Demographics and Volunteer Experiences of Oregon Master Gardeners

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SUMMARY. The last statewide survey of the Oregon Master Gardener (MG) Program was completed in 1992. Since that time, the program has expanded from 20 to 27 counties and increased by over 600 new volunteers. Compared to other MG programs around the United States, Oregon is the tenth largest in number of volunteers and seventh in hours volunteered. Considering the size of the Oregon MG program and changes seen in annually compiled statistics, a better understanding of who the Oregon MGs are and what they think about their personal volunteer experience became critical. We developed a survey tool to understand the Oregon MG demographic composition and personal volunteer experience. Compared to the 1992 baseline survey, the general trends found in the 2001 survey suggest that Oregon MGs are younger, joining the program with more college education, live further from cities and towns, and are more often employed. Still, the commitment level to volunteering is similar to, or has exceeded 1992 levels.

The Master Gardener (MG) Program, started in 1973 in Washington State, has spread throughout the United States and to several Canadian provinces. Even though most states have a program, nationwide consistency is lacking in the MG Program. Although program missions appear similar, the methods used to reach the community can differ (Meyer, 1997).

Nationally, Master Gardeners are a diverse population of volunteers (Rose, 2001; Schrock et al., 2000). The range of age distribution varies by program; Missouri had about 59% of its volunteers over the age of 50 (Schrock et al., 2000), Maine had about 35% over 51 years of age (Stack, 1997), Bexar County Texas had 28% of their volunteers over 55 (Finch, 1997), and 55% of Atlanta Master Gardeners were over 50 (Rohs and Westerfield, 1996). In 1992 in Oregon, 66% of the volunteers were over the age of 51 (McNeilan, 1992).

The number of retired and employed volunteers also varied by program. Of Atlanta Master Gardeners, 29% were retired and 48% were employed (Rohs and Westerfield, 1996). The Missouri program had a similar breakdown with about 27% and 53%, respectively (Schrock et al., 1997). In 1992, the Oregon program had more retired volunteers (46%) and fewer employed (34%) (McNeilan, 1992).

From 1992 to 2000, the Oregon Master Gardener Program grew in numerous ways.

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The number of counties with the MG program increased from 20 to 27, the number of active Master Gardeners rose from 2137 to 2759, and the hours spent volunteering increased from 73,844 to 115,176. These numbers reflect a visible change in the scope of the program, and lead to questions about who was getting involved in this growing program. General questions included: Who are the Oregon MGs? Were the training methods currently used to train and reach MGs still appropriate? What impact was the Oregon MG program having on the individual volunteers and their community?

Materials and methods

A survey was developed to answer these questions and others. As a baseline to work from, questions were taken from surveys used previously with the Oregon MGs. Questions also met specifications from the Oregon State University institutional review board. Survey specialists were consulted in the development process to ensure concise questions that would result in useful data (M. Engle, personal communication).

Incorporating questions used from previously administered Oregon MG surveys allowed for useful comparison between old data and new data. The survey included a section with basic demographic questions to discover age, gender, ethnicity, income, education level, community size, and employment. A second section asked participants to share their personal MG volunteering experience. They were asked questions to define their involvement with the MG program and also the value they placed on their individual learning and volunteering experience using a four-point Likert scale (Babbie, 1998; Likert, 1932). Figure 1 illustrates sample questions from the survey; a complete copy of the survey is also available on-line (VanDerZanden, 2002).

In total, 257 surveys were sent to a random stratified proportional sample of currently active Oregon MGs. The sample size was chosen using Perseus survey software (Perseus Development Corp., Braintree, Mass.). By setting alpha equal to 0.05 and the power at 80%, an effective sample was determined to be 187. The actual sample size chosen was 257 to account for attrition of nonrespondents. Three weeks after the survey was mailed, followup postcards were sent to nonrespondents.

Results and discussion

Of the 257 surveys sent to Oregon MGs, 132 surveys were returned for a response rate of 51.4%. The returned surveys still represented the stratified proportional sample. The 1992 survey was sent to 600 Oregon MGs with 276 returned, for a response rate of 46%.

Fig. 1. Sample questions from the 2001 survey sent to currently active Oregon Master Gardeners (VanDerZanden, 2002).

	Strongly disagree	Disagree	Agree	Strongly agree	
After receiving training, I feel that:					
35. I have gained new sources of information.	0	1	2	3	N/A
36. I am providing a needed service to the community.	0	1	2	3	N/A
37. The recipients of my volunteer work appreciate my help.	0	1	2	3	N/A

Table 1. Comparison of gender, annual household income, and ethnicity of Oregon Master Gardeners based on statewide surveys conducted in 1992 and 2001.

