

SELECTED FACTORS INFLUENCING
THE SUCCESS OF A COMMUNITY GARDEN

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by

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MANUSCRIPT

SELECTED FACTORS INFLUENCING THE SUCCESS OF A COMMUNITY GARDEN ¹

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Abstract: A demographic analysis of community garden participants was compared to the degree of success of their garden plots. Income level, number of people supported per plot, plot size, and personal gardening experience significantly influenced gardening success. Distance from the home to the community garden had no influence on gardening success.

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Approximately 2 million Americans participated in community gardening programs in 1978, with another 6 million expressing interest if gardening opportunities were available (2). Community gardens offer personal benefits: monetary gains, relief from stress, leisure time recreation, and an ethereal relationship with nature (3,4,5,6, 7,8,9,10). Additionally, these programs provide a profound effect on urban areas, increase community pride, beautify blighted areas, decrease neighborhood vandalism, and raise the quality of living among economically disadvantaged groups (7,8,9).

Community gardens are sponsored by the Cooperative Extension Service, community action organizations, parks and recreation departments, civic and church groups (1,2,5,9,11). Problems do exist: vandalism, theft, plot abandonment, lack of knowledge, plant pest problems, and managerial problems (3,11).

The purpose of this research was to analyze selected demographic factors influencing the success of individual community gardens within a gardening site and consequently the success of community gardening as a whole.

The research site was a 100-plot community garden in Manhattan, Kansas. This program provided low income military, students, blue-collar, and retired people a place to grow vegetables in an urban location.

All garden plots were rated during the first weeks of June (spring growing season) and September (fall growing season) using the following system:

1. Insect problems: 0 = severe damage, 1 = moderate damage,
2 = no visible insect damage.
2. Disease problems: 0 = dead plants, 1 = moderate disease
injury, 2 = no visible disease present.
3. Weeds: 0 = overgrown with weeds, 1 = some weeds present,
2 = no weeds present.
4. Cultural practices: 0 = improper horticultural skills to
4 = proper horticultural skills.

Each garden plot ratings were totaled and placed in categories:

1. Poor = 0-3 points
2. Fair = 4-6 points
3. Good = 7-8 points
4. Excellent = 9-10 points

Gardeners provided data in February, 1978 on experience, income, family size, and distance to the garden. Plots per gardener were assigned on an availability basis to those who requested multiple plots. Information from the 1978 gardeners was coded from application forms to protect the privacy of the participants.

Correlations and contingency table Chi-square statistical analyses were calculated using Statistical Analysis System (SAS) programs.

Experience. As shown in Table 1, experienced gardeners had significantly better June gardens than new gardeners. By September, both experienced and new gardeners had predominantly fair to poor gardens.

Gardeners with appropriate horticultural skill have more

productive gardens and consequently will return to garden the next year. However, in this study only 25% of the gardeners had returned from the previous year due to the transient nature of the population. Gardeners with no horticultural skills will need to be educated and motivated to be successful.

Income level. Gardeners with \$5,000 to 14,999 incomes had significantly better June gardens than those earning less than \$5,000 or more than \$15,000 (Table 2). All gardeners earning less than \$5,000 had poor September ratings. September garden ratings were highly correlated with income level ($r = .394^{***}$).

For low income families, monetary gains were not adequate motivation to have successful gardens. Gardening may be on a lower priority than basic needs of shelter and security.

Number of family members per plot. Increasing family size influenced higher June garden ratings ($r = .393^{**}$). As shown in Table 3, June to September ratings decreased in value independent of family size.

Family units with children may be more successful since food produced and economic factors may be more critical. Active participation with the children provides family recreational activities.

Number of plots per gardener. June garden ratings were significantly correlated with the size of the garden ($r = .404^{**}$). As shown in Table 4, significantly more good to excellent plots occurred in June when gardeners had two plots as compared to single plots. By September, single and double plots received similar percentages of poor to fair ratings.

Experienced gardeners initially requested extra plots due to confidence in gardening abilities. In September, it is evident that the additional plot was detrimental to gardening success.

Distance traveled to garden. In both the June and September ratings, distance was not a significant factor. If the gardeners were motivated sufficiently enough to have a successful garden, the distance was an insignificant factor.

In conclusion, involved gardeners, good management, adequate resources, strict control and reassignment of abandoned plots, and availability of managerial assistance are additional factors to consider for a successful community gardening program.

