

# State Master Gardener Report 2013



The WSU Extension Master Gardener Program provides public education in gardening and environmental stewardship based on research at WSU and other university systems. Volunteers are trained to be community educators about issues of importance in their local communities that enhance natural resources, sustain communities, and improve the health and wellness of Washington residents.

The WSU Extension Master Gardener Program has a rich history, beginning in the Seattle area in 1973, and spreading from most counties in Washington to the entire United States and abroad.

Total certified Master Gardener volunteers:

**3,527**

Total MG volunteer hours reported:

**256,000**

Average hours per MG volunteer:

**59.3**

## 🌸 Master Gardener volunteers taught **9,358 first-time gardeners.**

Research shows that learning to grow vegetables improves eating habits and health. The more involved people are with growing their own food, the more likely they are to eat it. This correlates to a diet consisting of more fruits and vegetables, and evidence shows that gardeners eat more fresh produce than non-gardeners. Diets high in fresh fruits and vegetables are known to prevent obesity, diabetes and other chronic illnesses. Seniors who garden eat more fruits and vegetables, are more physically active, and report a higher quality of life than non-gardeners.

### FOR INSTANCE:

In **Snohomish County**, MG volunteers worked with members of the Tulalip Tribe to develop gardens for the tribal community. The goal of this project is to get tribal members interested in growing and eating fresh food. The gardening lessons are partnered with education about diabetes, which is epidemic among tribes across the United States. Thirty tribal members participated in the program and a greenhouse was recently installed to increase production. Master Gardeners are there each gardening day to give advice on best gardening practices. The garden has also created interest among the youth, with 40 signing up to participate. One of the youth who signed up for the Leadership Group, in response to President Obama's challenge to Native American Youth, was selected to meet the president. In addition, the program has been featured in National Tribal Magazine.

One tribal member said, "I can't believe I am 47 years old and had never tasted a tomato. Now we love them."



## ❁ Master Gardener volunteers taught in **175 community gardens.**

Studies of community gardens and their participants show more benefits to neighborhoods than just better access to fresh food and nutrition. Community gardens foster increased community involvement and pride among residents, increased neighborhood safety, increased activity and sense of well-being, and less isolation among residents. Community gardens also help people save money, preserve green space, and contribute to the urban food system. Additionally, community gardens bridge ethnic, economic, and age differences.

In 2013, under the leadership of Master Gardener volunteers, community and demonstration gardens donated over 64 tons of produce to food banks or other community-supported agencies in Washington.

### FOR INSTANCE:

In **Pierce County**, MG volunteers started a gardening project in 2010 with inmates at the Washington Corrections Center for Women in Purdy. Twenty women currently participate in the project and grow strawberries, zucchini, potatoes, tomatoes, lettuce, carrots, beets, winter greens and other vegetable crops. Since 2010, more than 30,000 pounds of produce have been harvested for the Corrections Center cafeteria, reducing food costs and increasing the amount of fresh produce the inmates consume.

In **Chelan County**, a community garden was built as a result of a cooperative effort between Columbia Valley Community Health Centers and WSU Chelan County Master Gardeners. The partnership sought to increase consumption of fresh fruits and vegetables, increase physical activity, increase family togetherness opportunities, and create a place to garden for those who did not already have one. Participants reported saving a total estimated \$1,300 in 2013 as a direct result of growing their own food. On average, families increased their daily vegetable and fruit consumption by 22% and garden plot owners increased their vegetable gardening knowledge by 35%. Gardening at the Eastmont Community Garden increased the physical fitness level of participants by an average of 17%. Gardeners also indicated that stress levels were decreased by working in the garden and spending time with their families.

In **Benton-Franklin Counties**, MG volunteers are promoting and helping people grow produce for the Plant-A-Row program, which encourages gardeners to plant extra produce to donate to food banks. Under the direction of Bill Dixon (MG), over 5,000 seed packets and 4,000 transplants were distributed to local gardeners. As a result, 16,000 pounds (valued at \$24,000 and providing 48,000 servings of fruits and vegetables) were donated to local food banks. The MG demonstration garden alone donated 1,700 pounds of that produce. In addition, the Plant-A-Row MG team mentored 13 community gardens, two school gardens, and three developing community gardens.

In **San Juan County**, MG volunteers developed a demonstration garden next to the local food bank. The demonstration garden grows about 1,000 pounds of fresh produce each year that is donated to the food bank. In addition, easy-to-grow vegetable starts with growing information on their labels are given to the clients of the food bank. With Master Gardener volunteers on hand to answer additional questions, the new gardeners are prepared for success in growing and harvesting their own vegetables.

## ❁ Master Gardener volunteers taught **30,671 residents to use Integrated Pest Management methods.**

Integrated Pest Management (IPM) is a proven system for managing pests (insects, diseases, and weeds) in ways that limit pest damage to a tolerable level for plant health and minimize threats to unintended animal and plant species as well as the environment. Master Gardener volunteers teach cultural, mechanical, biological, and chemical methods of pest management, highlighting plant health measures to prevent plant problems and using least-toxic methods of pest control when necessary.

## 🌸 Master Gardener volunteers taught **13,113 youth**.

School gardens create more positive attitudes among students regarding fruits and vegetables, which leads to higher consumption of fruits and vegetables by the students and their families who garden. Studies of students involved in school gardens show higher nutrition and environmental awareness, higher science test scores, increased self-esteem and interpersonal relationships, and better work and team skills than their non-gardening peers.

