GROUNDED

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Grant/Adams Master Gardeners

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Editor's Note: The annual Master Gardener Plant Sale helps sustain our ongoing efforts to provide public outreach events throughout Grant-Adams Counties. Your support is greatly appreciated.

INSIDE THIS ISSUE

Master Gardener Annual Plant Sale and Raffle

The annual Master Gardener plant sale/raffle takes center stage at the Moses Lake Farmers Market in McCosh Park, Saturday, May 9, from 8 am to noon as the primary fundraiser for the Master Gardener Foundation of Grant-Adams Counties. Funds raised support Master Gardener horticultural and environmental advocacy activities, including demonstration gardens, presentations and classes, an annual public gardening symposium, plus educational materials and references for plant clinics.

The sale will offer a fantastic array of reasonably priced annual and perennial plants. Need tomatoes? Numerous varieties, both heirloom and hybrid, most from organic seed, can be found at this once-a-year event. Customers will also find other seasonal vegetables, herbs, annual flowers, *locally adapted* perennial trees, shrubs, flowers, and grasses. Master Gardeners will be available to provide care and planting information.

Also featured at the plant sale is a raffle of seven packaged donated items:

- Bucket filled with goodies—birdfeeder, birdhouse, stained glass stepping stone
- Boot repair and painting by local artist Janet Greene
- 2 Camas Cove bottles of wine and carrying bag
- Wine barrel table with glass top
- Seated garden cart
- 1-month Evolve Fitness gym membership
- Cave B Mother's Day basket

2014 Master Gardener Plant Sale Staff

Tickets cost $1 each, and buyers can purchase tickets specifically for any of the package(s) they want to win! Seven winners will be drawn at noon on May 9, and you do not need to be present to win! Tickets are available from any Master Gardener or at the Plant Sale.

New and Revised WSUE Publications

Washington State University Extension has updated three publications and added seven new publications on a variety of gardening topics. There is no charge and they can be accessed by going to the websites listed below.

- **FS115 Growing Food in Parking Strip and Front Yard Gardens— NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=FS115
- **PNW649 Natural Insecticides NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=PNW649
- **PNW104 Meadow Deathcamas in the Pacific Northwest — REVISED**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=PNW104
- **FS116E Growing Green Peas in the Home Garden (Home Garden Series) — NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=FS116E
- **PNW591 How to Reduce Bee Poisoning from Pesticides — REVISED**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=PNW591
- **FS150E 2013 Cost Estimation of Producing Seedless Watermelon in E. WA— NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=FS150E (Online Only)
- **PNW664 Making Garlic and Herb Infused Oils at Home— NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=PNW664 (Online Only)
- **FS153E Knotweed Alert— NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=FS153E Online Only N/C
- **EB0482E Home Lawns—Revised**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=EB0482E Online Only N/C
- **FS161E Pesticide Ingredient: Acetic Acid/Vinegar (HGS) NEW**
  - https://pubs.wsu.edu/ListItems.aspx?Keyword=FS161E Online Only N/C

Coming Soon: First Annual Columbia Basin Eco-Gardening Symposium

The Grant-Adams Master Gardeners and Grant County Conservation District have partnered to jointly sponsor a free half-day gardening symposium open to the public on Saturday, April 25, 2015, at Big Bend Community College, ATEC Building 1800, Moses Lake, from 9 am to 1 pm.

The symposium will focus on drought-tolerant plants and common-sense lawn watering methods adapted to the Columbia Basin. The keynote speaker is Paula Dinius, urban horticulturalist and certified arborist with WSU Chelan-Douglas County Extension, who will give ideas on planting trees and shrubs for low-water-use gardens. Master Gardeners Barbara Guilland and Cynthia Calbick will discuss the benefits/drawbacks of lawn grass and drought-tolerant plants that do well in the Columbia Basin. The information given below provides more details and encourages individuals to register early to reserve a space.

Eco-Gardening Symposium

Purposes and Long-Term Goals:

- Learn the research-based principles and practices that help plants thrive in the Columbia Basin.
- Manage, conserve, and utilize our natural resources in ways that are cost effective, keep yards and gardens productive, and ensure quality habitat for beneficial insects and birds.
- Design sustainable landscapes to help protect water, soil, and air quality, and encourage the appreciation and conservation of all our natural resources.

There is no fee to attend this event.
Refreshments will be provided.
Door prizes will be awarded.