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TABLE 1. Comparisons of June and September garden ratings with gardening experience.^z

Garden Rating	Type of Experience			
	Previous		None	
	June	Sept.	June	Sept.
Poor	3	7	6	27
Fair	2	6	26	20
Good	6	1	15	4
Excellent	6	3	7	3

^zJune $\chi^2 = 8.54$, $P = .04$; Sept $\chi^2 = \text{n.s.}$

TABLE 2. Comparisons of June and September garden ratings with income of gardeners.^z

Garden Rating	Income							
	< \$5,000		\$5,000-9,999		\$10,000-14,999		> \$15,000	
	June	Sept.	June	Sept.	June	Sept.	June	Sept.
Poor	1	9	3	13	3	6	2	6
Fair	7	0	9	14	4	6	8	6
Good	1	0	8	1	10	4	2	0
Excellent	0	0	8	0	1	2	4	4

^z June $\chi^2 = 17.85$, P = 4%; Sept $\chi^2 = 27.59$, P = .1%

TABLE 3. Comparisons of June and September garden ratings with number of family members.^z

<u>Garden Rating</u>	<u>Family members (no.)</u>					
	<u>1-2</u>		<u>3-4</u>		<u>> 4</u>	
	<u>June</u>	<u>Sept.</u>	<u>June</u>	<u>Sept.</u>	<u>June</u>	<u>Sept.</u>
Poor	7	16	2	17	0	1
Fair	16	9	12	15	0	2
Good	4	2	16	3	1	0
Excellent	3	3	8	3	2	0

^zJune $\chi^2 = 19.54$, $P = .2\%$; Sept. $\chi^2 = \text{n.s.}$

TABLE 4. Comparisons of June and September garden ratings and number of garden plots.²

<u>Garden Rating</u>	<u>Number of plots/gardener</u>			
	<u>1</u>		<u>2</u>	
	<u>June</u>	<u>Sept.</u>	<u>June</u>	<u>Sept.</u>
Poor	8	23	1	11
Fair	25	21	3	5
Good	14	3	7	2
Excellent	5	5	8	1

²June $\chi^2 = 13.29$, $P = .4\%$; Sept. $\chi^2 = \text{n.s.}$

APPENDIX

TABLE A-1 Comparisons of June and September garden ratings with distance traveled to garden.^z

Garden Rating	Distance traveled (blocks)					
	0-3		4-6		6-9	
	June	Sept.	June	Sept.	June	Sept.
Poor	3	6	5	17	1	11
Fair	5	4	12	7	11	15
Good	4	2	9	2	8	1
Excellent	3	3	2	2	8	1

^z June $\chi^2 = \text{n.s.}$; Sept $\chi^2 = \text{n.s.}$

TABLE A-2 Correlation coefficients for garden ratings and demographic data on community gardeners.^z

	June Rating	Sept. Rating	Experience	Annual Income	Family Members	Plots/Gardener	Distance
June Rating	-	-.019 .87	-.191 .11	.048 .69	.405 .0005	.433 .0002	.170 .16
Sept. Rating	-	-	-.147 .22	.394 .0007	-.039 .75	-.086 .48	-.141 .24
Experience	-	-	-	-.277 .02	-.161 .18	-.257 .03	.179 .13
Annual Income	-	-	-	-	-.043 .72	-.032 .79	-.277 .02
Family Members	-	-	-	-	-	.093 .44	.097 .42
Plots/Gardener	-	-	-	-	-	-	.022 .86

^z Correlation coefficients/Probability level $> |R|$ under $H_0: \rho = 0$ /
n = 71

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Community gardens are popular because of social, economic, and personal benefits. Two million people in the United States participate in community gardening programs and another 6 million express an interest if more programs were available.

The purpose of this research was to investigate some factors to determine what may be responsible for the problem of garden plot abandonment. Some new gardeners never get beyond the planting stage and the gardens are left to grow up in weeds.

The factors selected for this study were: distance from the home to the garden site, income level, number of people supported by the garden, experienced and new community gardeners, and number of plots per gardening unit. The gardens were rated in June (spring season) and in September (fall season), and analyzed using Chi-square and correlation statistics.

The factors of experience, income level, number of family members, and plot size significantly influenced garden success. Distance from gardening site to home had no significant effect on the success of the individual gardening plot.

Consequently, educational tools need to be developed to work with new gardeners and new methodology may be needed with low income people to motivate them to successfully garden.

Involved gardeners, good management, adequate resources, strict control and reassignment of abandoned plots, and availability of managerial assistance are additional factors to consider for a successful community gardening program.