, the most popular markets were Minneapolis at Lyndale, downtown St. Paul on Saturday, and the Aldrich Arena.

Seventy-two percent of the farmers think all their customers know how to prepare and cook the vegetable crops they grow, but 11% did not think so and 17% did not know. Only 33% of the farmers share recipes for their vegetable crops with their customers.

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[1] By Kent Olson, Vang Yang, Nigatu Tadesse, Yanping Chang, Nengshao Yang, and Seung-wan Lee, Staff Paper P03-11, Department of Applied Economics, University of Minnesota, St. Paul, 2003. This report is currently available on the web at http://www.apec.umn.edu/faculty/kolson/currentres.html.

The median amount paid by the 43 responding farmers for membership fees at farmers' markets in 2002 was $135. Only 18% of the 55 responding would be willing to pay higher fees for a better stall location in the farmers' market. Forty-six percent of the 48 farmers responding thought stall location should be permanently assigned in the farmers' market. Thirty-eight percent of the farmers thought the fee should be based on location.

According to those farmers responding, the two major barriers for success in farming for small vegetable and flower growers in the Twin Cities Metropolitan Area are: lack of farming skills and knowledge, and language and cultural barriers.

Only 9% of the 54 farmers responding said they had a written farm business plan for their crop production. Most of the farmers financed their own operation. Only a few of the 23 farmers responding were familiar with USDA loan programs. Few farmers indicated they were familiar with crop insurance programs. Sixty-eight percent of the 19 farmers responding (or 21% of the 62 surveyed) said they were familiar with multi-peril crop insurance (MPCI). Only 12% of the 50 farmers responding had bought crop insurance in 2002.

The most common age range for these farmers was 56-65 although many were in the 36-45 and 46-55 age ranges. Ninety-six percent of the 45 farmers responding said they could read and write Hmong; 38% said they could read and write English.

The most frequently indicated needs for future education programs by the farmers were production oriented: weed control, insect control, fertilization, and pesticide safety. Soil preparation, marketing strategy, and organic production were also popular topics. The most preferred educational style or delivery method is in a class.

Reflecting the locations at which the 69 customers were interviewed, the most common markets to shop and buy fresh produce were the markets in downtown St. Paul (on Saturday and Sunday), Woodbury, St. Lukes, Minneapolis (Lyndale), 7th Place Mall (on Thursday), Midtown Public Market, and Burnsville. Overwhelmingly, the customers preferred to shop on Saturday (78%) and Sunday (64%). The customers also preferred to shop in the morning on Saturday and Sunday. Sixty percent of the customers had traveled 0-5 miles to the farmers' market. Almost half of the customers indicated they shopped at a farmers' market once a week. Another 24% indicated they shopped at a farmers' market twice a month.

All the customers regularly bought some kind of vegetables or herbs. Over half of the customers bought potatoes, snap beans, peppers, sweet corn, carrots, cucumbers, basil, and winter squash. Also popular were beefsteak tomatoes, beets, lettuce, melons, summer squash, spinach, broccoli, watermelon, cherry tomatoes, and eggplant. Ninety-seven percent of the 63 customers responding said they would you consider buying a "new" vegetable to eat if they had a recipe.

For those customers who did buy potted flowers, the most popular potted flowers were begonia, zinnia, coleus, snapdragon, and marigold. Fifty-nine percent of the customers did not regularly buy any potted flowers. Of the customers who did buy cut flowers, the most popular cut flowers were zinnia, snapdragons, and sunflowers. Twenty-nine percent of customers did not regularly buy any cut flowers. Other popular products that customers would like to buy besides fresh produce include homemade jellies, fresh meat, honey, and dried fruit and vegetables.

Eighty-one percent of the responding customers said the overall quality of the services were excellent at the farmers' market they were attending that day. Twelve percent said the services were good. None of the customers said the overall service was poor. Similarly, 79% of the customers responding rated the personal service from individual vendors as excellent, and 18% as good. No one said individual vendor service was poor.

Convenient location of the market was the most important factor for 48% of the customers who selected only one factor from among those listed. When asked to select from another list of factors, "knowing where your food comes from" and "fresh food" were selected the most often by those who selected only one factor that they considered most important about farmers' markets. When asked to indicate 1 or 2 reasons why they might choose NOT to shop at a farmers' market, 43% of the customers chose "too busy." Inconvenient times and parking problems were each chosen by 30% of the customers.

Eighty-eight percent of customers indicated they typically spend between $10 and $29 on vegetables and herbs during each visit to a farmers' market. Forty-four percent indicate they spend between $1 and $9 on other products.

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Results of a Farm and Market Survey for Hmong Specialty Crop Farmers in the Minneapolis, St. Paul Metro Area

Kent Olson, Vang Yang, Nigatu Tadesse,
Yanping Chang, Nengshao Yang, and Seung-wan Lee[2]

December 2003

This report is part of a larger project, "Risk Management Education and Farm Management Development Program for Hmong Specialty Crop Farmers in the Minneapolis, St. Paul Metro Area," funded by the Risk Management Agency, U.S. Department of Agriculture. The project was designed to assist Hmong farmers in the Twin Cities area in improving their production and management practices so they are able to increase their economic viability and reduce their exposure to risk.

As part of the overall project, two surveys were done to determine the local specialty crop production and market conditions. The first major section of this report presents the results of the survey of Hmong farmers. The second major section of this report presents the results of a survey of farmers' market customers. Some concluding comments are in the last section of this report.

Survey of Hmong Specialty Crop Farmers

The survey instrument for the farmers was developed with the goal of obtaining information on their farm, their farming experiences, the practices and methods, revenues and costs from farming, what vegetables, herbs, and flowers they grew, their marketing methods and locations, their view of barriers for success in farming, their financing methods, their crop insurance knowledge and some general questions on age, ability to read and write Hmong and English, education, future educational needs. The survey instrument is included as an appendix to this report. In the summer of 2003, the surveyor interviewed Hmong farmers at a Hmong farmer meeting at UMore Park, one of the Research and Outreach Centers of the University of Minnesota and at several farmers' markets in the Twin Cities area. The farmers were interviewed at these markets: Minneapolis (Lyndale), Downtown St. Paul (Saturday and Sunday), Aldrich Arena, Nicollet Mall, Woodbury, 7th Place Mall, and Rosemount. The selection of farmers was not a random process; those selected were volunteers and willing to answer the questions.

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[2] Olson is Professor, Department of Applied Economics; V. Yang is a Community Program Specialist, New Immigrant Farm Program; Tadesse is Outreach Coordinator, USDA-Farm Service Agency, and former extension educator, New Immigrant Farm Program; Chang is a graduate student, Department of Biostatistics, N. Yang is a former Community Program Specialist, New Immigrant Farm Program, and Lee is a graduate student in the Department of Applied Economics, all at the University of Minnesota, Twin Cities.

Since many farmers did not read English or did not have time to read the survey as they waited on customers at the markets, the surveyor read the questions to the farmer and tallied their responses. In this way, 62 farmers completed the survey. These 62 farmers represent about 20% of the approximately 300 Hmong farmers in the Minneapolis, St. Paul metro area. The results from these 62 surveys are reported in this section.

The Farming Operation

Hmong farmers or gardeners have many reasons for farming or starting to farm. The most common reason for becoming a gardener or farmer was because it was a hobby or part of their culture (Table 1). Other important reasons were to give children a farming experience, to supplement income, as a step to full-time farming, and to supply some of the family's food.

Table 1. Reasons for becoming a gardener or farmer (% of 61 farmers responding)	
Hobby/culture	64%
To give children a farming experience	38
To supplement income	36
As a step to full-time farming	33
To supply some of the family's food	28
Other	3

Almost half of the farmers surveyed have been farming for 2-5 years in the U.S. (Table 2, Figure 1). Over 80% were farming for 10 years or more in another country (Figure 2). However, the number of years farming in the U.S. was not significantly ($p=0.05$) correlated with length of farming in another country.

Figure 1. Years farming in the U.S.

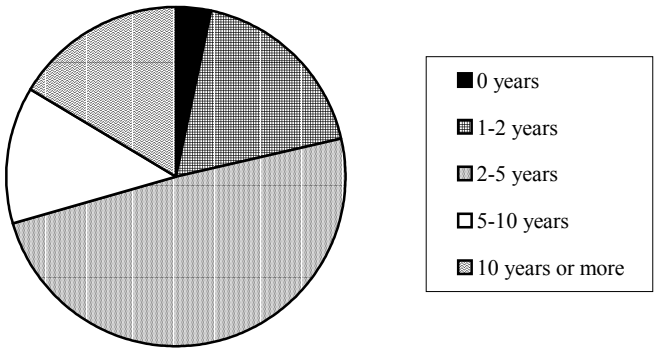
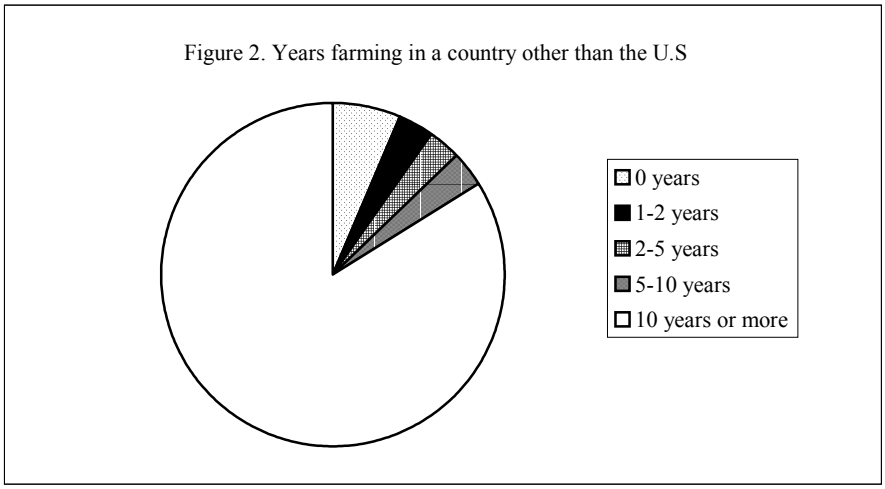
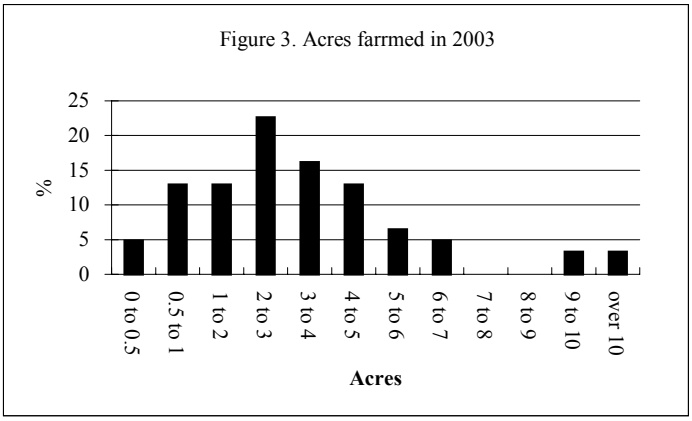


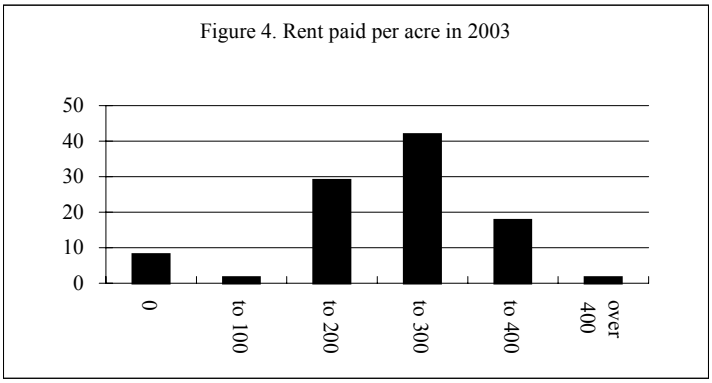
Table 2. Number of years farming (% of 61 farmers responding)		
Years	In the U.S.	In another country
0	3%	7%
1-2	18	3
2-5	49	3
5-10	13	3
10 years or more	16	84



As expected from prior observation, Hmong farms are small (Figure 3). The median size of the surveyed farms is 3 acres in both 2002 and 2003 (Table 3). The average size in 2003 is higher due to one farm; without that farm the average size is 3.7 acres. For those who rented land, the median rent was $200 per acre in 2002 and $250 in 2003 (Figure 4).

Table 3. Acres farmed, owned, and rented and rent paid in 2002 and 2003 (all 62 farms)					
Year		Acres farmed	Acres owned	Acres rented	Rent paid ($/acre)
2002	Median	3	0	3	200
	Average	3.0	0.5	2.9	202
	Std dev.	2.4	2.8	2.3	112
2003	Median	3	0	0	250
	Average	4.5	2.2	16.2	235
	Std dev.	6.8	8.9	52.0	105





Farm size has remained stable in the past few years, but the farmers were unsure whether it would stay the same in the future. Almost two-thirds of the farmers indicated that the total amount of the land they farmed had remained the same in the past five years (Table 4, Figure 5). However, only 14 percent thought it would stay the same in the next 5 years (Figure 6). Thirty-five percent thought their farming land would increase in the future while 45% were unsure. There was no significant (p=0.05) correlation between the amount of land farmed in the past 5 years and what they thought would happen in the next 5 years.