Pre-Registration is appreciated (space is limited)
Register online: www.columbiabasincds.org
Phone: 509-765-9618
In person or by mail:
Grant County Conservation District
1107 S. Juniper Dr.
Moses Lake, WA 98837

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Columbia Basin Eco-Gardening Symposium Registration Form

Name (s) ____

Address ____

City __________________________ State ____ Zip _________

Email ____

Persons with a disability requiring special accommodations while participating in this program may call 509-754-2011. Ext/ 4313 or email: ga.mgvolunteers@wsu.edu. If accommodations are not requested five (5) days in advance, we cannot guarantee availability of accommodations.

Extension programs and employment are available to all without discrimination. Evidence of discrimination may be reported through your local WSU Extension office.

8:30 am	**Registration and Check-in**
9 am	**Introduction** — Kris Nesse, Master of Ceremony
9:15 am	**Paula Dinius,** Keynote Speaker, WSU Chelan Douglas County Extension **Topic: Trees and Shrubs for Low-Water Use Gardens in the Columbia Basin**. Subjects emphasized will be site assessment, matching plants to site, irrigation needs, woody landscape plant species to consider for the region, and challenges frequently encountered.
10:15 am	Break
10:30 am	**Barbara Guilland,** WSU Grant-Adams Extension Master Gardener Volunteer **Topic: Becoming Waterwise: Good Lawn but Less Lawn.** The cooling, stabilizing, filtering benefits of lawn grass will be weighed against the environmental challenges of water scarcity and the heavy water consumption, chemicals, and equipment needed to maintain a healthy, attractive lawn.
11:45 am	**Cynthia Calbick**, WSU Grant-Adams Extension Master Gardener Volunteer **Topic: Drought-Tolerant Plants for the Columbia Basin.** Participants will learn about gardening with beautiful drought-tolerant hardy plants, managing plant health in drought-tolerant gardens, and locating sources for purchasing plants. The presentation is illustrated with photos from the local area.
12:30 pm	**Question & Answer Gardeners Panel, WSU Grant-Adams Extension Master Gardener Volunteers** Ask Questions of Knowledgeable Experts: If answers are not readily apparent, these qualified Master Gardener volunteers will research your questions and contact you. Forms for questions and contact information will be provided. Grant County Conservation District staff and WSU Extension Master Gardener Volunteers will be available to answer questions and provide literature on the objectives and projects in each organization.
1 pm	Adjourn

The Wonders of Winter Sowing . . . *By Terry Rice*

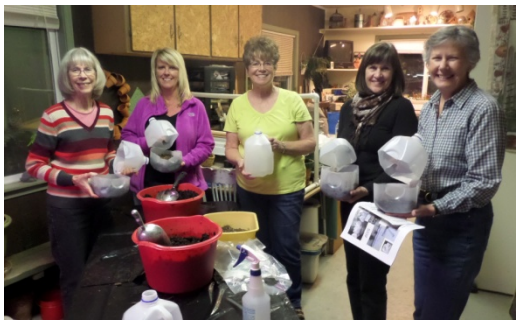
January is the month when all the seed catalogs show up in our mail boxes and we start visualizing beautiful gardens in our future. I have spent many years perusing seed catalogs and online blogs looking for new ways to get a jump-start on my plants. I've longed to have a greenhouse where I can nurture little seedlings until it's warm enough to get out in the garden.

Last year, I stumbled upon a winter sowing website and, since there was no greenhouse in my near future, I decided to give winter sowing a try. The theory seemed sound. "Plant your seeds like nature intended."

I gathered my supplies in January. My local barista saved milk jugs for me and I ordered seeds from my favorite sources. I followed the directions on www.winters own.org and planted more seeds than I could ever use, put the jugs outside in neat little rows, and waited for them to sprout. I waited, and waited, and waited.

Finally, in May (2014), there were the cutest little seedlings in my milk jugs. We all know how exciting those first little sprouts can be! By mid-May, I had more plants than I could possibly use and I started giving them away. I must say the plants were much sturdier and grew more vigorously than any that I had started inside. No hardening off was necessary.

Now I am hooked on winter sowing and happily offered a class through Othello's Community Schools Program. Fourteen gardeners came to class in 2015 and planted a miniature greenhouse made from a milk jug. Everyone was enthusiastic and thought they would try some more jugs when they got home. We have formed an email group and are looking forward to seeing how everyone's plantings progress.