Parameter	Respondents (%)	
	2001 (n = 132)	1992 (n = 257)
Gender		
Female	74	58
Male	26	42
Annual household income		
Under \$15,000	5	13
\$15,000- \$24,999	17	25
\$25,000- \$49,999	33	46
\$50,000 or more	45	16
Ethnicity		
White, European American, non-Hispanic	95	95
Native American	4	2
Other	2	3

Responses to the demographic questions in 2001 demonstrated changes in the volunteer composition of the Oregon Master Gardener Program in comparison to the 1992 survey.

In less than 10 years, the demographics have changed

Fig. 2. (top) A comparison of age distribution of Oregon Master Gardeners based on statewide surveys conducted in 1992 (n = 276) and 2001 (n = 132). (bottom) Age distribution of Oregon Master Gardeners based on a statewide survey conducted in 2001 (n=132).

considerably in some areas, while other categories remained consistent. Table 1 shows data on gender, income and ethnicity. There is a higher proportion of females in 2001 (about 74%) compared to 1992 (58%). The annual household income of the volunteers has increased with about 45% earning over \$50,000 in comparison to 1992, when only 16% were at that level. The one thing that has remained constant since the 1992 survey is the percentage (95%) of white European Americans in the program. When comparing age of MG volunteers, 50% were over the age of 61 in 1992; currently 40% are 62 and older (Fig. 2a), and the current age distribution is bimodal (Fig. 2b).

The percentage of volunteers with a 4-year or higher college degree, rose from 48% to 53% (Fig. 3). Oregon MGs are spread throughout the state and the number living in rural areas rose from 26% to 46% (Fig. 4). The number of employed MGs has increased from 34% in 1992 to 50% in 2001 and the number of retired MGs has decreased by 11% (Fig. 5).

Another comparison is the length of time MGs stay involved in the program. Previously, the average tenure of a volunteer was 3.7 years; this increased to 5.0 years in 2001 (Fig. 6). The average hours spent volunteering in a year remained similar with 63 h in 1992 compared to 65 in 2001 (Fig. 7). Required volunteer hours are determined by each county and range from a commitment of 50 to 70 h/year. The 2001 data show that volunteers are staying involved in the program longer, and continue to have high levels of commitment.

Even as MGs get younger, and have more outside commitments such as work or raising a family, they seem to find the time to remain involved. When asked if they plan to remain active in the program, 84% of the respondents replied affirmatively.

Those surveyed were asked to compare prior horticulture knowledge and skill levels to the levels obtained after they completed their training. Before Oregon MG training, horticultural knowledge was 1.72 (four-point Likert scale: 0 = little/low; 3 = high) and horticultural skill

Fig. 3. Education level of Oregon Master Gardeners based on a statewide survey conducted in 2001 (n = 132).

Fig. 4. Size of community Oregon Master Gardeners live in based on a statewide survey conducted in 2001 (n = 132).

Fig. 5. Comparison of Oregon Master Gardener employment status based on statewide surveys conducted in 1992 (n = 276) and 2001 (n = 132).

level was 1.74. After receiving 6 to 10 weeks of training, reported horticultural knowledge and skill level increased to 2.49 and 2.31, respectively.

Oregon MGs noted that personal growth and community enhancement were two motivations for active participation in the program. Not only do they improve personal knowledge and skills through training, there are adequate opportunities provided through the MG program to share through service (2.23). Providing a needed service to the community (2.35) allows the volunteer to grow personally through education and service (2.44 and 2.27, respectively). They feel their community appreciates the help they provide (2.50) and that their service is rewarding (2.39). Involvement with the MG program has motivated several volunteers (39%) to become involved with various other community organizations, thereby furthering their community involvement.

Conclusion

Because there is no standard national MG program, understanding the composition of the volunteer group on a state or local level is important. The responses received from the 2001 survey show that as a group, the Oregon MGs have changed over the past 9 years. These changes indicate the need for modifications to the MG program in order to meet the needs of these volunteers. Knowledge of the Oregon MGs educational experiences and employment backgrounds can guide modifications to the training format and methods of educational delivery that will be most effective for the group. These modifications may include capitalizing on the benefits of current technology such as computers and the Internet, by offering the entire training on-line; and/or offering evening or Saturday classes.

In a survey encompassing all Oregon State University Extension Service volunteer programs, volunteers rated personal growth and increased knowledge and skills as the most important benefits they received (Braker et al., 2000). Our data suggest this is particularly true of MG volunteers, and contributing to their community is equally important.

Fig. 6. Number of years spent volunteering with the Oregon Master Gardener program based on a statewide survey conducted in 2001 (n = 132).

Fig. 7. Annual hours spent volunteering by Oregon Master Gardeners based on a statewide survey conducted in 2001 (n = 93).

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