Table 4. Changes in the total amount of land farmed. (% of 53 & 58 farmers responding)

	Decreased	Stayed the same	Increased	Unsure
Past 5 years	9	66	25	n/a
Next 5 years	7	14	35	45

Figure 5. Changes in land farmed during the past five years

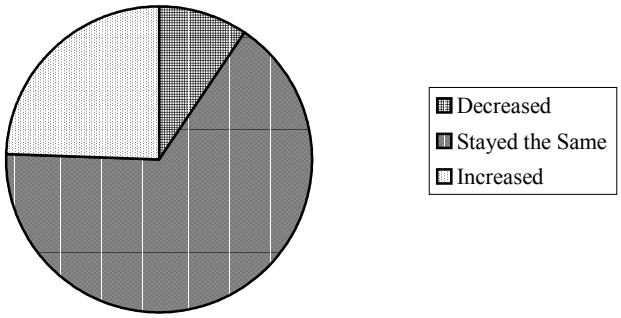
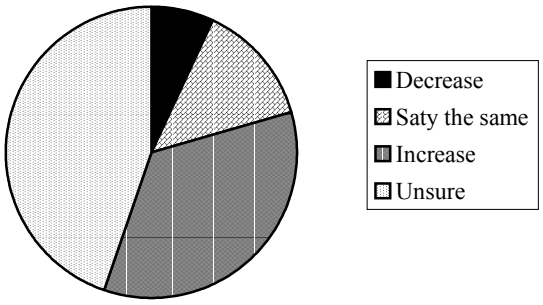


Figure 6. Potential changes in land farmed in the next five years



Those farmers surveyed had farmers all over the Twin Cities metropolitan area but were concentrated in Dakota. Over half of the farmers said their farm or garden was in Dakota County (Table 5). Washington County was the county with the next highest percentage.

Table 5. County where farm (garden) is located. (% of 62 farmers indicating which county their farm was located)	
Dakota	56%
Washington	18
Other	13
Ramsey	6*
Anoka	5
Hennepin	5
Carver	2
Scott	0**
* This 6% is likely too high and may be due to a misunderstanding of the survey question. The farmers may have answered based on where they live, not on where they farm. Anecdotal evidence indicates that there are no farms operated by Hmong in Ramsey county. **While Hmong do farm in Scott county, apparently none of them volunteered for this survey.	

Farm Production Methods

Farm production methods varied within the surveyed farmers but some commonalities can be seen. Half of the farmers surveyed use a walk behind roller tiller for plowing, cultivating, and seedbed preparation (Table 6). Hand tools and a tractor (either owned or rented) were also used by many. The most common method used for weed control was hand hoeing (53%; Table 7, Figure 7). Forty-five percent of the respondents said they used herbicides. (However, anecdotal evidence suggests that this 45% use of herbicides is probably too high.) Only 2% used mulching for weed control. The most common method for controlling insects is insecticides (Table 8). Cultural practices and crop rotations were also common methods for controlling insects.

Table 6. Farm equipment used for plowing, cultivating, and seedbed preparation (% of 61 farmers responding)	
Walk behind roller tiller	51%
Hand tools	41
Rented tractor	26*
Own tractor	20
Other	5
*The phrase "rented tractor" was used in the survey question, but needs to be interpreted as the use of a custom operator for the tillage and other operations, not as a pure rental of the tractor itself.	

Table 7. Methods used to control weeds (% of 62 farmers responding)	
Hand hoeing	53%
Herbicides	45
Crop rotation	15
Prevention*	15
Mechanical control	11
Crop competition	8
Other	6
Mulching**	2
None	0
*Prevention should be interpreted as using plastic mulch.	
**Mulching should be interpreted as using an organic mulch such as grass hay.	

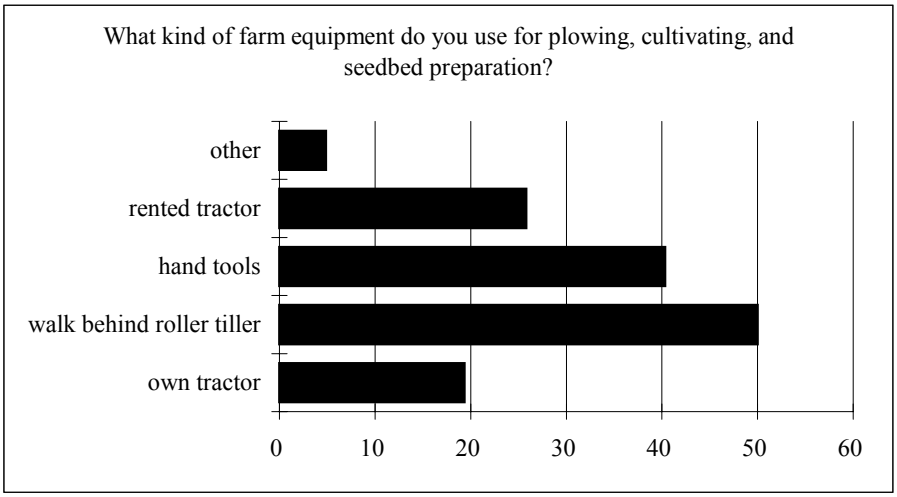


Table 8. Practices followed to control insects (% of 61 farmers responding)	
Insecticides	79%
Cultural practices	28
Crop rotation	23
Biological control	13
Preventive measures	12
Other	8
None	7
Resistant varieties	5

Testing of the soil nutrient levels was not done by many of the farmers. And not many of them knew how to interpret the soil test results. Only 2% of the 60 farmers responding sent their soil samples to a testing lab for analysis in 2002. Only 4% were able to correctly estimate that 217 lbs. of urea (46-0-0) should be applied per acre to achieve a recommended rate of 100 lbs N per acre (Table 9). Seventy-four percent said they were not sure of the correct rate.

Table 9. Estimated application rate for urea (46-0-0) when the recommended rate of N per acre is 100 lbs. (% of 57 farmers responding)	
Not sure	74%
46 lbs	7
100 lbs	16
217 lbs	4
425 lbs	0

Using a washing facility was the most common post-harvest handling technique used by 77% of the farmers (Table 10). Twenty-seven percent did not use any post-harvest handling technique.

Table 10. Post harvest-handling techniques. (% of 60 farmers indicating technique)	
Washing facility	77%
None	27
Forced air cooling	5
Hydro cooling	5
Mechanical refrigeration	3
Other	2

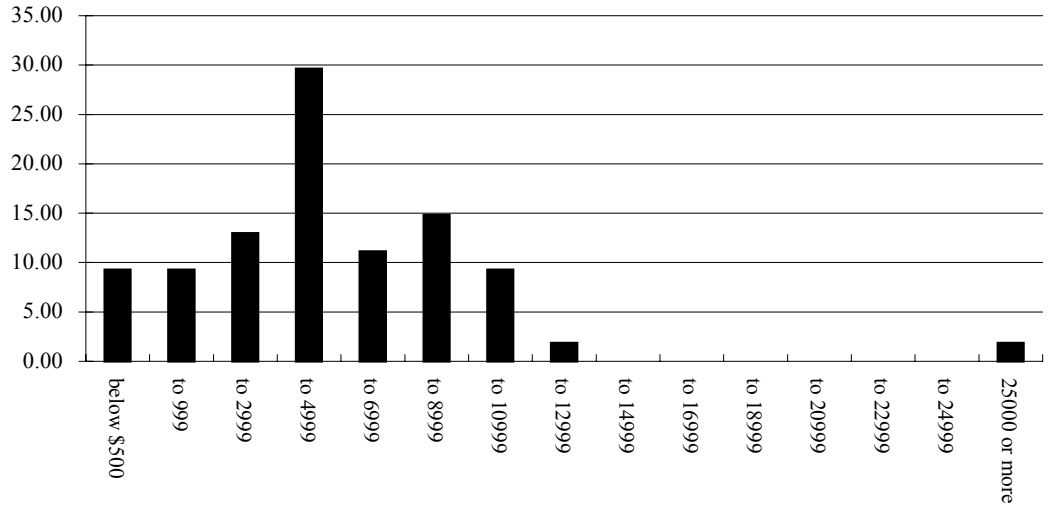
Farm Production Costs

Compared to a common Minnesota corn and soybean farm, production costs for Hmong specialty crop farmers were low. Thirty percent of farms indicated their total production costs in 2002 ranged from $3,000 to $4,999 (Table 11, Figure 8). Expenditures for all categories were also low. Two-thirds of the farmers said their costs were less than $1000 for seed and transplants. A third of the responding farmers indicated their expenses for insecticides, herbicides, and other pesticides were less than $500; 95% spent less than $3,000. Forty-nine percent said their fertilizer costs were less than $500. Seventy-nine percent said their hired labor costs were less than $500. These estimates should be viewed as estimates based on mental recall, not records, since only 35% of the 54 farmers responding keep records on costs and returns from their crops.

Table 11. Approximate farm production costs in 2002 (% of farmers responding)					
Cost category	Total farm production costs	Seed and transplants	Insecticides, herbicides and other pesticides	Fertilizer	Hired labor
Below $500	9	37	33	49	79
$500 to $999	9	30	31	30	4
$1,000 to $2,999	13	15	31	17	13
$3,000 to $4,999	30	13	4	0	2
$5,000 to $6,999	11	4	2	2	0
$7,000 to $8,999	15	2	0	2	2
$9,000 to $10,999	9	0	0	0	0
$11,000 to $12,999	2	0	0	0	0
$13,000 to $24,999	0	0	0	0	0
$25,000 or more	2	0	0	0	0
# of farmers responding	54	54	55	53	47

The median cash wage (including benefits) was $6 per hour for the 15 farmers responding. The average wage was $5.40 with a standard deviation of 3.7. Due to reporting problems, the information on farmer and family labor requested in the survey was not quantifiable. Many responses were "all day" with no information on start and stop times or on the allocation of time between production and marketing.

Figure 8. Farmers' approximate total farm production costs in 2002

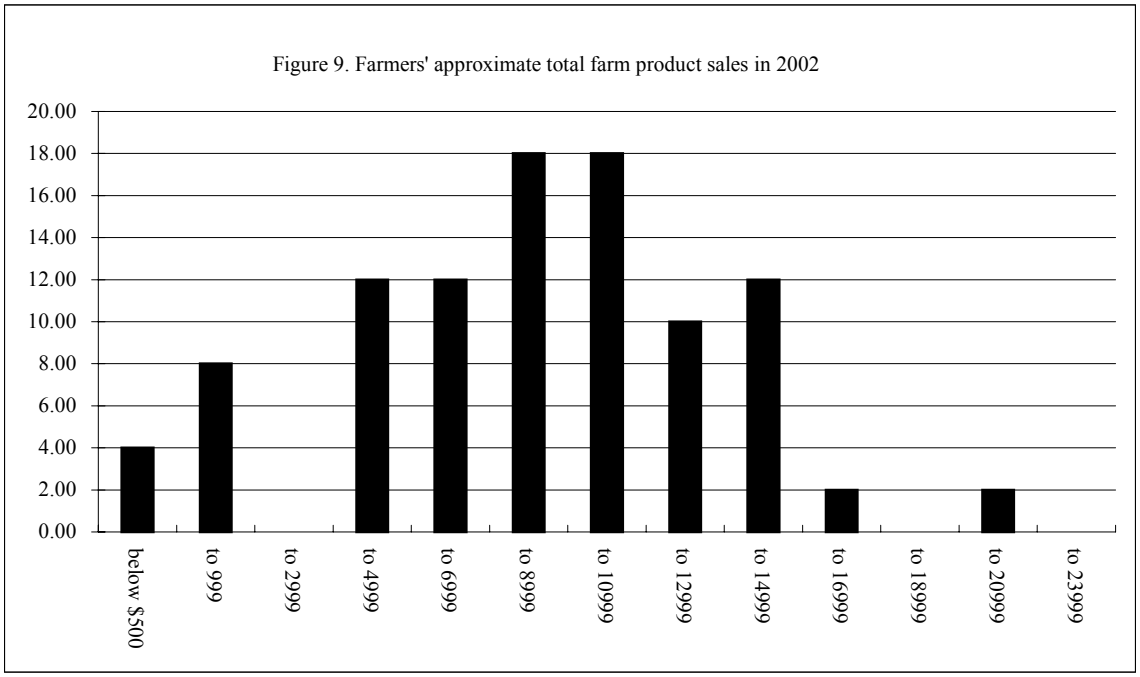


Farm Product Sales

Forty-two percent of those farmers responding reported total farm product sales between $3,000 and $8,999 (Table 12, Figure 9). Another 40% reported sales between $9,000 and $14,999. Only 2% reported sales between $24,000 to $26,999. Four percent reported sales less than $500. The reported sales was significantly (p=0.05) correlated with the number of acres farmed.

Table 12. Total farm product sales in 2002 (% of 50 farmers responding)	
Below $500	4%
$500 to $999	8
$1,000 to $2,999	0
$3,000 to $4,999	12
$5,000 to $6,999	12
$7,000 to $8,999	18
$9,000 to $10,999	18
$11,000 to $12,999	10
$13,000 to $14,999	12
$15,000 to $16,999	2
$17,000 to $18,999	0
$19,000 to $20,999	2
$21,000 to $23,000	0
$24,000 to $26,999	2
$27,000 or more	0

Figure 9. Farmers' approximate total farm product sales in 2002



Fifty-eight percent of the farmers reported that vegetables and herbs constituted between 1-25% of their total sales (Table 13, Figure 10). In the past five years, 51% of the farmers said their total farm product sales have stayed the same. Twenty-nine percent said their sales have decreased; twenty percent said they have increased (Table 14, Figure 11). Seventy-one percent of the farmers said they had sold 40% or less of the vegetables and herbs they had grown in 2002 (Table 15, Figure 12). Only 2% said they could have sold more than they produced. There was no significant (p=0.05) correlation between the size of farm (as measured by total farm sales) and the percentage sold of the vegetables and herbs that were produced.

