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Summary. The Davis County Master Gardener program is unique in several ways. The program includes 3 years of training and volunteer service. The first year's training, taught each year, covers general gardening principles, while the two advance classes, offered in alternate years, focus on fruit and vegetables and ornamentals and landscape design. The program is also unique in that it is based at the Utah State University Botanical Gardens. In addition to working with horticulture extension programs, Master Gardeners can get hands-on experience working in the gardens. Many specialize and become local resident experts in particular gardening areas.

The Davis County Master Gardener (MG) program began in 1980. Davis County is located 20 miles north of Salt Lake City, Lutah, and is presently the fastest growing urban county in Utah. It has a population of 225,000, which is the third largest in the state, although it has the smallest land area. The MG program in Davis County is a unique 3-year program with 40 hours of training and volunteer service each year. Training topics follow a 3-year rotation and include a general gardening course during the first year. Topics in the general course include basic plant science, soils and soil fertility, irrigation and water quality, fruit and vegetables, tree care, annuals, perennials, and woody plants, insect and disease management, weed control, and other miscellaneous gardening subjects. In the second year, MGs receive extensive instruction in fruit and vegetables. During the final year, instruction focuses on landscape design and ornamental horticulture. There is a \$40 application fee for each year of the program, plus a \$25 fee for copied materials. Upon completion of the 40 hours of service, MGs are eligible for a \$40 refund. The program was set up to train extension volunteers and provide educational programs at the Utah Botanical Gardens (UBG). A disadvantage of the 3-year program was that each year new MGs would enter the program, often joining the advanced classes without first taking the general training. Since 1994, the general course has been taught annually.

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The popularity of this 3-year program grew beyond the Davis County boundary. As other gardeners and MGs heard of the courses and became familiar with the materials presented, individuals from other counties drove long distances to participate. Some had completed 1-year MG programs offered in their home counties and were looking for more advanced training and information. Many who were drawn to the program said it was because it offered a hands-on approach to horticulture, was associated with UBG, and allowed more diverse and varied alternative educational options. While most MG training sessions in Utah are offered in the evenings, classes and training in Davis County have only been offered during weekdays, with volunteer time mostly during the day. Daytime programming has not limited the number of participants and volunteer time donated to the county continues to increase (Table 1).

In 1994, the state and county MG leadership decided that the General Gardening course (year 1) should be offered every year. This allowed standardization of programs throughout Utah and corrected the problem of individuals entering the advanced classes without receiving the introductory course. UBG continues to offer the two advanced classes every other year. This allows MGs from other counties to enter the advanced classes to continue their training and service. MGs are required to complete 40 hours of volunteer service before they may take either advanced course. This approach has helped to retain volunteers and increased enrollment of new MGs. We have also noted that the longer MGs participate in the program the greater the number of individual complete the 40 hours of service required. From 1993 to 1995, 58% of the MGs in the introductory class, 65% with 2 years of classes, and 83% of those completing all 3 years fulfill their 40 hours each year. While offering the general gardening class solve one problem, it also requires the county and state staff that instruct MGs to do so every year.

As the MG program grew, retention of volunteers became more important. A MG screening program has been initiated to assess the commitment and suitability of applicants for involvement in the program. In 1996, a committee consisting of the county MG coordinator, UBG's garden manager, and two MGs interviewed each applicant for the 1997 training class. Interviews were arranged to help applicants understand the goals and format of this volunteer program and extensions expectations for them at the completion of the training. The interviews gave the applicants a chance to ask questions and express their volunteer interests before the training

started. This part of the program will continue because volunteer retention rates and hours volunteered have increased as a result of careful screening of MG applicants.

The cooperative extension office for horticulture moved to the grounds of UBG in 1981. This was the inception of the Davis County MG program. Since that time, the number of volunteers has grown from 21 donating ≈700 hours of service in 1982 to 150 volunteers contributing ≈5000 hours in 1996 (Table 1). The most active volunteers (donating >20 hours of time) make up the bulk of the volunteer hours each year. Several of the volunteers are known to give 300 to 400 hours of service per year. Recognition of MG contributions to Davis County and Utah State University is an important part in the volunteers retention. Events such as an annual summer barbecue and graduation ceremony, spring and fall socials, and a winter recognition luncheon with presentation of awards and certificates holds the group together.