Left to right: Cynthia Calbick, Karen Fowler, Terry Rice, Diane Escure, and Nancy Yoder

If you are looking for more winter sowing information please consider visiting these links:

- Winter Sowing FAQs at GardenWeb
- Winter Sowing Forum at GardenWeb
- Winter Sowers Group at FaceBook
- WinterSown at WebArchive.Org
- www/agardenforthehouse.com

Meet Our Newest MG Volunteers . . . *By Kris Nesse*

In 2013 a small cadre of selected volunteers completed four months of rigorous on-line coursework, local classroom labs and field trips, and testing through Washington State University (WSU). Those who were successful became interns, and worked 50+ hours in 2014 to become certified Master Gardener (MG) volunteers and community educators in gardening and environmental stewardship. These newly minted volunteers are a diverse and amazingly accomplished group of individuals. In this issue of *Grounded* we introduce two of our Moses Lake volunteers.

Edris Herodes

Edris Herodes has lived in Grant County since 1997, residing first in Royal City, then moving with her husband to Moses Lake. She has three grown children and five grandchildren. Edris, a graduate of Evergreen State University, worked at Green Hills Correctional Center and then as a social worker with Washington State Home and Community Services. Now retired, Edris loves working in her yard, gardening, and working out at the gym.

Edris heard about the MG program from a co-worker, and, once she retired, decided to take the training. She was surprised at how difficult the course was, but enjoyed the challenge and all she learned. Edris states, "I have learned much so far and know that I will learn more each year in the MG program. Everyone is so helpful and eager to teach the new folks." Edris hopes to be an asset to the program by helping out with different events MGs offer to the community. She already is active working at the Big Bend Community College greenhouse to ready plants for the MG annual plant sale, in plant clinics, and as a member of the coordinating committee for the First Annual Eco-Gardening Symposium coming up in April 2015.

Edris concludes, "I really enjoy working with new and different species of garden plants and flowers. I look forward to continued learning!"

Karen Fowler

Karen Fowler and her husband, Dave, moved to Moses Lake in 2009. They have six children and eight grandchildren. As a couple who loves the outdoors, Karen and Dave enjoy all the area has to offer, particularly fishing and hunting.

Karen first heard of the MG program from her sister, who is now on a waiting list in Vancouver to take the training. Karen was interested in volunteer work, as well as in improving their vegetable garden and learning more about landscaping. She says, "I had heard wonderful things about the WSU MG program, and thought it would be an ideal opportunity for me." She found the training interesting and challenging, and believes, "This has been a great learning experience. I have met the most wonderful people and incredible mentors." Karen already is deeply engaged in working with homeowners in plant clinics, working at the BBCC greenhouse, and in taking over as the Superintendent responsible for agricultural displays at the Grant County Fair, a major MG responsibility.

The Master Gardener Program of Grant-Adams Counties is lucky to have Edris Herodes and Karen Fowler, along with all the other new volunteers!

Building Better Soils

In December 2014, Andy McGuire, Irrigated Cropping Systems Agronomist, and David Granatstein, Sustainable Agriculture Specialist, organized a Washington State University Extension (WSUE) Workshop on building better soils. This all-day session was full of detailed research, facts, and a variety of information related to soil health for the farmer and gardener alike. Speakers, who were all professional and polished, consisted of experts from WSU, Oregon State University, USDA, ARS, and the University of California as well as a panel of Grant County composters who talked about soil amendments for building soils. Topics included soil health for disease suppression, biological indicators of soil health, economics of building soils, factors affecting soil organic levels, nutrient availability, and soil amendments. One UC researcher compared the paucity of center pivot irrigation systems in California with the thousands of such systems in Washington.

