



GROUNDDED

A Quarterly publication of WSUE
Grant/Adams Master Gardeners

Newsletter June 2014
Volume 3 Number 2

Grant/Adams Counties Master Gardeners, PO Box 37, Ephrata, WA 98823
<http://grant-adams.wsu.edu> · ga.mgvolunteers@ad.wsu.edu

CONTINUING TO GROW THE MGF MISSION . . . *By Kris Nesse*

The Grant-Adams Master Gardener Foundation (MGF) financially supports WSU Master Gardener projects and activities. The goal is to enhance public education in horticulture and environmental stewardship. Thus far, 2014 has proven to be a stellar year, with substantial and unexpected donations along with great community support for the 7th annual MG Plant Sale/Raffle.

INSIDE THIS ISSUE

- MGF Mission
- Using Native Plants
- Managing Squash Bugs
- Local Efforts Help Pollinators
- Mini Hoop Houses
- Hortus Mustus-Lemon Lily
- Clinic Schedules

The foundation welcomed another donation from Jim Baird via the Columbia Basin Foundation (see “Making a Local Impact” in the March 2014 issue of *Grounded*). As a 501c3 nonprofit, the MGF also was the beneficiary of an unexpected donation from the Friends of the Moses Lake Farmers Market group as it is in the process of disbanding. We are very grateful for these votes of confidence in our group and in the support for our mission.

In addition, sunshine, a huge variety of quality plants, enthusiastic customers, and knowledgeable salespeople all contributed to Grant-Adams Master Gardener Foundation’s successful 2014 plant sale. The seventh annual MGF Plant Sale took place at the Moses Lake Farmers Market on May 10.

The sale offered a wide variety of tomatoes, along with other vegetables, herbs, annual ornamentals, locally adapted perennial trees, shrubs, flowers and grasses, as well as Mother’s Day baskets, garden gift items and books. Hundreds of customers took plants home along with descriptions and cultural information.

Veteran and intern Master Gardeners spent many hours in the BCC and home greenhouses growing plants.

In addition, plants from MG homes and demonstration gardens were propagated, dug and nurtured to offer at the sale. These WSU-trained experts were also on hand to describe plants and help customers with growing information.



President, Kris Nesse, accepts a donation from Eddie Huffman and JoAn Stern, Friends of the Moses Lake Farmers Market on behalf of the MG Foundation

The MG Foundation is committed to honoring this hard work and financial support by carefully planning annual and long-range goals to make the best use of the funds. A committee will analyze current MG activities and projects and consider a variety of new proposals. We humbly thank our donors and the community for continuing to support the MG Foundation mission.



Dedicated Master Gardeners Staff at 2014 Plant Sale

Using Native Plants in Your Garden . . . *By Cynthia Calbick*

What are Native Plants?

Native plants existed in habitats before the arrival of Europeans with their plant imports.

Reasons to use native plants in the home garden:

Native plants are adapted to our climate with cool moist winters and hot, dry summers. They require less water and generally require less maintenance than non-natives once they are established. Native plants can improve water quality by requiring less fertilizer and may not need pesticides. They provide shelter, food and pollination opportunities for wildlife. Many of these plants resist native (and introduced) pests and diseases better than non-natives, and provide habitat for animals and beneficial insects. Finally, they can help reduce erosion, control weeds, and encourage a sense of stewardship.

Native plants grow best in their traditional environments

Natives can often adapt to varying soil quality factors like growing in different soil textures (e.g., sand or clay), in varying moisture regimes, or being tolerant of high pH, alkaline conditions (very typical of Columbia Basin soils). Natives are adapted to the local temperature, light and precipitation ranges.

Natives exist in a unique and intertwined environment

A unique quality of native plants is that they live in association with both beneficial and harmful pests. Natives have developed sufficient resistance to plant diseases and pests to survive the

attack of common aggressors. In fact, many natives live in surprising equilibrium with nearby diseases, plants and animals, as well as insects and soil microbes. You could think of natives as members of a local cooperative where all manage to work in relative harmony with both their neighbors and the living conditions.