MG service activities

Davis County MGs serve the gardening needs of the community in a variety of ways. Trained volunteers provide plant diagnostics at weekly clinics throughout the spring, summer, and fall and staff a telephone diagnostics service throughout the year. In 1992, a Speakers Bureau, which presents horticulture programs to groups at UBG and at local churches, schools and public facilities upon request, was organized by the MGs. In 1995, the Saturday Morning Gardening Series was offered to the public at UBG. This series of workshops and classes is offered every other week. In 1997, this program taught by MGs includes 19 sessions on all aspects of home garden care. MGs have also helped extension

Table 1. Total and active Master Gardeners (MGs) trained and volunteer time donated for Davis County, Utah.

| Year | Volunteers | | | |
|------|--------------------|------|------------|------|
| | Total ² | | Activey | |
| | (no.) | (h) | (no.) | (h) |
| 1982 | 21 | 728 | x | |
| 1988 | 32 | 988 | | |
| 1989 | 31 | 1087 | | |
| 1990 | 36 | 1347 | 22 | 1219 |
| 1991 | 43 | 1406 | 22 | 1183 |
| 1992 | 51 | 1950 | 34 | 1754 |
| 1993 | 88 | 3451 | 47 | 3152 |
| 1994 | 92 | 4621 | 60 | 4213 |
| 1995 | 112 | 5500 | 61 | 5088 |
| 1996 | 150 | 4982 | <i>7</i> 5 | 4417 |

²Includes all MG volunteers.

yActive volunteers (subset of total) are MGs completing 20 or more service hours.

Detailed records not kept.



staff develop the resources and teaching materials (slide sets, videos, and a diagnostic data base) needed to run the horticultural programs offered by extension and serve as tour guides at UBG.

Since UBG has a limited number of paid staff, MG volunteers contribute greatly to the maintenance, care, and development of the gardens and plant collections. Sprinkler systems, tillage equipment, and physical facilities are maintained and repaired through volunteer mechanical and horticultural skills. MGs sign up each year to maintain iris, rose, herb, and daylily and children's, perennial, and annual flower gardens. Some MGs have maintained the same areas in the gardens for >10 years. More experienced MGs become project leaders in specific garden areas. Many have become resident experts on particular plantings. Other MGs work in the greenhouses seeding, transplanting and caring for plants used on the grounds. In many ways the Davis County MG program is a family affair. Children are encouraged to work and learn alongside their parents and grandparents. All these activities keep the gardens well maintained, attractive, and able to function at a fraction of the real operating cost.

UBG is moving from its present 7 acres to a new 100-acre site in 1997 and 1998. This move is required due to state highway expansions adjacent to the present site. MGs are looking forward to move as it gives them an opportunity to assist in the creation of the new Utah Botanical Center. There are many challenges for the extension staff as they work to keep the volunteers active during the transition and development of the new facilities. These challenges include volunteer coordination to assist in site preparation, plant removal and planting, fund raising, and program scheduling.

MGs also assist Utah State University professors in research trials. The proximity of the Utah Agricultural Experiment Station's Horticulture Research Farm to UBG allows active participation of MGs in research and extension efforts. They help plant, harvest, and, on completion of the research, glean produce from the vegetable and fruit plots which is distributed to local food banks. MGs have also worked with the Extension Refugee Program and have supplied veg-

etable and herb transplants to refugees throughout Utah. In 1993, the Davis County MG Association received the Refugee Service Award from the Utah Refugee Advisory Council and the State Office of Family Support. Other activities and service projects that MGs have been involved with include educational displays, clinics and booths at garden festivals, running the horticulture department at the county fair, assisting in local tree planting, and helping develop a small horticulture library. In conjunction with the Davis County 4-H program, MGs built and distributed portable growing units for use in local elementary schools.

The Davis County Master Gardener Association was formed by volunteers in 1991 as an independent group to help support MG and horticulture education programs. The association is independent of extension; however, its purpose as stated in the by-laws is to promote, assist and perpetuate the Utah State MG Program in cooperation with the Davis County Extension Office. Annual dues are \$10 per year and membership is open to MGs and others interested in gardening. The association includes five officers, five committee chairs, and the county extension advisor. Since its inception, the association has grown to >100 active members. The association provides additional educational opportunities to its members through an annual statewide minicollege, develops and presents monthly programs, and participates in local, state, regional, and national tours, workshops, and field trips in addition to publishing a monthly newsletter. For the past several years, the association has provided \$400 in annual funding to Utah State University for a horticultural scholarship. Money for this scholarship come from yearly dues, craft sales and other fund raising activities.

Conclusion

Utah State University with the Davis County MGs have greatly enhanced the quality of life for surrounding communities. With continued urban growth in Davis County, expansion of UBG, and greater interest in horticultural education, MGs become more important as they help supply the public with detailed horticultural information.