Table 13. Percentage of farm product sales from vegetables and herbs (not flowers) (% of 53 farmers responding)	
100%, only vegetables and herbs	6
76 – 99%	4
51 – 75%	6
26 – 50%	13
1 - 25%	58
None, 0%	13

Figure 10. Percentage of sales from vegetables and herbs

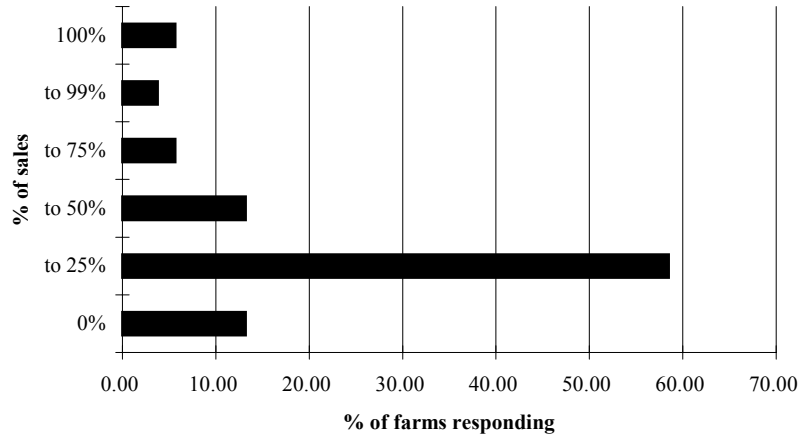


Table 14. Percent of farmers indicating their farm product sales have decreased, stayed the same, or increased (% of 45 farmers responding)		
Percent of farmers indicated their farm product sales have:		
Decreased	Stayed the same	Increased
29	51	20

Figure 11. Direction of change in farm product sales in past 5 years

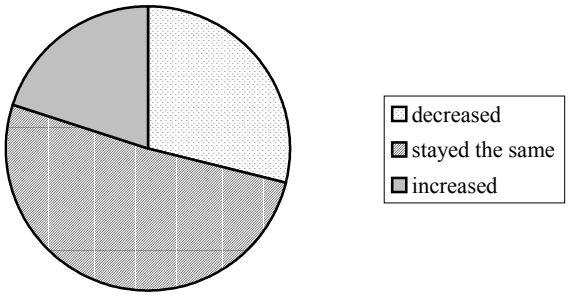


Table 15. Percent sold of total production in vegetables and herbs grown in 2002 (% of 51 farmers responding)	
I could have sold more	2
100%	0
81 – 99%	2
61 – 80%	4
41 – 60%	22
21 - 40%	45
0 - 20%	26

Crops Grown

The median number of crops grown by an individual farmer in 2002 was 13 (Figure 13). The maximum was 32. Over two thirds of the farmers grew tomato, pepper, green bean, bitter melon, cilantro, squash, green onion, eggplant, and long bean (Table 16) Over half the farmers grew slicing cucumber, lettuce, and potato. The effect of farm size (as measured by sales) can be seen in a few crops (i.e., tomato, radish, lettuce, lemongrass, eggplant, dry onion, cilantro, cabbage, broccoli, bitter melon) (Figure 14).

Figure 13. Total number of crops grown per farmer in 2002

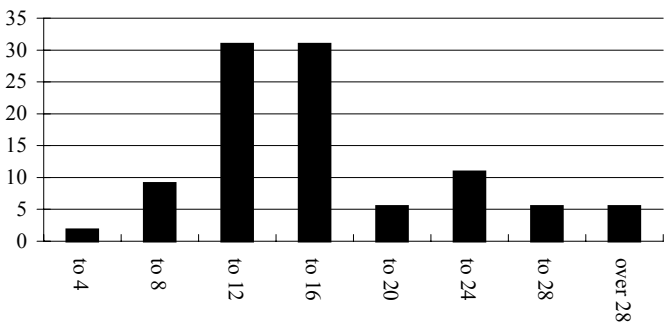
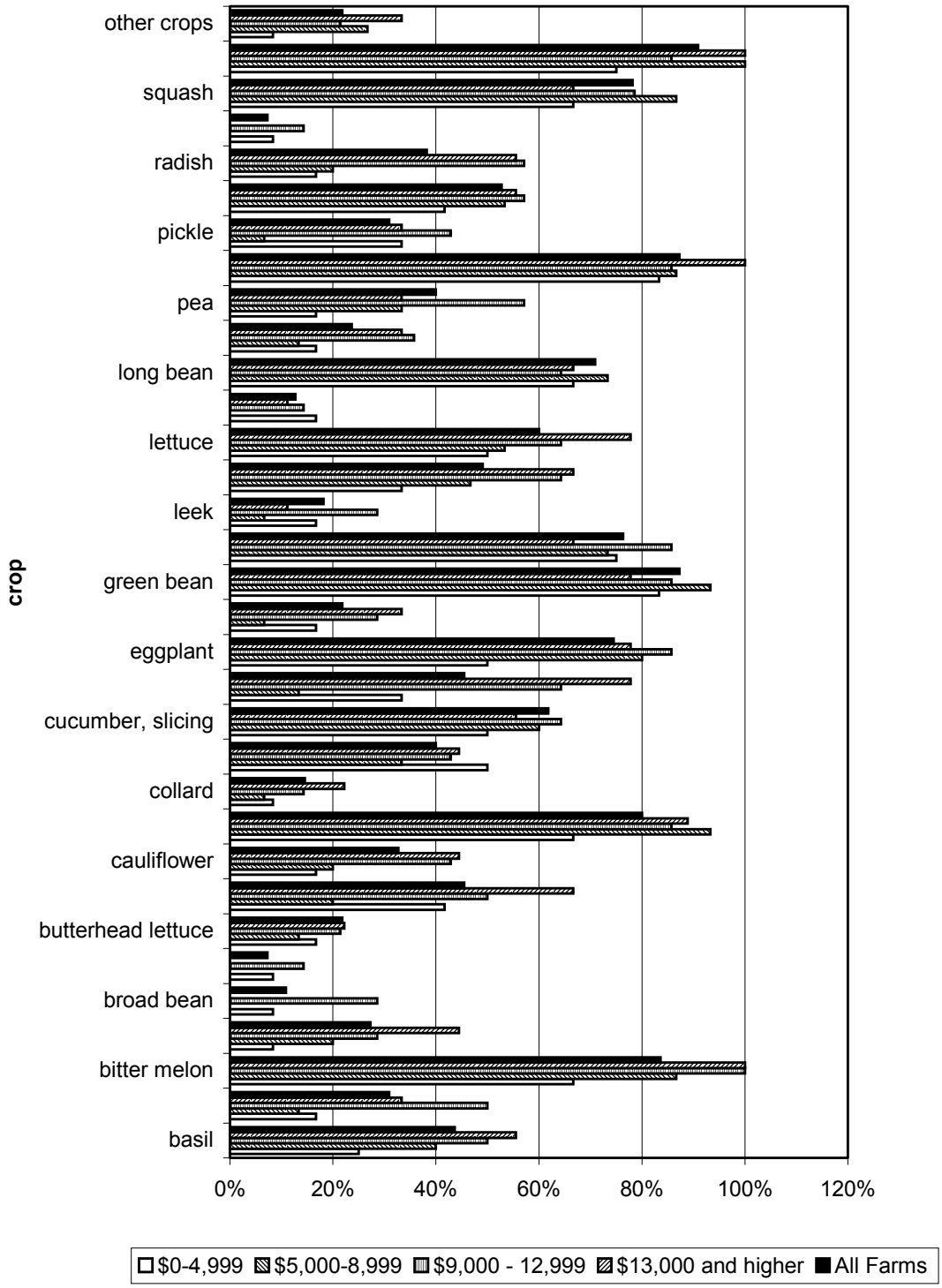


Table 16. Crops grown for sale in 2002 (% of 55 farmers responding)					
Basil	44%	Corn, sweet	40%	Long bean	71
Beet	31	Cucumber, slicing	62	Mustard	24
Bitter melon	84	Dry onion	45	Pea	40
Broccoli	27	Eggplant	75	Pepper	87
Broad bean	11	Garlic chive	22	Pickle	31
Brussels sprout	7	Green bean	87	Potato	53
Butterhead Lettuce	22	Green onion	76	Radish	38
Cabbage	45	Leek	18	Rutabaga	7
Cauliflower	33	Lemongrass	49	Squash	78
Cilantro	80	Lettuce	60	Tomato	91
Collard	15	Lima bean	13	Other crops	22

Figure 14. Percent of farmers producing crop, all farms and by sales class



Marketing

Only 11% of the 56 farmers responding had a written marketing plan for their crops. Sixty-one percent of the 54 farmers responding said they know how to price their produce, but 31% said they were not sure. Fifty-eight percent of the farmers responding said the market price was the most important reasons for selecting vegetable crops (Table 17, Figure 15). Ninety-six percent of the farmers responding said they marketed their fresh produce at farmers' markets (Table 18). Sixty-two percent of the farmers responding said they had sold their crops at 3 to 5 market locations in 2002 (Table 19). The median number of market locations per week was 4 for these farmers. The median number of days selling at farmers' markets was 5 per week for these farmers in 2002 (Figure 16). There was no significant (p=0.05) correlation between farm size (as measured by total sales) and either the number of days selling or the number of market locations utilized. For the farmers surveyed, the most popular markets were Minneapolis at Lyndale, downtown St. Paul on Saturday, and the Aldrich Arena (Table 20, Figure 17).

Figure 15. Reasons for selecting vegetable crops for marketing

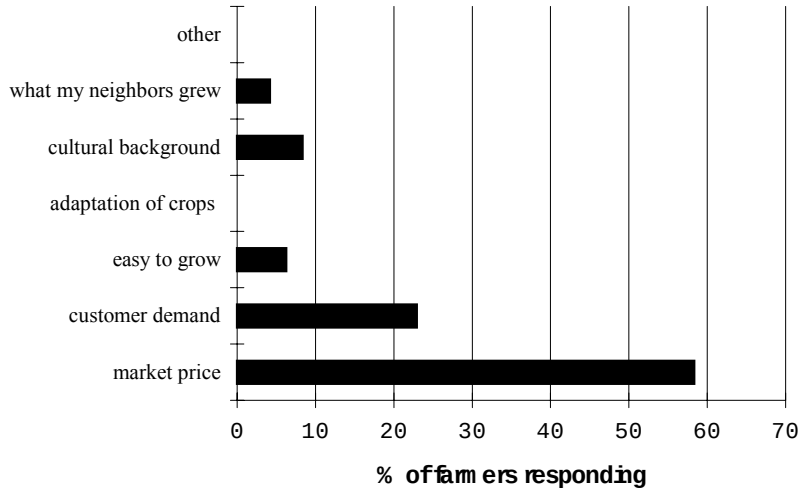


Figure 16. Days per week selling at farmers' markets in 2002

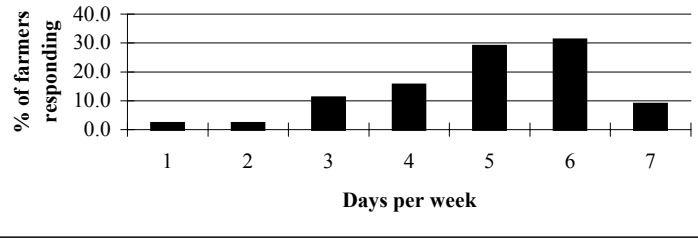
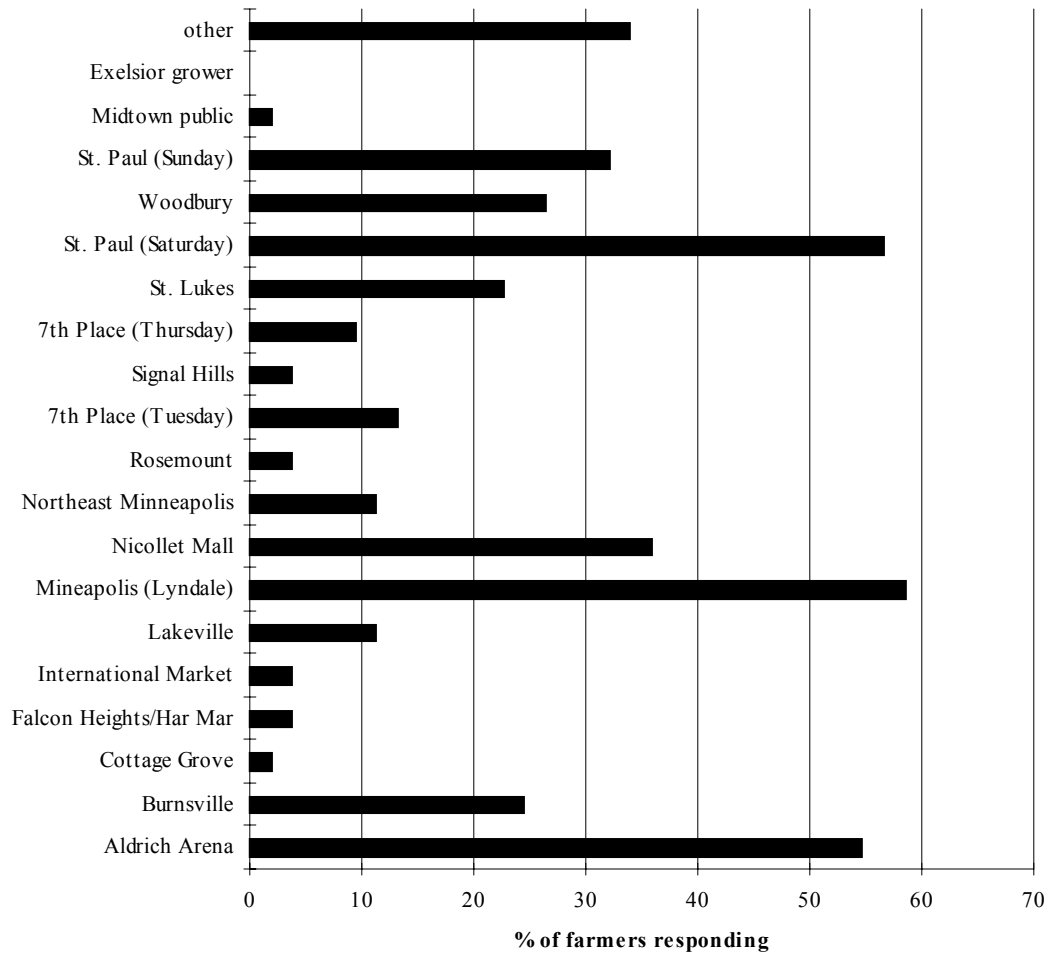


Figure 17. Farmers' choice of best markets for selling crops



Besides cash, 61% of the farmers responding would accept a (market) coupon as an alternative payment method; 39% would accept WIC payments, and 10% would accept a gift certificate. None of the farmers responding would accept food stamps or credit cards. Eighty-nine percent of the farmers responding would give a discount for large volume sales.