Successful use of natives in a home garden means providing conditions that mimic natural wild habitats

Natives prefer and do best in conditions similar to their accustomed growing conditions. As with most plants, *the place most similar to their natural location is the best place for native plants.*

Gardening with native plants can have certain limitations

Mature natives do not transplant very well because they have deep and extensive root systems that allow them to seek water and other resources at relative distances and depths. Growing native plants from seed or starts is more successful though sometimes it is a process of trial and error to encourage seeds to germinate.

Natives often have short blooming or growing seasons that allow them to grow, flower and produce seed in a short period mirroring the length of their prevailing growing season. In their most natural settings natives can be easy to grow.

When the native plants are in bloom they often are spectacular

Early to late spring garden tours or field trips to see wild flowers can be a very enriching experience.

Check out these locations and sites for information about organizations and trips to see wild flowers and gardens. Remember to respect private property and the plants you want to view. Watch for snakes now, too.

- ❖ Moses Lake City Library, 418 E 5th St.; Native and Drought Tolerant Master Gardener Demonstration Gardens
- ❖ Othello Old Hotel, 33 E Larch St.; Drought Tolerant Master Gardener Demonstration Garden
- ❖ Rieman-Simmons House, Quincy Valley Historical Society, 119 F St. SE, Quincy; Native Garden
- ❖ County and State Native Plant Societies listed on the internet.
- ❖ Washington Native Plant Society, Columbia Basin Chapter: <http://www.wnps.org/cbasin>
- ❖ Another resource: *Teaming with Microbes: A gardeners guide to the soil food web*, by Jeff Lowenfels and Wayne Lewis. Timber Press, Portland Oregon, 2006.



Sulfur buckwheat



Penstemon



Looking across the pink Palmer's Penstemon, you can see Gaillardia 'Blanket Flower' to the left, globe mallow (orange) and Venus penstemon (the blue) and, of course, the beautiful elderberry Sambucus nigra in the (right) background



On the left foreground, Oenothera 'Evening Primrose' and Gaillardia 'Blanket Flower'; behind-left to right, Venus penstemon, Philadelphus coriolanum 'Mock orange', Eriogonum umbellatum 'Sulfur Flower Buckwheat', and Palmer's Penstemon

The Moses Lake Demonstration Garden in front of the Public Library is in full bloom.

Photos by Cynthia Calbick and Barbara Guilland

Managing Squash Bugs in the Vegetable Garden . . . *By Mona Kaiser*

We're all starting another vegetable gardening season anticipating great bounty. It's exciting to watch our seedlings progress into mature plants. It even gets more exciting as we pick our produce for family meals or have extra produce to share with friends or the local food bank. Many home gardeners look forward to exhibiting their best-looking produce and vegetables at the Grant County Fair each August. Gardening sounds so simple, but many of us will undoubtedly be dealing with the dreaded squash bug on our cucurbit (zucchini, squash, pumpkin, melons, cucumber, etc.) plants.



Squash bug (A) hatching egg mass, (B) older nymph and (C) adult and damage. *Photo credit: Bill Snyder, WSU.*

During the Grant-Adams Master Gardener plant clinics, one of the most asked questions is how to manage the squash bug population on zucchini plants. Some gardeners never have problems with this pest and some gardeners try and try to rid their garden of the squash bug without success.

Recognizing the Squash Bug: Adult squash bugs mate and begin laying clusters of eggs about the time the squash vines begin to spread. Eggs are laid in clusters of a dozen or more on the undersides of leaves. Adult squash bugs are typically dark brown, but may have gray or light brown markings. They are about 3/4" long at maturity. Brown to reddish eggs are laid along the veins of new leaves. The newly hatched nymphs (immature bugs) are greenish to gray. Squash bug nymphs and adults feed on the leaves.

Recognizing Squash Bug Damage: Activity of adult squash bugs begins in the spring and continues through the summer. They prefer the nice tender growth. The adults feed on all above ground plant parts using piercing-sucking mouthparts, sucking sap and disrupting the flow of nutrients and water through the plants tissues. The damage causes yellow specks. Later the damage looks like a wilt, turning a dried brown/black.