### FOR INSTANCE:

In **Asotin County**, MG volunteers implemented a gardening and nutrition pilot project at two elementary schools to investigate long-term solutions to the alarming rise in youth obesity, diabetes and other nutrition-related diseases. Asotin County is ranked near the bottom (36<sup>th</sup> out of 39 Washington counties) on standardized health indicators. The goal of the Sustainable Kids, Sustainable Gardening project was to promote healthy eating choices and increase knowledge of local fruit and vegetable production for 4<sup>th</sup> and 5<sup>th</sup> grade students. Master Gardener volunteers taught 100 students from November to June. Hands-on curricula were developed consistent with the Washington State K-12 Science Curriculum Standards. Class surveys indicated that, through this education, youth learned to read, understand, and use food labels to make better food choices and to make small changes in their food choices, all of which will lead to positive long-term health impacts.

In **Thurston County**, 400 volunteers, children, and chaperones participated in a gardening program at the Master Gardeners Dirt Works Demonstration Garden. The youth were taught, through hands-on gardening activities from seed to harvest, an appreciation for the environment and community service values. During this program, 680 pounds of produce were grown and donated to the Thurston County Food Bank.

In **Spokane County**, WSU Master Gardener volunteers, WSU horticulture faculty, and Spokane County government entered into a partnership in 2011 with the Fairchild Air Force Base Youth Center. They worked with local retired military personnel to develop a community garden for children of active military families.

In 2012, a second garden was developed on base. The instructional model was modified to include ten pre-teens as teachers for younger youth (28 4-H Clover-Buds). Donations and support came from Lowe's, Burpee Seeds, and Home Depot. Garden instruction was based on STEM (science, technology, engineering, and mathematics) principles. In 2013, the program expanded to include garden journals that featured age-appropriate STEM-related activities. Garden produce was mostly consumed by the young gardeners, but 250 pounds was donated to the nearby food bank.

At local and state fairs overall, youth horticulture exhibits have been decreasing, but youth involved in this project entered 35 horticulture exhibits at the annual Spokane Interstate Fair. First place ribbons were earned on all but two entries.

## 🌸 Master Gardener volunteers taught **39,161 residents how to conserve water and protect water quality**.

Washington's rivers, lakes, and aquifers provide water for agricultural, residential, and recreational use, and provide wildlife habitat. Safe, reliable sources of water must be maintained to meet the needs of our growing population. Water-conserving garden practices such as mulching, efficient irrigation, and planting drought-tolerant plants are the most cost-effective and environmentally sound ways to reduce the demand on our limited water supplies. Stormwater runoff has been linked to pollution of drinking water supplies and declining health of wildlife and fish species and has been identified as the leading cause of pollution in the Puget Sound region. To protect water quality, urban gardening best management practices include reducing the use of pesticides and fertilizers, composting, mulching and using groundcovers to reduce erosion, grass cycling, and planting rain gardens that capture and filter water runoff from roofs and other impervious surfaces.

**FOR INSTANCE:**

In Snohomish County, Washington State University Extension developed the first rain garden program in 2008. Partnerships now include the Snohomish Conservation District and the City of Everett. Rain Gardens are landscaping features adapted to provide on-site treatment of stormwater runoff. They are designed to mimic forested ecosystems, helping to remove harmful pollutants from stormwater runoff as it infiltrates and recharges our groundwater. Master Gardener Rain Garden Mentors provide access to the Rain Garden Manual for Western Washington Homeowners and have published rain garden brochures and articles, and been interviewed on radio programs. As a result of this program, there have been 96 outreach events across the state, including Rain Garden clinics and presentations, as well as assistance with 66 private rain garden installations, as reported by WSU Extension offices.

In Kitsap County, the Rain Garden Mentor program involves trained volunteers who help homeowners understand the benefits of rain gardens while assisting in technical details such as site selection, design, and plant suggestions. Volunteers meet with homeowners at their site and provide them with valuable information to help in the planning process. WSU's Rain Garden Mentor volunteers are recruited from current WSU Kitsap Master Gardener and Beachwatcher volunteers who therefore have a wide background in native plants, water conservation practices, shoreline stewardship, and least toxic gardening methods.

## Master Gardener volunteers taught **13,899 residents proper tree planting and maintenance practices.**

Research documents the many benefits of a healthy urban and community forest, such as moderation of extreme air and soil temperatures, conservation of energy, improved air quality, reduction of stormwater runoff, lower noise levels, and increased wildlife habitat. For instance, a 25-foot tree can reduce heating and cooling of a typical residence by 8 to 10%. Trees modify the "heat island effect" in urban areas by evaporation through their foliage, which cools their immediate surroundings. Roots and fallen leaves help hold soil together and protect it from erosion. These benefits, together, result in increased energy savings and increased survival and health of other landscape plants. In addition, trees and plants enhance property values and community assets, resulting in an increased tax base for municipalities.

**FOR INSTANCE:**

In Yakima, Benton, and Franklin Counties, through a grant from Washington State Department of Agriculture, multiple study sites were funded to explore organic approaches to pest management in backyard fruit trees. One of these sites was managed by Yakima County Master Gardener volunteer Fred Staloch. He adopted pest management strategies, including fruit bagging (a preventative for codling moth) and properly timed spraying with an organic insecticide that controls western cherry fruit fly. As a horticultural enthusiast, he helped refine the study by demonstrating his "bonsai approach" to backyard tree fruit production. By keeping the overall height of his fruit trees to less than 10 feet tall, Staloch helped document that organic pest management was effective in properly trained and pruned fruit trees. An estimated 350 Master Gardener volunteers throughout Washington have been made aware of the Bonsai pruning approach and two peer-reviewed WSU Publications advocating this new approach have been published.



## Master Gardener Program

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