Seventy-two percent of the farmers think all their customers know how to prepare and cook the vegetable crops they grow, but 11% did not think so and 17% did not know. Only 33% of the farmers share recipes for their vegetable crops with their customers.

Table 17. Reasons for selecting vegetable crops to grow for marketing (% of 48 farmers responding)	
Market price	58%
Customer demand	23
Cultural background	8
Easy to grow	6
What my neighbors grew	4
Adaptation of crops	0
Other	0

Table 18. Market outlets for fresh produce (vegetables, flowers, and herbs) (% of 54 farmers responding)	
Farmers' markets	96%
Wholesale food market	6
Contract with local restaurant, grocery retailer store, individual customer/consumer, or public institution	6
Roadside stand	2
Sell at my own farm	0
Community supported agriculture (CSA) members	0
Advertise and take order by phone	0
Others	0

Table 19. Number of market locations at which farmers sold their crops in 2002 (% of 50 farmers responding)	
1	10%
2	16
3 – 5	62
6 - 9	12
10 or more	0

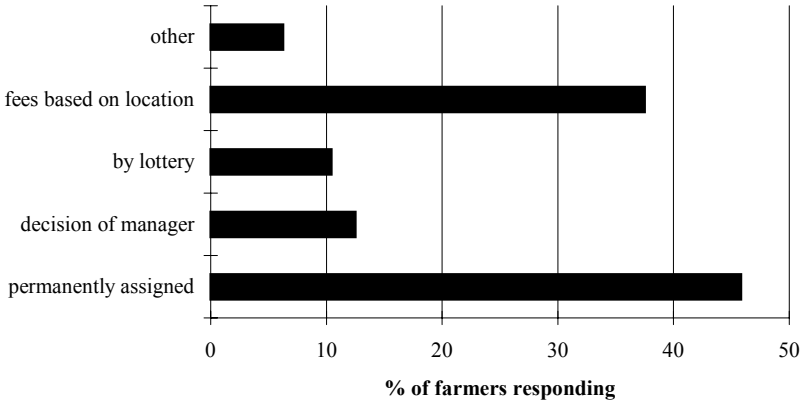
Table 20. Farmers' choices for the best markets for selling their crops (% of 53 farmers responding)			
Minneapolis *(Lyndale)*	58%	Northeast Minneapolis	11%
Downtown St. Paul *(Saturday)*	57	Lakeville	11
Aldrich Arena	55	7th Place Mall *(Thursday)*	9
Nicollet Mall	36	International Market Place	4
Other	34	Rosemount	4
Downtown St. Paul *(Sunday)*	32	Falcon Heights / HarMar Mall	4
Woodbury	26	Signal Hills	4
Burnsville	25	Cottage Grove	2
St. Lukes	23	Midtown Public Market	2
7th Place Mall *(Tuesday*	13	Excelsior Grower Association	0

Market Considerations

The median amount paid by the 43 responding farmers for membership fees at farmers' markets in 2002 was $135. Only 18% of the 55 responding would be willing to pay higher fees for a better stall location in the farmers' market. Fifty-eight percent said they would not, while 24% said it would depend on the fee.

Forty-six percent of the 48 farmers responding thought stall location should be permanently assigned in the farmers' market (Figure 18). Twelve percent thought stall location should be decided by the manager, and 10% by lottery. Thirty-eight percent of the farmers thought the fee should be based on location.

Figure 18. Preferred method of stall assignment in the farmers' market



Sixty-nine percent of the 48 farmers responding said they have lost customers due to restrictions on market hours.

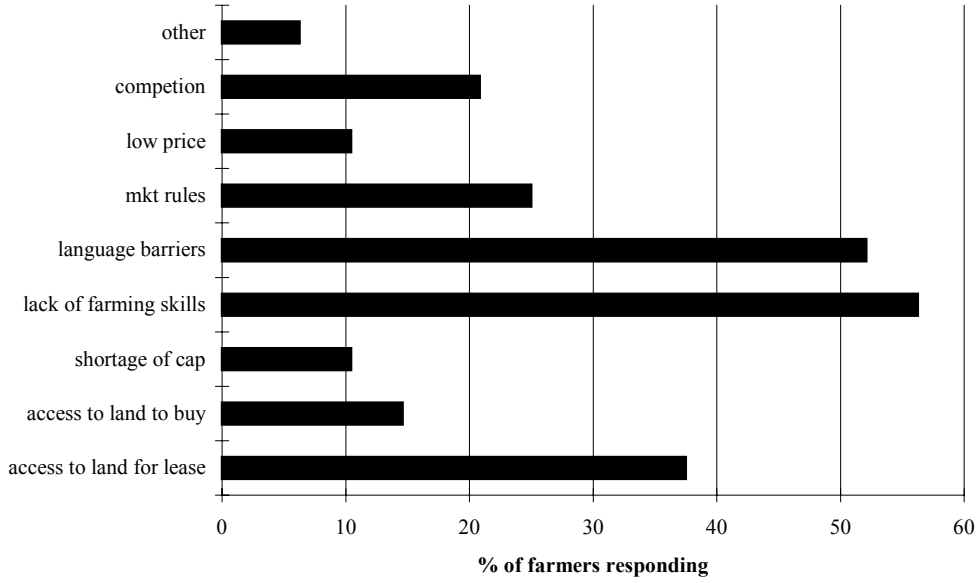
Seventy percent of the 56 farmers responding see a need for forming a Hmong Farmer Association, but 6% did not. Fifteen percent were not sure, and 6% did not care.

Barriers to Farming Success

According to those farmers responding, the two major barriers for success in farming for small vegetable and flower growers in the Twin Cities Metropolitan Area are: lack of farming skills and knowledge, and language and cultural barriers (Table 21, Figure 19).

Table 21. Major barriers for success in farming for small vegetable and flower growers (% of the 48 farmers responding)	
Lack of farming skills and knowledge	56%
Language and cultural barriers	52
Access to land for lease	38
Market rules or regulations	25
Competition	21
Access to land to buy	15
Shortage of capital / credit	10
Low price	10
Other	6

Figure 19. Major barriers for success in farming for small vegetable and flower growers



Financing

Only 9% of the 54 farmers responding said they had a written farm business plan for their crop production, and only 35% of the 54 farmers responding kept records on costs and returns from their crops. There was no significant (p=0.05) correlation between farm size (as measured by total sales) and whether the farmers either had a written business plan or kept records. Most of the farmers financed their own operation (Table 22). If they did borrow to buy a farm, the 15 farmers responding had used or would use a variety of sources for a loan but there was no one source that a majority used (Table 23). Only a few of the 23 farmers responding were familiar with USDA loan programs (Table 24).

Few farmers indicated they were familiar with crop insurance programs (Figure 20). Sixty-eight percent of the 19 farmers responding (or 21% of the 62 surveyed) said they were familiar with multi-peril crop insurance (MPCI; Table 25). Only 12% of the 50 farmers responding had bought crop insurance in 2002. Those who had bought crop insurance had purchased it for a median of 4 acres and 5 crops. A variety of reasons for not buying crop insurance were indicated (Table 26).

Table 22. Sources of money to buy inputs for their farm (% of 53 farmers responding)	
Own pocket	81%
Friends and relatives	11
Bank	9
Private lenders	4
Other	4

Table 23. Sources of a loan to buy a farm (% of 15 farmers responding)	
Other	47%
Farm Service Agency (FSA) of the USDA	33
Commercial bank	13
Insurance company	7
Credit union	0

Table 24. Familiarity with USDA loan programs (% of 23 farmers responding)	
Operating loan	26%
Emergency loan	17
Guaranteed loan	17
Direct loan	4

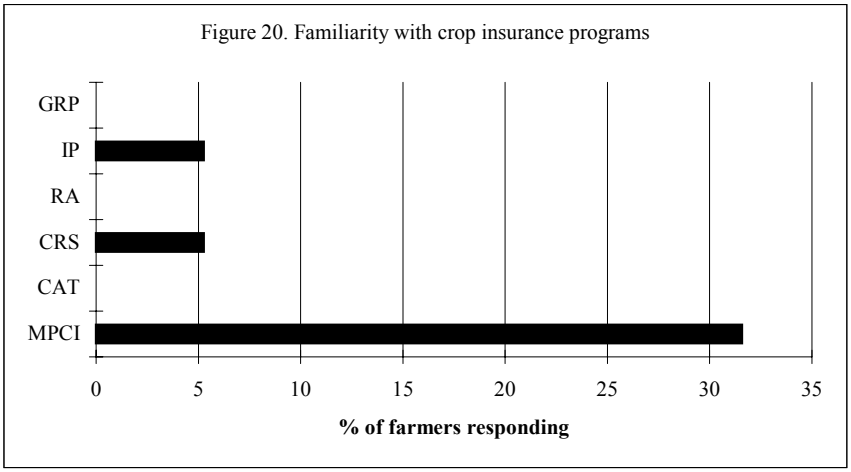


Table 25. Familiarity with crop insurance programs (% of 19 farmers responding)	
Multi-Peril Crop Insurance (MPCI)	68%
Crop Revenue Coverage (CRC)	5
Income Protection (IP)	5
Catastrophic Risk Protection (CAT)	0
Revenue Assurance (RA)	0
Group Risk Protection (GRP)	0

Table 26. Potential reasons for not buying crop insurance (% of 41 farmers responding)	
Other	37%
Did not think it was available for my crops	34
Can not afford	29
Unfamiliar with crop insurance	10

Farmer Age and Education

The most common age range for these farmers was 56-65 although many were in the 36-45 and 46-55 age ranges (Table 27, Figure 21). There was no significant (p=0.05) correlation between farm size (as measured by total sales) and farmer age. Ninety-six percent of the 45 farmers responding said they could read and write Hmong; 38% said they could read and write English. There was no significant (p=0.05) correlation between farm size (as measured by total sales) and whether the farmers could read and write English. Of the 20 farmers who responded, 40% said they had a high school diploma and 25% said they had no formal schooling (Table 28). There was no significant (p=0.05) correlation between farm size (as measured by total sales) and the level of school completed.

Table 27. Farmer's age (% of 54 farmers responding)	
18-25	7%
26-35	13
36-45	22
46-55	19
56-65	33
Above 65	6

Figure 21. Farmer's age

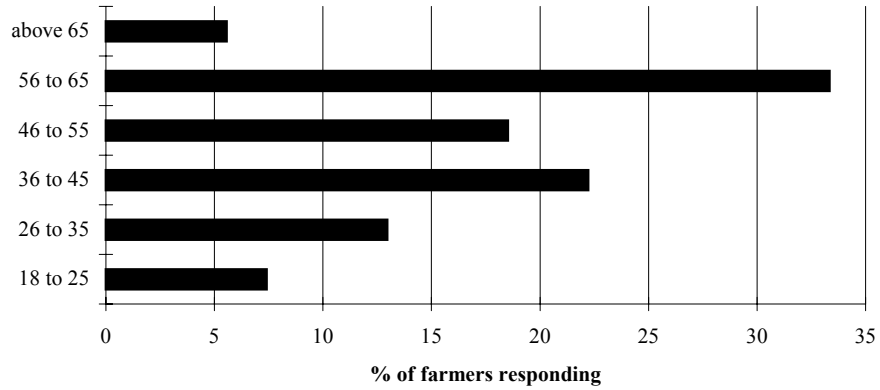


Table 28. Highest level of formal education attained by farmers (% of 20 farmers responding)	
No formal schooling	25%
Elementary school (K-6)	10
Middle school (junior high)	0
Some high school	10
High school diploma	40
Some college	5
Two-year college (associate) degree	5
Four-year college (bachelor) degree	0
Graduate school degree	5

Future Needs for Education Programs

The most frequently indicated needs for future education programs were production oriented: weed control, insect control, fertilization, and pesticide safety (Table 29). Soil preparation, marketing strategy, and organic production were also popular topics. The most preferred educational style or delivery method is in a class. A few also liked video, but essentially no one chose DVD.

Table 29. Future education program needs and preferred education styles (% of 47 farmers responding)				
Topic	Yes, I need it	What education style do you prefer?		
		Class	Video	DVD
c. Weed control	75%	32%	11%	0%
d. Insect control	72	51	13	0
f. Fertilization	64	47	11	0
g. Pesticide safety	57	30	11	0
a. Soil preparation	43	19	21	2
j. Marketing Strategy	40	28	13	0
h. Organic production	36	13	9	0
e. Farm equipment	30	11	4	0
i. Business plan	28	26	13	0
m. Business plan	19	6	11	0
b. Post-harvest handling	15	2	6	0
l. Record keeping	11	6	6	0
n. USDA loan program	11	2	4	0
k. Pricing	9	4	4	0
o. Crop insurance	4	2	4	0

Survey of Customers at Farmers' Markets

The survey instrument for the customers was developed with the goal of obtaining information on where customers shopped, what days and times they preferred shopping, satisfaction levels, important factors, what vegetables, herbs, and flowers they regularly buy, and how much money they normally buy. The survey instrument is included as appendix to this report. In August and September 2003, the surveyors spent 9 days at a number of farmers markets in the Twin Cities area. The customers were surveyed at these markets: Downtown St. Paul (Saturday and Sunday), Woodbury, St. Lukes, 7th Place Mall (Thursday), Midtown Public Market, Minneapolis (Lyndale), Burnsville, and Lakeville. Following the procedures suggested by the Institutional Review Board at the University of Minnesota, the surveyors set up a table, stood behind the table, and asked customers if they would complete the survey. Sixty-nine customers volunteered to complete the survey. Those who completed the survey could also fill out another sheet with their name for a chance of receiving a small gift, a clock imprinted with the logo of the College of Agricultural, Food, and Environmental Sciences. One customer's name was drawn for each day of surveying. The results from these 69 surveys are reported in this section.