Control Methods: The adult squash bug overwinters in residue from the previous year's cucurbit crops, or in other debris in or near the garden. Clean up garden debris as soon as practical to remove hiding places for overwintering squash bugs. Destroying the debris is advised; don't compost. For this reason, crop rotation can help with the control of the squash bug population.

Another means of controlling the squash bug is to hand-pick, bugs and eggs. Destroy them by dropping into a bucket of soapy water. Egg masses are usually yellow-orange or bronze in color and found on the underside of the leaves, particularly on new, fresh growth. Look for the bugs around the base of the plant at dusk. Insecticidal soap can be applied every 3 days for the first 2 weeks after the squash bugs first emerge in the spring.

Natural Control/Natural Enemies: Squash bugs have natural enemies called beneficial insects living in the garden space that feed on a certain phase of development. The hard eggs of the squash bug are heavily preyed upon by ground beetles. The squash bug nymphs are fed upon by predatory damsel and the big-eyed bugs. Later in the season the tachinid fly parasitoid attacks nymphs and adults of the squash bug. The female fly lays an egg on the underside of large squash bug nymphs or adults; the larva feeds and develops inside the bug and eventually kills it. Several parasitoid wasps attack squash bug eggs.

Gardeners need the activity of beneficial insects and the pollination activity of bees for successfully gardening. If the gardener turns to pesticides for the control of unwanted squash bugs, there is the risk of eliminating beneficial insects and the pollinators.

Another natural control of the unwanted insects is the use of floating row cover. Remove the row cover when flowering begins. Monitor the use of nitrogen when fertilizing the garden. Nitrogen does promote nice fresh growth, which the squash bug will be more than happy to take care of for you.

References:

<http://pep.wsu.edu/hortsense/scripts/query/displayProblem.asp?tableName=plant&problemID=237&categoryID=5>
<http://pnwhandbooks.org/insect/vegetable/vegetable-pests/hosts-and-pests/pumpkin-and-squash-squash-bug>
[http://www.ipmnet.org/Pocket guide of Natural Enemies.pdf](http://www.ipmnet.org/Pocket%20guide%20of%20Natural%20Enemies.pdf)

LOCAL EFFORTS CONTINUE TO HELP POLLINATORS . . . *By Kris Nesse*

It's been a little over a year since a cadre of MG volunteers installed a pollinator friendly border at the Ephrata Community Garden, corner of 4th Avenue SW and C Street. Most plants are establishing well, attracting a variety of pollinating insects, and looking gorgeous to boot. As a demonstration garden, clear plant labels are helping educate community members. Posters and brochures are currently being developed that will further inform the public about the plants in this garden as well as techniques to enhance pollinator habitat.

Educational materials, acquired and developed, have already informed interested buyers at the annual MGF Plant Sale/Raffle, and will be available at market plant clinics this summer. Special activities featuring pollinators will be offered at the Ephrata Farmers Market. Any interested group can visit (http://county.wsu.edu/grant-adams/gardening/Pages/Master_Gardeners.aspx) for a list of presentations available, or contact Jeannie Kiehn, 754-2011, jmkiehn@wsu.edu, to arrange a presentation on attracting and protecting pollinators.

Join the Grant-Adams MG volunteers in celebrating Pollinator Week by following these tips:

- **Use local native plants** as much as possible. Research indicates that native plants are four times more attractive to native pollinators.
- **Choose several colors of flowers.** Colors that particularly attract bees include blue, purple, violet, white and yellow.
- **Plant flowers in clumps.** If possible make the clumps four feet or more in diameter.
- **Include flowers of different shapes.** Bees are all different sizes, have different tongue lengths. So a range of flower shapes means more bees can benefit.
- **Have a diversity of plants flowering all season.** A succession of plants provides pollen and nectar throughout the growing season, supporting pollinators.
- **Avoid using pesticides.**

Reference: (Xerces Society for Invertebrate Conservation, www.xerces.org)



Blanket flower (*Gaillardia aristata*)



Western aster (*Aster occidentalis*)



Firecracker penstemon
(*Penstemon eatonii*)



Little Lemon (*Solidago*)



Little Sunflower (*Helianthella uniflora*)



Palmer's Penstemon (*Penstemon palmerii*)