References:

Building Soils for Better Crops book, SARE, online:
http://www.sare.org/Learning-Center/Books/Building-Soils-for-Better-Crops-3rd-Edition

Managing Cover Crops Profitably book, SARE, online:
http://www.sare.org/Learning-Center/Books/Managing-Cover-Crops-Profitably-3rd-Edition

WSU compost information at:
http://puyallup.wsu.edu/soilmgmt/Composts.html and http://csanr.wsu.edu/?s=compost

WSU manure management information at http://puyallup.wsu.edu/soilmgmt/Manure.html

WSU high residue farming under irrigation:
http://csanr.wsu.edu/high-residue-farming-under-irrigation/

http://www.soilquality.org.au/factsheets/how-much-carbon-can-soil-store

NRCS online webinars: Search for Soil Health at http://www.conservationwebinars.net/previous-webinars

Celebrate Soil in 2015, and Forever! . . . *By Kris Nesse*

> "A cloak of loose, soft material, held to the earth's hard surface by gravity, is all that lies between life and lifelessness." — Wallace H. Fuller, Soils of the Desert Southwest, 1975

Soil IS essential to life. This substance, a complex and various mix of minerals, air, water, and innumerable microorganisms, forms the 'skin' of our earth. The 68th United Nations General Assembly declared 2015 the International Year of Soils. The MG Foundation of Grant-Adams Counties will celebrate this essential component of life in *Grounded* articles throughout the year. The Soil Science Society of America outlines the critical functions soil performs in any terrestrial ecosystem—farm, forest, prairie, or city:

- Most of our food comes directly or indirectly from plants anchored in, and nourished by, soil.
- Soils modify the atmosphere by emitting and absorbing dust and gases, including carbon dioxide, methane, and water vapor.
- Soils provide habitat for soil organisms—mostly microscopic creatures that account for most of the life on Earth.
- Much of the water we drink and use every day has been filtered and purified by soil.
- Soils process and recycle nutrients, including carbon, so that living things can use them over and over again.
- Soils serve as the foundation for the construction of roadbeds, dams, and buildings.

Productive soil, as a natural resource on Earth, is extremely limited. Consider an apple to illustrate just how little soil there is available for growing all the food, fiber, and lumber that the ever-growing population of Earth requires. Picture the apple as the Earth. How much of the apple/Earth is water? Imagine cutting away 3/4 of that apple. About half of the remaining quarter of "dry" Earth surface does not produce food, fiber, or lumber because it is under polar icecaps or high mountain ranges. Picture discarding half of the remaining quarter of the original apple. Three quarters of the remaining 1/8 apple is too hot, too dry, too wet, too cold, or too shallow to raise food, fiber, or lumber. Picture cutting that away. There will now be only 1/32 of the original apple left. This is the only portion of Earth available to produce all of the food, fiber, lumber that the world population uses every day. Now imagine peeling the skin from that remaining sliver of apple. That is the soil available on Earth.

What happens if this limited and fragile resource is damaged? How can we all be good stewards of the soil? *Grounded* will explore some of these issues throughout 2015. Note the "Soil Testing" article as one way to get to know the soils in your own gardens.

> "How can I stand on the ground every day and not feel its power? How can I live my life stepping on this stuff and not wonder at it?" — William Bryant Logan, Dirt-The Ecstatic Skin of the Earth

Reference: https://www.soils.org/iys

SOIL TESTING . . . *By Kris Nesse*

Soil is the foundation of any garden. Healthy soil nurtures the crops we want to grow. Laboratory soil tests provide information to help the gardener develop and maintain more productive soil. Such tests detail the level of various nutrients and recommend how much fertilizer to add, based on the test results and the crops to be grown in any particular area.

A garden soil test typically measures organic matter, phosphorus, potassium, calcium, magnesium, boron, and soil pH (acidity) and nitrogen. Soil tests can provide valuable information and are recommended for home gardeners every 3 to 5 years.

To take a soil sample, a few rules need to be considered.

- Sample where the crop will be planted. For instance, if you are using raised beds, take samples in the beds, not in the pathways between them.
- Avoid unusual areas where conditions are different from the rest of the growing space. Examples of areas to avoid might include the site of a former chicken coop or a low-lying wet area.
- Collect subsamples from at least 10 different spots in the garden, sampling the top foot or so of soil in each spot. Use clean sampling tools and avoid contamination of subsamples (fertilizer residue, something in the mixing container, etc.).
- Air-dry the samples and mix thoroughly in clean container. The lab will want about a pint of the mixed sample.