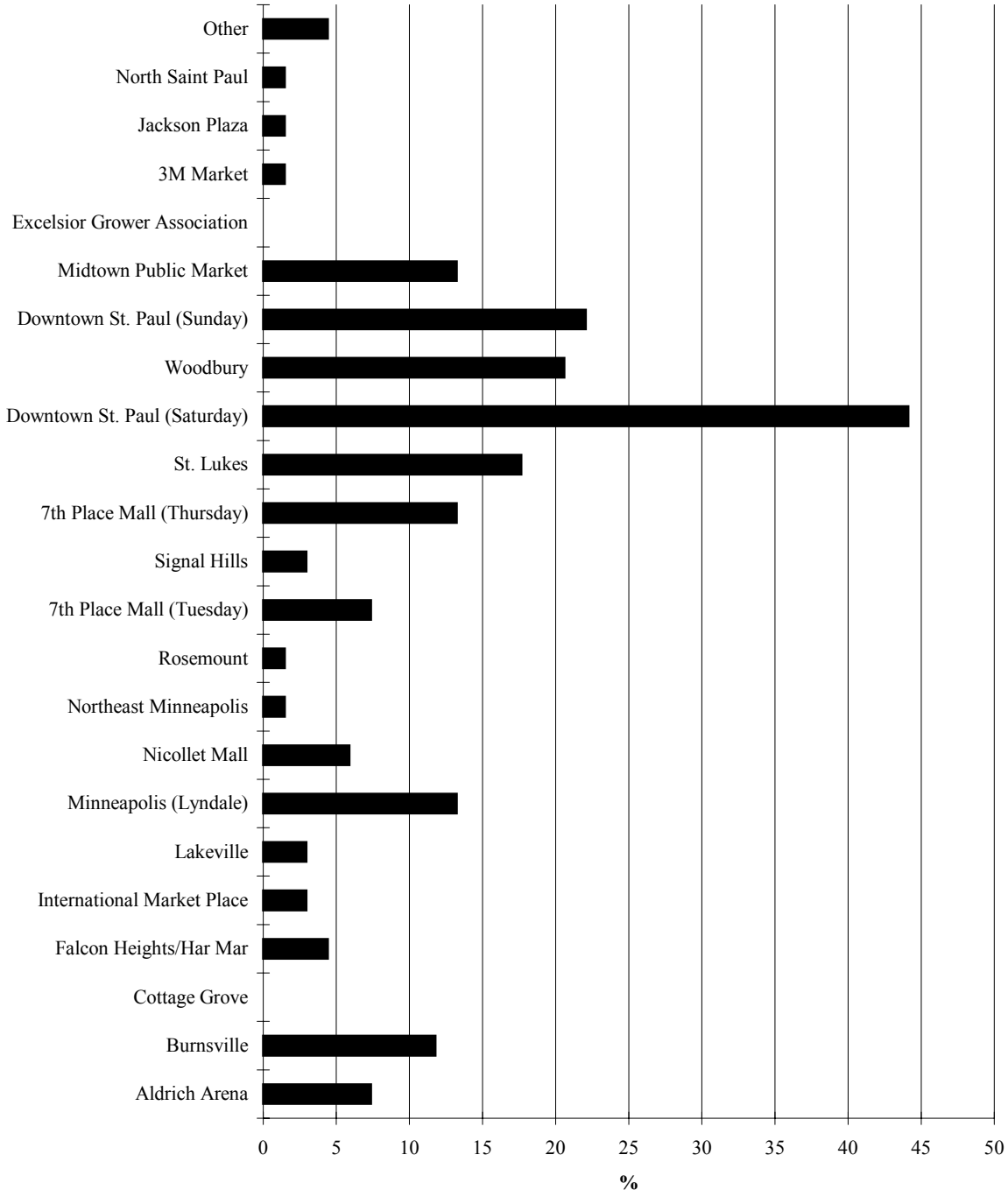
Customers' Preferences for Market Location, Timing, and Frequency

Reflecting the locations at which they were interviewed, the most common markets for these 69 customers to shop and bought fresh produce were the markets in downtown St. Paul (on Saturday and Sunday), Woodbury, St. Lukes, Minneapolis (Lyndale), 7th Place Mall (on Thursday), Midtown Public Market, and Burnsville (Table 30, Figure 22).

Table 30. Customers' indication of farmers' markets at which they regularly shop and buy fresh produce (% of 68 customers responding)

Downtown St. Paul *(Saturday)*	44%	Other	4%
Downtown St. Paul *(Sunday)*	22	International Market Place	3
Woodbury	21	Lakeville	3
St. Lukes	18	Signal Hills	3
7th Place Mall *(Thursday)*	13	Rosemount	1
Midtown Public Market	13	3M Market	1
Minneapolis *(Lyndale)*	13	Jackson Plaza	1
Burnsville	12	North Saint Paul	1
Aldrich Arena	7	Northeast Minneapolis	1
7th Place Mall *(Tuesday)*	7	Cottage Grove	0
Nicollet Mall	6	Excelsior Grower Association	0
Falcon Heights/Har Mar Mall	4		

Figure 22. Customers' choice of farmers' markets for regular shopping and buying of fresh produce



Overwhelmingly, the customers preferred to shop on Saturday (78%) and Sunday (64%) (Table 31, Figure 23). The customers also preferred to shop in the morning on Saturday and Sunday (Table 32).

Table 31. Customers' preferred day for farmers' markets (% of 67 customers responding)	
Monday	12%
Tuesday	16
Wednesday	12
Thursday	16
Friday	28
Saturday	78
Sunday	64

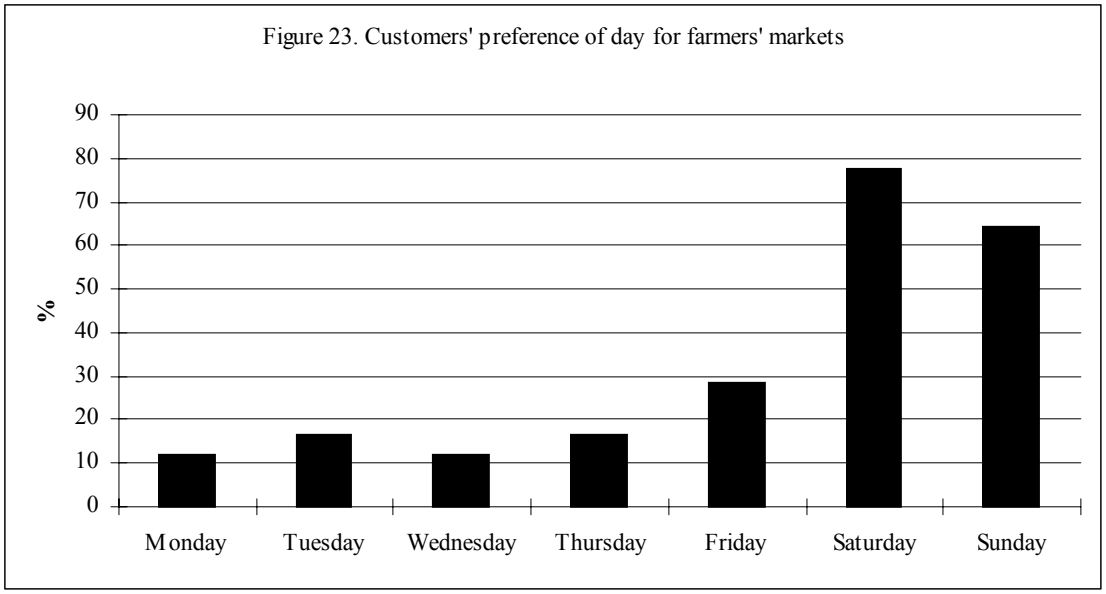


Table 32. Customers' preferred time of day for shopping at farmers' markets (% of 65 customers responding and indicating a preference for that day and time.)							
Time	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
6AM – 8AM	3%	5%	3%	3%	3%	18%	15%
8AM – 10AM	4	2	3	2	2	48	45
10AM – 12PM	6	11	5	11	8	37	45
12PM - 2PM	3	8	5	6	11	12	23
2PM – 4PM	2	3	2	5	14	14	9
4PM – 6PM	6	8	11	9	12	5	6

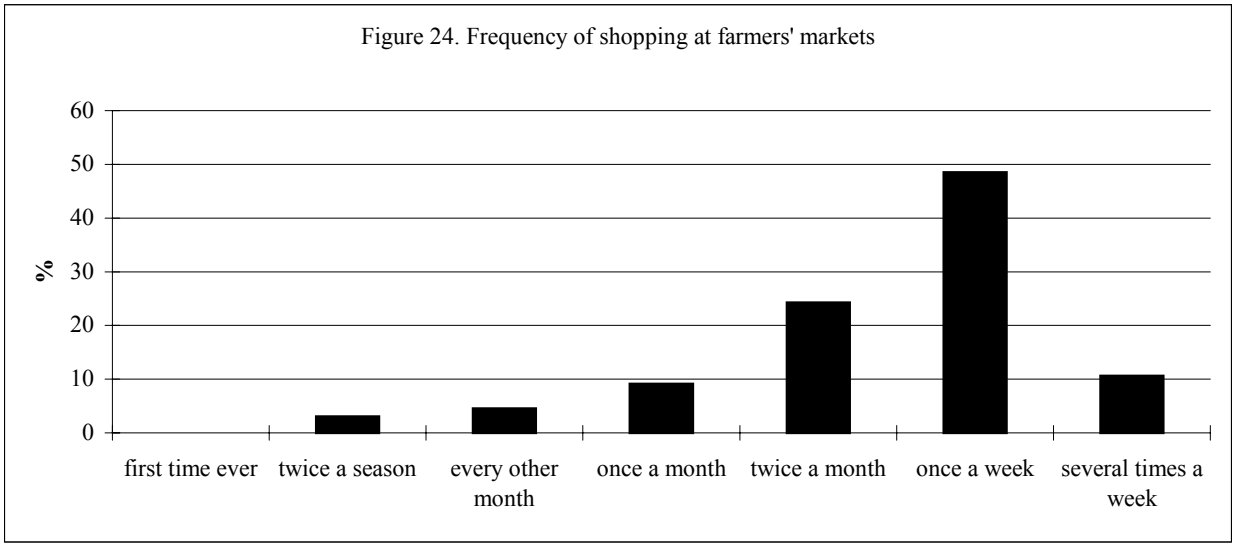
Most of the customers had not traveled far to the market. Sixty percent of the customers had traveled 0-5 miles to the farmers' market (Table 33). Twenty-two percent had traveled 5-10 miles. No one had traveled more than 30 miles.

Table 33. Customers' usual travel distance to farmers' markets? (% of 67 respondents responding)	
0-5 miles	60%
5-10 miles	22
10-15 miles	4
15-20 miles	10
20-30 miles	3
more than 30 miles	0

Almost half of the customers indicated they shopped at a farmers' market once a week (Table 34, Figure 24). Another 24% indicated they shopped at a farmers' market twice a month.

Table 34. Frequency of shopping farmers' markets. (% of 66 customers responding)	
First time ever	0%
Twice a season	3
Every other month	5
Once a month	9
Twice a month	24
Once a week	48
Several times a week	11

Figure 24. Frequency of shopping at farmers' markets



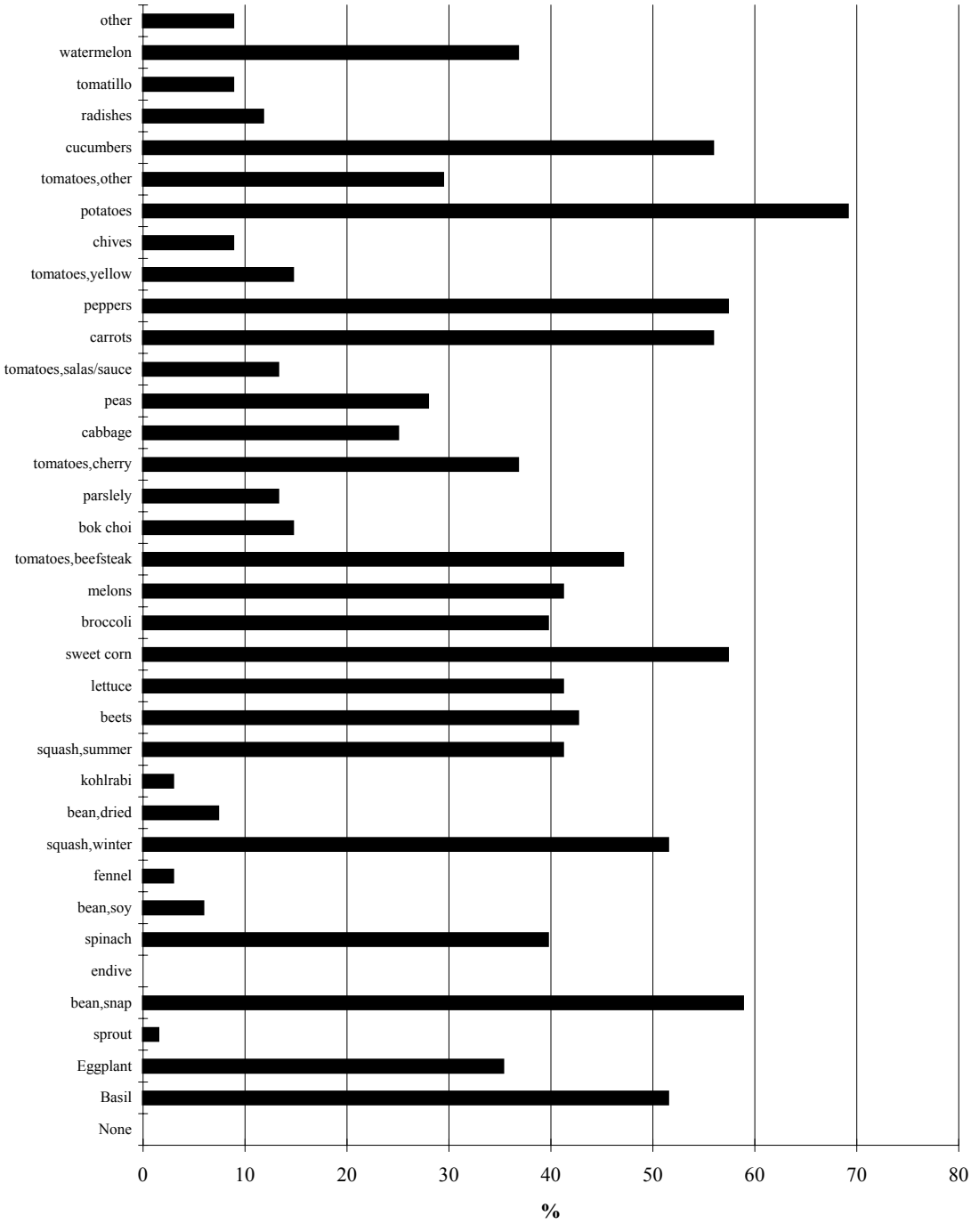
Product Preferences

All the customers regularly bought some kind of vegetables or herbs. Over half of the customers bought potatoes, snap beans, peppers, sweet corn, carrots, cucumbers, basil, and winter squash (Table 35, Figure 25). Also popular were beefsteak tomatoes, beets, lettuce, melons, summer squash, spinach, broccoli, watermelon, cherry tomatoes, and eggplant. Ninety-seven percent of the 63 customers responding said they would you consider buying a "new" vegetable to eat if they had a recipe.