Taper Leaf Penstemon (*Penstemon attenuatus*)

Opportunities to get involved with pollinators may be investigated by referring to: <http://pollinator.org/Resources/facts.General%20Public.pdf>

Mini Hoop House Low Tunnels . . . *By Mark Amara*

A dozen people attended a WSU Extension-sponsored hands-on mini-hoop house construction workshop at Dune Lake Flower Farm near Moses Lake on a cold day in early March 2014. The workshop was organized by and led by Jenelle Ottmar, WSU Extension, Small Farms Specialty Crop County Coordinator and her husband, Jason Ottmar, who demonstrated how to properly build two alternative sets of frames.



Jenelle Ottmar, right, introduced group to mini-hoop house concepts

Low tunnels are easy to build and can provide an affordable way to extend the growing season by weeks or months at season end or at the beginning. Tunnels rely on passive sunlight to create more favorable conditions for growing vegetables and other crops. They can be used as season extenders and a natural way to provide shade and to control insects.

In the demonstrations performed on site, materials had been pre-purchased at local hardware and plumbing supply stores. Tunnel construction is a

relatively easy process made by placing plastic or wire hoops over a planting bed and covering with greenhouse-grade plastic or row cover. In general peak height of the hoop should be at least one half foot higher than the tallest plants in the bed to allow for sufficient air circulation and to avoid frost (or heat) damage.

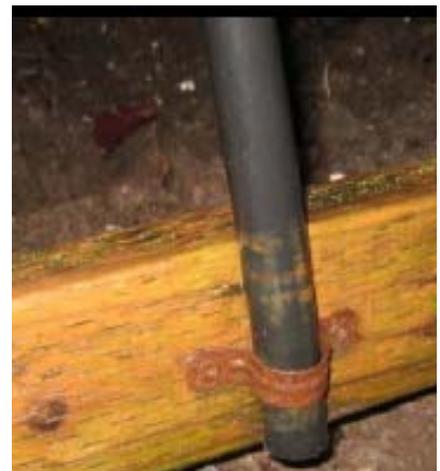
In the first demonstration, ½" No. 4 steel rebar had been cut in 1' lengths though the length should be determined by soil type. A sandy more loose soil may require a longer length for better support while soil depth may also be limited by rocks, hardpan or other factors so knowing your soil characteristics is important. Rebar is pounded into the ground using a hammer at regular intervals on both sides of the bed to about 8" in depth. This is the support system for the hoops to follow. Plastic hoops are cut to length depending on the bed size and preferred height. Hoops are made from ¾" diameter advance drainage systems (ADS) polyflex tubing or from acrylonitrile-butadiene-styrene (ABS) tubing. Both products are used for plumbing and are made from polyethylene. ABS tubing is more rigid than ADS and so is not as satisfactory for very low tunnels. The tubing is placed over the rebar.



Beds are selected and laid out, tubing and rebar is cut and laid out at regular intervals



Plastic or row cover is stretched over the tubing and anchored with boards and/or with straps that clamp directly over the plastic to the tubing.



2 x 4s are cut to length (left), holes are drilled to support the electrical metallic tubing and the boards are drilled with screws to hold them in place. Once the structure is laid on the ground, the tubing used in the first pictures above may be inserted directly through the holes. Plastic or fabric can be stapled to the wood or anchored with rocks or wood

Plastic and row cover fabric are both commonly used to cover low tunnels. Plastic is most often used during the fall, winter, and spring. Row cover is most often used during the late spring, throughout the summer and during the early fall. Plastic comes in various thicknesses and dimensions while row covers also come in varying thicknesses which offer varying levels of frost protection and insect control.



Local mini-hoop house at home of Edris Herodes

For more information, contact Carol Miles, Jacky King, and Jonathan Roozen, WSU Mt. Vernon, NWREC <http://vegetables.wsu.edu/>.

HORTUS MUSTUS - Grant-Adams MG Recommended Plants: Lemon Lily
(Hemerocallis lilioasphodelus) . . . By Kris Nesse

This regular feature of *Grounded* presents plants grown and loved by one or more Grant-Adams Master Gardener volunteers. This issue features a perennial, *Hemerocallis lilioasphodelus*, commonly known as Lemon Lily.



Choosing a “favorite” plant is impossible for me. It’s like choosing a favorite grandchild, and often carries a similar emotional component. So, whoever is in range at any given moment (like when the article is being written), might be the one. At this moment, my mother’s Lemon lily is still blooming, at least four weeks into its season, decorating and perfuming the entryway and patio. Every day it blooms, May into June, it reminds me of my mother and the home where I grew up.

Many plants I cherish most are from my mother or grandmother, or a beloved friend. These favorites have moved with me, from college rentals, through adult moves to four homes. Some species thrive in most environments while others need to be babied if the zone is too cold, or too wet, or too hot and windy. Daylilies have thrived in all my homes.

Many people believe that some of the tough old daylilies are native to North America, mostly because they seem to thrive in old gardens and along roadsides. The lemon lily is a native of eastern Siberia and northern China, where daylilies have been used for food, ornament, and medicine for over 2,500 years. It moved through Europe, into NE Italy and Slovenia and is one of the first daylilies used for breeding.

Hemerocallis lilioasphodelus is an herbaceous perennial, and grows well through a wide range of zones (4-10). The plant has elegantly arching, strap-shaped, medium green leaves. Its fleshy roots (not bulbs) hold nutrients and moisture, allowing the plants to survive out of the ground for weeks (as our wagon train ancestors learned). They also allow the plant to spread and colonize quickly. These clumps stay low, two feet or so, with three foot scapes, are happy in sunny to shady

locations, and even shade out weeds. They have medium water requirements, and appreciate yearly compost or fertilizer. Divide clumps every 3-5 years, or when a friend wants some for her garden.

While the foliage looks good all summer long, it's the 3' tall flower scapes, covered with 10 or more individual 4" trumpet-shaped, bright yellow blooms that make this plant a Hortus Mustus. Individual flowers open for one to two days. The plants look tidier if dead-headed, but are lovely even if that task remains undone. The flowers are very fragrant, with a smell sometimes likened to orange blossoms. Lemon lilies have no serious cultural problems, are easy to grow, and are virtually pest free. They also attract butterflies.

We'll enjoy the Lemon lily's fragrant blooms for a bit longer. I noticed this week that the scapes on another old Asian favorite of my mother's, the "wild" homestead orange daylily (*Hemerocallis fulva*), are emerging just in time to start another reliable six weeks of bloom. Guess that's what will become another of my Hortus Mustuses.

References:

<http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=d180>

<http://www.americanmeadows.com/perennial-planting-guide/daylilies>

http://blog.oregonlive.com/homesandgardens/2009/04/lemon_lily_sweet_to_eat_smell.html

Save These Dates

June to October	First Fridays, 10-11 am Ephrata, 5-6 pm Moses Lake	Meet at the Ephrata and Moses Lake Community Gardens. Master Gardeners on hand to answer season appropriate gardening tips and answers to questions
August	12-16	Grant County Fair, Grant County Fairgrounds, Moses Lake
September	18-20	MG Advanced Education Conference, Greater Convention and Trade Center, Tacoma, WA

2014 Master Gardener Plant Clinics:

- Moses Lake Farmers Market, Every Saturday through October, 8-12 noon in McCosh Park, Moses Lake
- Grand Coulee Farmers Market, First Saturdays: July 5, August 2 and September 6, 8:30-12:30 pm, on Morrison Street across from Safeway, Grand Coulee
- Ephrata Farmers Market, two Saturdays per month, June-September, 8-12 noon on C street between the Courthouse and Bureau Building, Ephrata
- Othello Farmers Market, Saturdays June - September in Pioneer Park, 9 am - 1 pm, Othello

Grant-Adams Counties MG Foundation Officers

Kris Nesse, President, 509-690-8542
 Terry Rice, Vice President, 509-488-3871
 Diane Escure, Treasurer, 509-765-5747
 Mark Amara, Secretary, 509-760-
 Cynthia Calbick, At Large, 509-765-5474

Grounded Staff:

Mark Amara
 Diane Escure
 Barbara Guiland
 Kris Nesse