Table 35. Percent of customers that regularly buy the following vegetables/herbs. (% of 68 customers responding)

Potatoes	69%	Squash, Summer	41%	Tomatoes, salsa/sauce	13%
Beans, Snap	59	Broccoli	40	Radishes	12
Peppers	57	Spinach	40	Chives	9
Sweet Corn	57	Watermelon	37	Tomatillo	9
Carrots	56	Tomatoes, cherry	37	Other	9
Cucumbers	56	Eggplant	35	Beans, Dried	7
Basil	51	Tomatoes, other	29	Beans, Soy	6
Squash, Winter	51	Peas	28	Fennel	3
Tomatoes, Beefsteak	47	Cabbage	25	Kohlrabi	3
Beets	43	Bok Choi	15	Sprouts	1
Lettuce	41	Tomatoes, yellow	15	Endive	0
Melons	41	Parsley	13	None	0

Figure 25. Customers' preferred vegetables & herbs to regularly buy

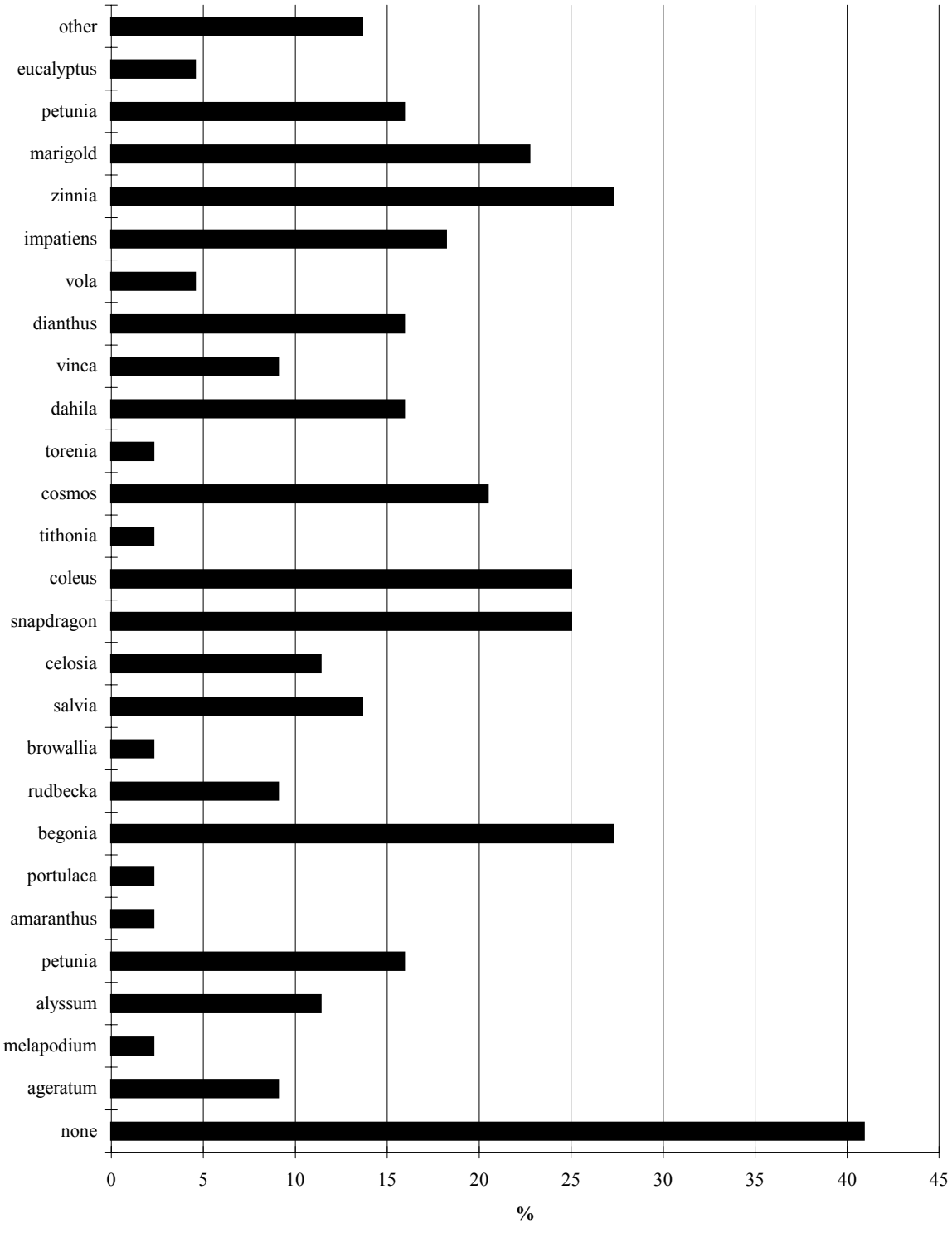


For those customers who did buy potted flowers, the most popular potted flowers were begonia, zinnia, coleus, snapdragon, and marigold (Table 36, Figure 26). Fifty-nine percent of the customers did not regularly buy any potted flowers.

Table 36. Percent of customers that regularly buy the following potted flowers. (% of 44 customers responding)

Begonia	27%	Petunia	16%	Amaranthus	2
Zinnia	27	Salvia	14	Melapodium	2
Coleus	25	Alyssum	11	Portulaca	2
Snapdragon	25	Celosia	11	Tithonia	2
Marigold	23	Ageratum	9	Torenia	2
Cosmos	20	Rudbecka	9	Browallia	2
Impatiens	18	Vinca	9	Other	14
Dahlia	16	Eucalyptus	5	None	41
Dianthus	16	Vola	5		

Figure 26. Customers' preferred plant flowers to regularly buy

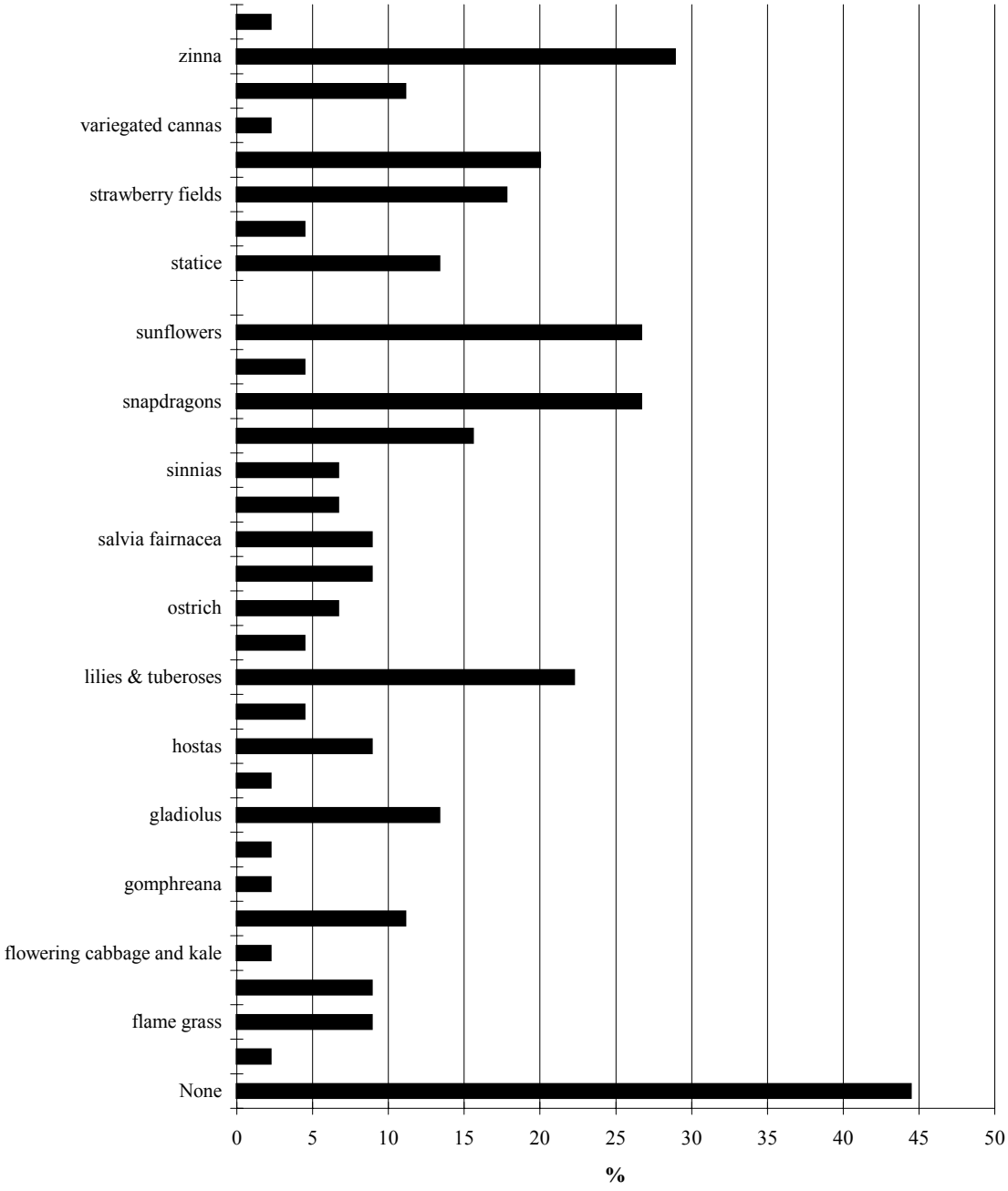


Of the customers who did buy cut flowers, the most popular cut flowers were zinnia, snapdragons, and sunflowers (Table 37, Figure 27). Twenty-nine percent of customers did not regularly buy any cut flowers.

Table 37. Percent of customers that regularly buy the following cut flowers. (% of 45 customers responding)

Zinnias	29%	Asiatic Hybrid Lilies	9%	Daybreak	4%
Snapdragons	27	Celosia	9	Ageratum	2
Sunflowers	27	Flame Grass	9	Begonias	2
Lilies & Tuberoses	22	Hostas	9	Caladium	2
Daylilies	20	Salvia fairinacea	9	Flowering Cabbage & Kale	2
Strawberry Fields	18	Cockscomb	7	Gomphreana	2
Dahlia	16	Ostrich	7	Other, please list	2
Gladiolus	13	Sinnias	7	Variegated Cannas	2
Statice	13	California Callas	4	Dahlias Gallery	0
Asters	11	Cannas	4	None	44
Eclipse Mix Asters	11	Dahlias Deluxe	4		

Figure 27. Customers' preferred cut flowers to regularly buy



Other popular products that customers would like to buy besides fresh produce include homemade jellies, fresh meat, honey, and dried fruit and vegetables (Table 38).

Table 38. Percent of customers indicating they would like to purchase these other items (% of 58 customers responding)	
Fresh produce	47%
Organic products	36
Homemade jellies	33
Fresh meat	31
Honey	31
Dried fruit and vegetables	26
Flowers	17
Arts and crafts	10
Canned goods	5
Other	3

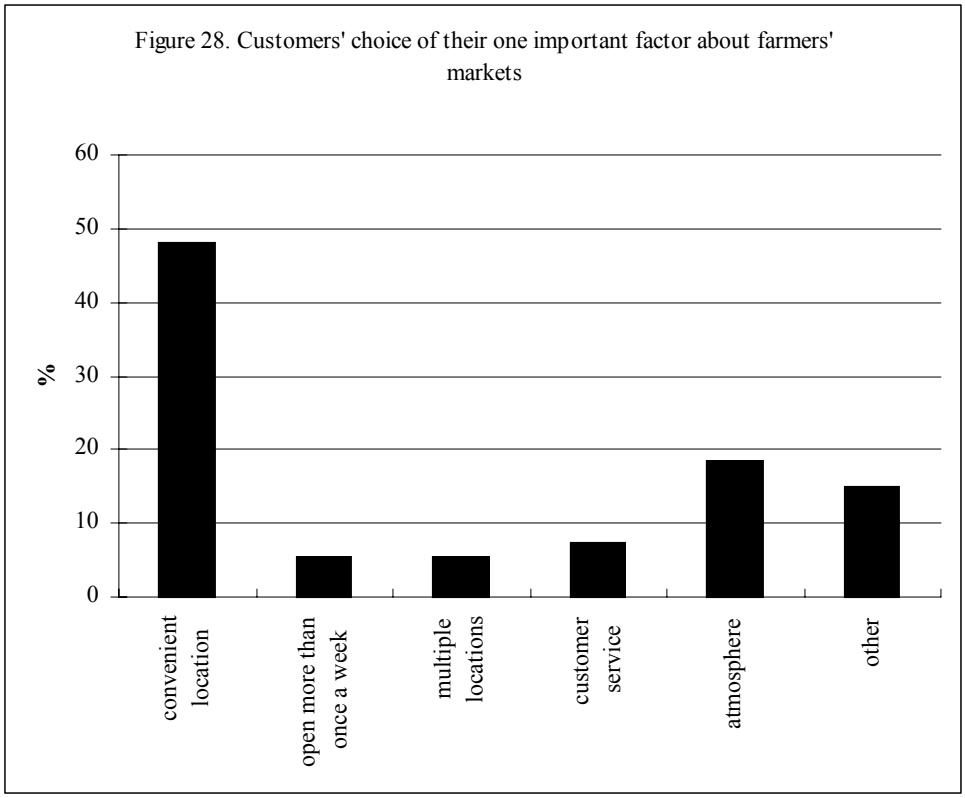
Customer Ratings and Preferences

Eighty-one percent of the responding customers said the overall quality of the services were excellent at the farmers' market they were attending that day (Table 39). Twelve percent said the services were good. None of the customers said the overall service was poor. Similarly, 79% of the customers responding rated the personal service from individual vendors as excellent, and 18% as good. No one said individual vendor service was poor.

Table 39. Customer ratings of service				
Service type	Excellent	Good	Fair	Poor
Overall quality of the market (% of 66 customers responding)	85	12	3	0
Personal service from vendors (% of 68 customers responding)	79	18	3	0

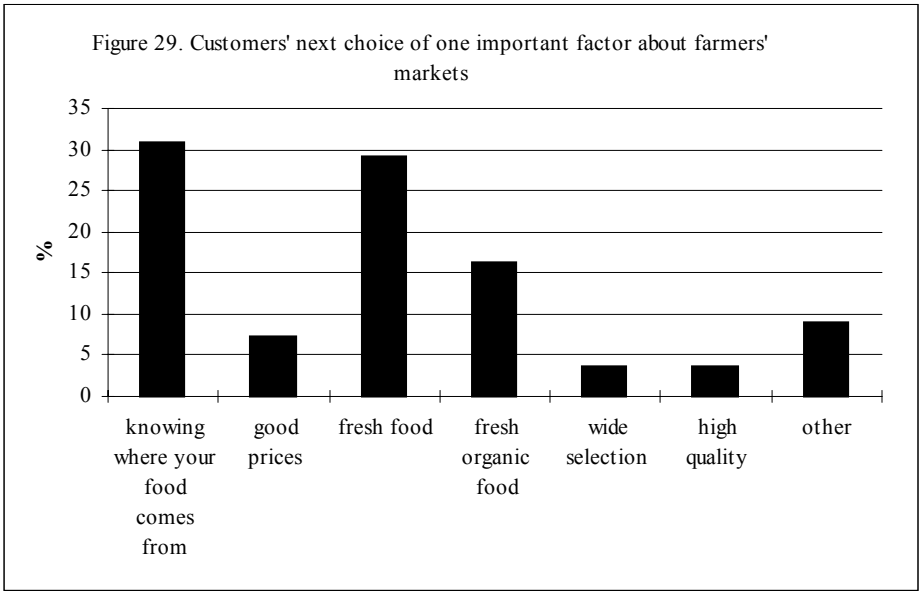
Convenient location of the market was the most important factor for 48% of the customers who selected only one factor from among those listed (Table 40, Figure 28). This percentage is based on 54 responses; 13 customers checked more than one factor and 2 did not indicate any factor.

Table 40. Percent of customers selecting the following factors as the ONE factor that is most important factor about farmers' markets. (% of the 54 customers checking only one response)	
Convenient location	48%
Atmosphere	19
Other	15
Customer services	7
Open more than once a week	6
Multiple locations	6



When asked to select from another list of factors, "knowing where your food comes from" and "fresh food" were selected the most often by those who selected only one factor that they considered most important about farmers' markets (Table 41, Figure 29). Twelve customers indicated more than one factor and 2 did not indicate any.

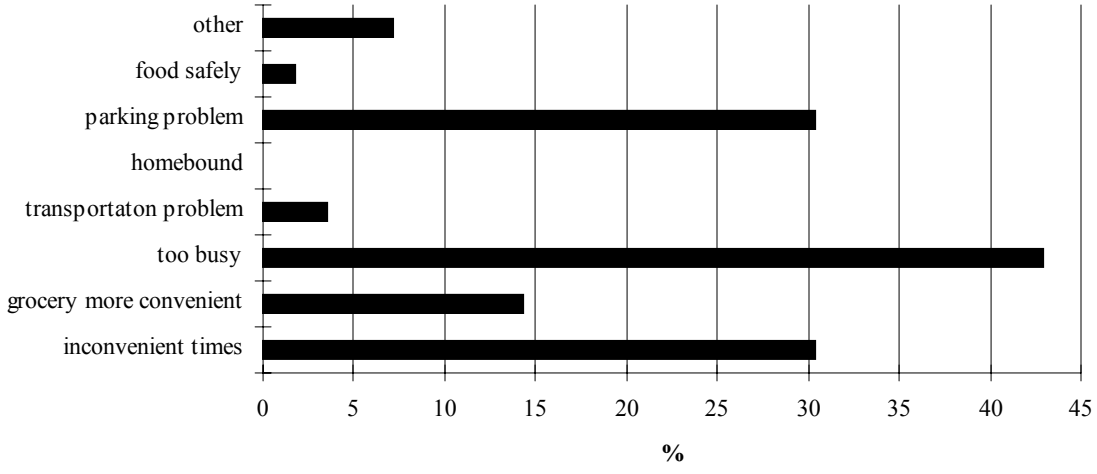
Table 41. Percent of customers selecting the following factors as the ONE factor that is most important about farmers' markets. (% of the 55 customers checking only one response)	
Knowing where your food comes from	31%
Fresh food	29
Fresh Organic food	16
Other	9
Good prices	7
Wide Selection	4
High quality	4



When asked to indicate 1 or 2 reasons why they might choose NOT to shop at a farmers' market, 43% of the customers chose "too busy" (Table 42, Figure 30). Inconvenient times and parking problems were each chosen by 30% of the customers.

Table 42. Reasons to NOT shop at a farmers' market (% of 56 customers responding)	
Too busy	43%
Parking problem	30
Inconvenient times	30
Grocery more convenient	14
Other	7
Transportation problem	4
Food safety	2
Homebound	0

Figure 30. Customers' main reasons for choosing NOT to shop at a farmers' market



Customer Expenditures

Eighty-eight percent of customers indicated they typically spend between $10 and $29 on vegetables and herbs during each visit to a farmers' market (Table 43, Figure 31). Forty-four percent indicate they spend between $1 and $9 on other products. Ninety-seven percent of the customers indicated they preferred to use cash to pay for their choices (Table 44).

Table 43. Typical customer expenditures on vegetables/herbs and on other products (% of the customers who responded)		
Expenditure range	For vegetables & herbs	For other products
$0	0%	23%
$1-9	9	44
$10-19	39	6
$20-29	39	21
$30-39	5	5
$40-49	2	2
$50-59	6	0
$60 or more	0	0
# Customers responding	66	62

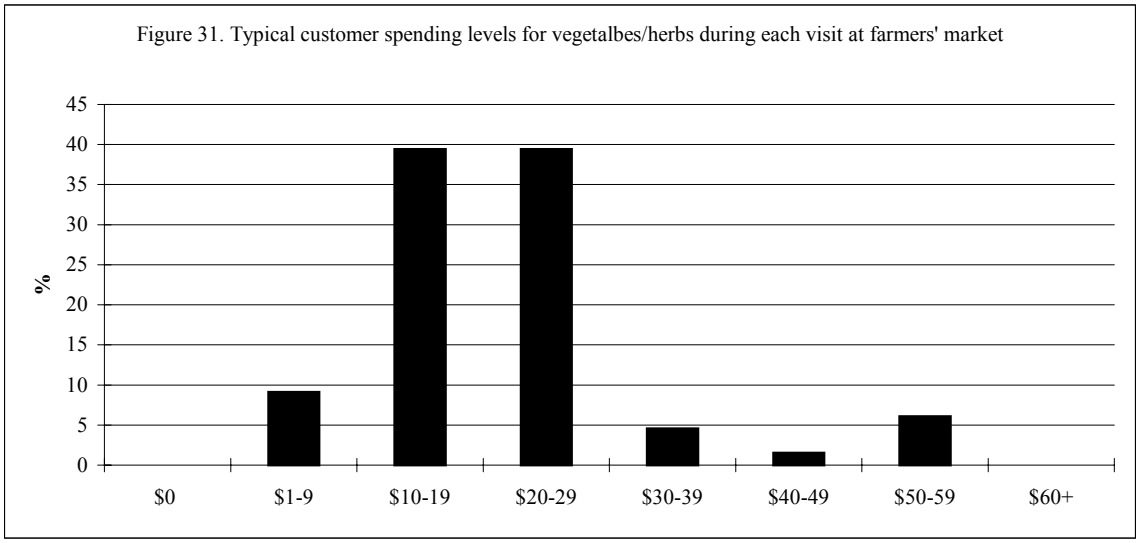


Table 44. Preferred payment method (% of 66 customers responding)	
Cash	97%
Check	11
Credit Card	5
Food Stamp	3
Debit Card	3
Other	2
Electronic Benefits Transfer (EBT)	0

APPENDICES

Farm and Market Survey

Part I Farming Operation

1. Why did you become a gardener or farmer? (Circle all that apply.)
   a. Hobby/culture b. To supplement income
   c. As a step to full-time farming d. To supply some of the family's food
   e. To give children a farming experience
   f. Other (specify) _____

2. How long have you been farming in the United States?
   a. 0 years b. 1-2 years c. 2-5 years
   d. 5-10 years e. 10 years or more

3. How long have you been farming in a country other than the United States?
   a. 0 years b. 1-2 years c. 2-5 years
   d. 5-10 years e. 10 years or more

4. How many acres of land did you farm in 2002? _____ Acre(s)

5. How many acres of land are you farming in 2003? _____ Acre(s)

6. How many acres of land did you own in 2002? _____ Acre(s)

7. How many acres of land do you own in 2003? _____ Acre(s)

8. How many acres of land did you rent/lease in 2002? _____ Acre(s)

9. How much rent did you pay per acre in 2002? $_____ /Acre

10. How many acres of land do you rent/lease in 2003? _____ Acre(s)

11. How much rent do you pay per acre in 2003? $_____ /Acre

12. What county is your farm (garden) located in? (Circle all that apply.)
   a. Anoka b. Carver c. Dakota
   d. Hennepin e. Ramsey f. Scott
   g. Washington h. Other (Specify)_____

13. In the past five years, the total amount of land you farmed has:
   a. Decreased b. Stayed the same c. Increased

14. In the next five years, do you think the total amount of land you farm will:
   a. Decrease b. Stay the same c. Increase d. Unsure

15. What kind of farm equipment do you use for plowing, cultivating, and seedbed preparation? (Circle all that apply.)

a. Own tractor b. Walk behind roller tiller c. Hand tools
d. Rented tractor e. Other (Specify)_____

16. What methods do you use to control weeds? (Circle all that apply.)

a. Mulching b. Hand hoeing c. Mechanical control
d. Herbicides e. Crop rotation f. Crop competition
g. Prevention h. Other (Specify)_____ i. None

17. What practices do you follow to control insects in your farm? (Circle all that apply.)

a. Insecticides b. Resistant varieties c. Cultural practices
d. Preventive measures e. Biological control f. Crop rotation
g. Other (Specify) _____ h. None

18. Did you send soil samples from your farm for analysis in 2002?

a. Yes b. No

19. The recommended rate of N per acre is 100 lbs, how many pounds of Urea (46-0-0) do you apply per acre?

a. 46 lbs b. 100 lbs c. 217 lbs
d. 425 lbs e. Not sure

20. What kind of post harvest handling technique do you use? (Circle all that apply.)

a. Washing facility b. Forced air cooling
c. Hydro cooling d. Mechanical refrigeration
e. Other (Specify)_____ f. None

21. What were your approximate total farm production costs in 2002?

a. Below $500 b. $500 to $999 c. $1,000 to $2,999
d. $3,000 to $4,999 e. $5,000 to $6,999 f. $7,000 to $8,999
g. $9,000 to $10,999 h. $11,000 to $12,999 i. $13,000 to $14,999
j. $15,000 to $16,999 k. $17,000 to $18,999 l. $19,000 to $20,999
m. $21,000 to $22,999 n. $23,000 to $24,999 o. $25,000 or more

22. Of the total farm production costs specified in question 21, what amount was for seed and transplants in 2002?

a. Below $500 b. $500 to $999 c. $1,000 to $2,999
d. $3,000 to $4,999 e. $5,000 to $6,999 f. $7,000 to $8,999
g. $9,000 to $10,999 h. $11,000 to $12,999 i. $13,000 to $14,999
j. $15,000 to $16,999 k. $17,000 to $18,999 l. $19,000 to $20,999
m. $21,000 to $22,999 n. $23,000 to $24,999 o. $25,000 or more

23. Of the total farm production costs specified in question 21, what amount was for insecticides, herbicides, and other pesticides in 2002?

a. Below $500	b. $500 to $999	c. $1,000 to $2,999
d. $3,000 to $4,999	e. $5,000 to $6,999	f. $7,000 to $8,999
g. $9,000 to $10,999	h. $11,000 to $12,999	i. $13,000 to $14,999
j. $15,000 to $16,999	k. $17,000 to $18,999	l. $19,000 to $20,999
m. $21,000 to $22,999	n. $23,000 to $24,999	o. $25,000 or more

24. Of the total farm production costs specified in question 21, what amount was for fertilizer expenses in 2002?

a. Below $500	b. $500 to $999	c. $1,000 to $2,999
d. $3,000 to $4,999	e. $5,000 to $6,999	f. $7,000 to $8,999
g. $9,000 to $10,999	h. $11,000 to $12,999	i. $13,000 to $14,999
j. $15,000 to $16,999	k. $17,000 to $18,999	l. $19,000 to $20,999
m. $21,000 to $22,999	n. $23,000 to $24,999	o. $25,000 or more

25. Of the total farm production costs specified in question 21, what amount was for hired labors in 2002? (Family labor is listed in question 25.)

a. None	b. $500 to $999	c. $1,000 to $2,999
d. $3,000 to $4,999	e. $5,000 to $6,999	f. $7,000 to $8,999
g. $9,000 to $10,999	h. $11,000 to $12,999	i. $13,000 to $14,999
j. $15,000 to $16,999	k. $17,000 to $18,999	l. $19,000 to $20,999
m. $21,000 to $22,999	n. $23,000 to $24,999	o. $25,000 or more

26. If you hired labor in 2002, what was the average cost (cash wage plus benefits) per hour? $_____/hour

27. How many hours did you and other family members spend producing and marketing your farm products in 2002? (Do NOT include the hours included as paid in question 23)

Months	**Production**[1]	**Marketing**[2]	**Fall Preparation**[3]
April, May, June			
July through mid September			
After mid September			

[1] Production includes planning, tilling, planting, growing, and harvesting

[2] Marketing includes post-harvest handling, transportation, and selling at a market

[3] Fall preparation includes seed collection, field cleaning, and tillage

28. What were your approximate total farm product sales in 2002?

a. Below $500	b. $500 to $999	c. $1,000 to $2,999
d. $3,000 to $4,999	e. $5,000 to $6,999	f. $7,000 to $8,999

g. $9,000 to $10,999 h. $11,000 to $12,999 i. $13,000 to $14,999
j. $15,000 to $16,999 k. $17,000 to $18,999 l. $19,000 to $20,999
m. $21,000 to $23,999 n. $24,000 to $26,999 o. $27,000 to $29,999
p. $30,000 to $34,999 q. $35,000 to $39,999 r. $40,000 to $44,999
s. $45,000 to $49,999 t. $50,000 to $59,999 u. $60,000 to $69,999
v. $70,000 to $79,999 w. $80,000 to $89,000 x. $90,000 to $99,000
y. $100,000 or more

29. Of the total farm product sales specified in question 28, what percentage was from vegetables and herbs (not flowers) ?

a. None, 0% b. 1 - 25% c. 26 – 50%
d. 51 – 75% e. 76 – 99%
f. 100%, only vegetables and herbs

30. In the past five years, your total farm product sales have:

a. Decreased b. Stayed the same c. Increased

31. For the vegetables and herbs you grew in 2002, what percent of your total production were you able to sell?

a. 0 - 20% b. 21 - 40% c. 41 – 60%
d. 61 – 80% e. 81 – 99% f. 100%
g. I could have sold more.

32. What crops did you grow for sale in 2002? (Check all that you grew.)

____Basil ____Corn, sweet ____Long bean
____Beet ____Cucumber, slicing ____Mustard
____Bitter melon ____Dry onion ____Pea
____Broccoli ____Eggplant ____Pepper
____Broad bean ____Garlic chive, ____Pickle
____Brussels sprout ____Green bean ____Potato
____Butterhead Lettuce ____Green onion ____Radish
____Cabbage ____Leek ____Rutabaga
____Cauliflower ____Lemongrass ____Squash
____Cilantro ____Lettuce ____Tomato
____Collard ____Lima bean

Other crops (Please specify):_____

33. Total number of crops grown in 2002: _____

Part II Marketing

34. Do you have a written marketing plan for your crops?
    a. Yes b. No

35. What is the most important reason for selecting vegetable crops for marketing?
    a. Market price b. Customer demand c. Easy to grow
    d. Adaptation of crops e. Cultural background f. What my neighbors grew
    g. Other (Specify)_____

36. How do you market your fresh produce (vegetables, flowers, and herbs)? (Circle all that apply.)
    a. Farmers' markets b. Wholesale food market
    c. Sell at my own farm d. Roadside stand
    e. Contract with local restaurant, grocery retailer store, individual customer/consumer, or public institution
    f. Community supported agriculture (CSA) members
    g. Advertise and take order by phone
    h. Others (Specify)_____

37. How many market locations did you sell your crops at in 2002?
    a. 1 b. 2 c. 3 – 5 d. 6 - 9 e. 10 or more

38. On average, how many days did you sell at farmers' markets per week in 2002?
____ Day(s) per week

39. On average, at how many market locations did you sell your crops per week in 2002?
____ Location(s) per average week

40. Please check the best markets for you to sell your crops.

____ Aldrich Arena	____ Burnsville
____ Cottage Grove	____ Falcon Heights / Har Mar Mall
____ International Market Place	____ Lakeville
____ Minneapolis *(Lyndale)*	____ Nicollet Mall
____ Northeast Minneapolis	____ Rosemount
____ 7th Place Mall *(Tuesday)*	____ Signal Hills
____ 7th Place Mall *(Thursday)*	____ St. Lukes
____ Downtown St. Paul *(Saturday)*	____ Woodbury
____ Downtown St. Paul *(Sunday)*	____ Midtown Public Market
____ Excelsior Grower Association	

____Other (Specify) _____

41. Who are your main customers? _____

42. Besides cash, which of the following payment methods do you accept? (Circle all that apply.)

a. Food stamp b. WIC c. Coupon
d. Gift certificate e. Credit card

43. Do you give a discount for large volume sale?

a. Yes b. No

44. Have you lost customers due to restrictions on market hours?

a. Yes b. No

45. Do you think all your customers know how to prepare and cook vegetable crops you grow?

a. Yes b. No c. I don't know

46. Do you share recipes for your vegetable crops with your customers?

a. Yes b. No

47. Do you know how to price your produce?

a. Yes b. No c. Not sure

48. Do you keep records on costs and returns from your crops?

a. Yes b. No

49. Do you see a need for forming a Hmong Farmer Association?

a. Yes b. No c. Not sure d. Don't care

50. How much did you pay in total for membership fees at farmers' markets in 2002?
$_____

51. Would you be willing to pay higher fees for a better stall location in the farmers' market?

a. Yes b. No c. Depend on fee

52. How should stall location be assigned in the farmers' market?

a. Permanently assigned b. Decision of manager c. By lottery
d. Fees based on location f. Other (Specify)_____

53. What do you think is the major barrier for success in farming for small vegetable and flower growers like you in the Twin Cities Metropolitan Area? (Circle all that apply.)

a. Access to land for lease b. Access to land to buy
c. Shortage of capital / credit d. Lack of farming skills and knowledge
e. Language and cultural barriers f. Market rules or regulations
g. Low price h. Competition
i. Other (Specify) _____

Part III Financing

54. Do you have a written farm business plan for your crop production?
    a. Yes b. No

55. Where do you get money to buy inputs for your farm? (Circle all that apply.)
    a. Own pocket b. Friends and relatives
    c. Bank d. Private lenders
    e. Other (Specify)_____

56. Where did you or would you find a loan to buy a farm?
    a. Commercial bank b. Credit union
    c. Insurance company d. Farm Service Agency (FSA) of the USDA
    f. Other (Specify)_____

57. Circle the following USDA loan programs with which you are familiar.
    a. Direct loan b. Operating loan
    c. Emergency loan d. Guaranteed loan

58. Circle each of the following crop insurance programs with which you are familiar.
    a. Multi-Peril Crop Insurance (MPCI) b. Catastrophic Risk Protection (CAT)
    c. Crop Revenue Coverage (CRC) d. Revenue Assurance (RA)
    e. Income Protection (IP) f. Group Risk Protection (GRP)

59. Did you buy crop insurance in 2002?
    a. Yes b. No →Go to 62

60. How many acres of your total farming land were covered under a crop insurance policy in 2002? ____ Acre(s)

61. How many crops were covered under a crop insurance policy in 2002? ____ Crop(s)

62. What are the potential reasons that you did not buy crop insurance?
    a. Unfamiliar with crop insurance b. Can not afford
    c. Did not think it was available for my crops
    d. Other (Specify) _____

Part IV General Questions

63. What is your age?

a. 18-25 b. 26-35 c. 36-45
d. 46-55 e. 56-65 f. Above 65

64. Do you read and write in the following language(s)? (Circle all that apply.)

a. Hmong b. English c. Other (Specify)_____

65. What is the highest level of formal education you have completed?

a. Elementary school (K-6) b. Middle school (junior high)
c. Some high school d. High school diploma
e. Some college f. Two-year college (associate) degree
g. Four-year college (bachelor) degree h. Graduate school degree
i. No formal schooling

66. What is your home Zip code? _____

67. Please check 3 important topics you need in future education program and the education styles.

Topic	Yes, I need it	What education style do you prefer?		
		Class	Video	DVD
a. Soil preparation				
b. Post-harvest handling				
c. Weed control				
d. Insect control				
e. Farm equipment				
f. Fertilization				
g. Pesticide safety				
h. Organic production				
i. Business plan				
j. Marketing Strategy				
k. Pricing				
l. Record keeping				
m. Business plan				
n. USDA loan program				
o. Crop insurance				
Other_____ _____				

Farmers' Market Customer Survey

1. Which farmers' markets do you regularly shop and buy fresh produce? (Check all that apply)

____ Aldrich Arena	____ Burnsville
____ Cottage Grove	____ Falcon Heights/Har Mar Mall
____ International Market Place	____ Lakeville
____ Minneapolis *(Lyndale)*	____ Nicollet Mall
____ Northeast Minneapolis	____ Rosemount
____ 7th Place Mall *(Tuesday)*	____ Signal Hills
____ 7th Place Mall *(Thursday)*	____ St. Lukes
____ Downtown St. Paul *(Saturday)*	____ Woodbury
____ Downtown St. Paul *(Sunday)*	____ Midtown Public Market
____ Excelsior Grower Association	____ 3M Market
____ Jackson Plaza	____ North Saint Paul

____ Other, please list: _____

2. Which farmers' market are you at today? _____

3. How would you rate the overall quality of the services of this farmers' market?
   a. Excellent b. Fair
   c. Good d. Poor

4. How do you rate the personal service from the individual vendors?
   a. Excellent b. Fair
   c. Good d. Poor

5. What day would you like to have a farmers' market on? (Check all that apply)

____ Monday	____ Tuesday	____ Wednesday
____ Thursday	____ Friday	____ Saturday
____ Sunday		

6. What time of day would you prefer to shop at farmers' markets? (Check all that apply)

Time	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
6AM – 8AM							
8AM – 10AM							
10AM – 12PM							
12PM - 2PM							
2PM – 4PM							
4PM – 6PM							

7. How far do you usually travel to purchase fresh produce from farmers' markets? (Choose only one)

____ 0-5 miles	____ 5-10 miles	____ 10-15 miles
____ 15-20 miles	____ 20-30 miles	____ 30-40 miles
____ 40-50 miles	____ more than 50 miles	

8. Which vegetables/herbs do you regularly buy? (Check up to 10)

____None		
____Basil	____Eggplant	____Sprouts
____Beans, Snap	____Endive	____Spinach
____Beans, Soy	____Fennel	____Squash,Winter
____Beans, Dried	____Kohlrabi	____Squash, Summer
____Beets	____Lettuce	____Sweet Corn
____Broccoli	____Melons	____Tomatoes, Beefsteak
____Bok Choi	____Parsley	____Tomatoes, Cherry
____Cabbage	____Peas	____Tomatoes, salsa/Sauce
____Carrots	____Peppers	____Tomatoes, Yellow
____Chives	____Potatoes	____Tomatoes, other
____Cucumbers	____Radishes	____Tomatillo
____Watermelon	____Other, please list: _____	

9. Which plant flowers (potted flowers) do you regularly buy? (Check up to ten)

____None	
____Ageratum	____Melapodium
____Alyssum	____Petunia
____Amaranthus	____Portulaca
____Begonia	____Rudbecka
____Browallia	____Salvia
____Celosia	____Snapdragon
____Coleus	____Tithonia
____Cosmos	____Torenia
____Dahila	____Vinca
____Dianthus	____Vola
____Impatiens	____Zinnia
____Marigold	____Petunia
____Eucalyptus	____Other, please list: _____

10. Which cut flowers do you regularly buy? (Check up to ten)

____None
____Ageratum
____Asiatic Hybrid lilies
____Asters
____Begonias
____Caladiums
____California Callas
____Cannas
____Celosia
____Cockscomb
____Dahlia
____Dahlias Delaxe
____ Dahlias Gallery
____Daybreak
____Daylilies
____Eclipse Mix Asters
____Flame Grass
____Flowering Cabbage and Kale
____Gomphreana
____Gladiolus
____Hostas
____Lilies & Tuberoses
____Ostrich
____Salvia fairinacea
____Sinnias
____Snapdragons
____Sunflowers
____Statice
____Strawberry Fields
____Variegated Cannas
____Zinna
____Other, please list_____

11. Select the ONE factor that is most important to you about farmers' markets.
    a. Convenient location
    b. Open more than once a week
    c. Multiple locations
    d. Customer services
    e. Atmosphere
    f. Other _____

12. Select the ONE factor that is most important to you about farmers' markets.
    a. Knowing where your food comes from
    b. Good prices
    c. Fresh food
    d. Fresh Organic food
    e. Wide Selection
    f. High quality
    g. Other _____

13. What other items would you like to purchase at farmers' markets? (Check up to 3 items.)
    a. Fresh produce
    b. Homemade jellies
    c. Dried fruit and vegetables
    d. Canned goods
    e. Arts and crafts
    f. Organic produces
    g. Flower
    h. Fresh meat
    i. Honey
    j. Other, please list: _____

14. How much money do you typically spend on vegetables/herbs during each visit at farmers' markets?

____ $0	____ $1-9	____ $10-19
____ $20-29	____ $30-39	____ $40-49
____ $50-59	____ $60-69	____ $70-79
____ $80-89	____ $90-99	____ $100 +

15. How much money do you spend on other products during each visit at farmers' markets?

____ $0	____ $1-9	____ $10-19
____ $20-29	____ $30-39	____ $40-49
____ $50-59	____ $60-69	____ $70-79
____ $80-89	____ $90-99	____ $100 +

16. How often do you shop at farmers' markets?
    a. First time ever
    b. Twice a season
    c. Every other month
    d. Once a month
    e. Twice a month
    f. Once a week
    g. Several times a week

17. What are the main reasons that you might choose NOT to shop at a farmers' market? (Choose 1 or 2)
    a. Inconvenient times
    b. Grocery more convenient
    c. Too busy
    d. Transportation problem
    e. Homebound
    f. Parking problem
    g. Food safety
    h. Other_____

18. Which payment method would you prefer to use? (Choose 1 or 2)
    a. Cash
    b. Check
    c. Credit Card
    d. Debit Card
    e. Electronic Benefits Transfer (EBT)
    f. Food Stamp
    g. Other_____

19. If you had a recipe, would you consider buying a "new" vegetable to eat?
    a. Yes
    b. No

20. What is your home zip code? _____

21. Please enter any additional comments or suggestions regarding products or services of farmers' markets.