Of course, contacting laboratories that perform soil testing in advance will provide specific directions as well as the cost of the soil test requested. Labs also will provide necessary paperwork and sample bags. Labs available to gardeners in the Grant-Adams Counties area include:

Soil Test Farm Consultants, Inc.
2925 Driggs Drive W
Moses Lake, WA 98837
(509) 765-1622
www.soiltestlab.com

Best-Test Analytical Services LLC
3394 Bell Road NE
Moses Lake, WA 98837
(509) 766-7701
besttest@scml.us or www.besttestlabs.com

Kuo Testing Labs Inc
337 S 1st Ave
Othello, WA 99344
(509) 488-0112
www.kuotesting.com

Cascade Analytical Environmental Agricultural Lab
3019 G. S. Center Road
Wenatchee, WA 98801
(509) 662-1888
info@cascadeanalytical.com

USAG Analytical Laboratories
1320 E. Spokane St.
Pasco, WA 99301
(800) 244-0573
http://www.emswcd.org/conservation-directory/soil-and-water-testing/usag-analytical-services-inc

Analytical Sciences Laboratory
University of Idaho Holm Research Center
PO Box 442203
Moscow, ID 83844
(208) 885-7081
http://www.agls.uidaho.edu/asl/

References:

Cogger, Craig, Home Gardener's Guide to Soils and Fertilizers. Washington State University. 2005. http://cru.cahe.wsu.edu/CEPublications/eb1971e/eb1971e.pdf

Washington State University Extension web site: Organic Farming Systems and Nutrient Management. Soils and Soil Testing. 2013. http://www.puyallup.wsu.edu/soilmgmt/Soils.htm.

Washington State University Extension: Soil Testing for Home Gardeners, Whatcom County Extension. No Date. http://cru.cahe.wsu.edu/CEPublications/eb648/eb0648.pdf

Soil Testing and Soil Improvement. http://county.wsu.edu/king/gardening/mg/factsheets/Fact%20Sheets/Soil%20Testing%20and%20Soil%20Improvement.pdf

Bio-controls, A Gentler Weed Control Option . . . *by Mark Amara*

The 18th Annual Noxious Weed Conference was held at Big Bend Community College in January 2015. The event covered a wide variety of weed management issues. Topics included smart-phone applications for noxious weed reporting and mapping, changes in the 2015 noxious weed list, aquatic weed control in

irrigation systems and pond, understanding federal and state restricted-use herbicide rules, drift management strategies, alternate ways to control weeds, Dalmation toadflax herbicide trials, using proper application methods and the right products to get the most out of your pest management practices, and chemical and container solutions.

"*Get More Bang for Your Bug: When and How to Incorporate Bio-control into Your Weed Management Strategy"* by WSU Extension Specialist Jennifer Andreas addressed using insects for weed control. Under the right conditions, WSU Extension will provide bio-controls free-of-charge to land management agencies or individuals, on private land, to cities, counties, on federal or tribal lands. Bio-controls are funded by the U.S. Forest Service and supported by funding through Washington Department of Agriculture and County Noxious Weed programs.

Andreas defined bio-controls as the intentional use of living organisms to control or suppress another organism that may include noxious weeds. Classic bio-controls allow plants to be controlled by their natural enemies. Progressive bio-controls help this process along by introducing key species into the troubled environment.

Here are advantages of bio-controls:

- They are safe – they do not attack native or crop species.
- They are ecologically desirable.
- They offer good resistance to controlling pests over the long term.
- Biological agents are mobile so they can cover larger area, and they offer a long-term solution.

Limitations are:

- It takes a long time to see results or impacts.
- Bio-controls are not an eradication tool; rather they can help control a pest over the long term. Typically, it may take 5-25 years for a bio-control agent to be effective.
- Bio-controls are subject to predators.
- They may not survive or thrive at some sites.
- There is limited availability of some agents, very slow approval of new agents, and eradication rarely happens.

Bio-controls are best used in established, relatively large infestations rather than on small sites or disturbed areas. Likewise, they do best in remote, relatively inaccessible and less disturbed areas, or areas not controlled by other measures or on environmentally sensitive areas.

Bio-controls should not be used in small or newly infested areas, highly disturbed sites, roadbeds or traveled paths, sites where it will compete with other weed management tools and on weeds with no approval for bio-control agents.

Intensive weed management should consider using bio-controls as a component of an overall strategy. Bio-controls can be used with other cultural methods, either directly or indirectly, including around the edge of a large area, using other mechanical or chemical controls on other parts.

Factors that reduce effectiveness include really deep freezes, fire or heat, floods, and predators. Others are human error, poor timing, inappropriate site selection, misidentification of weed species, incompatible weed management strategies, release of the wrong agent, and changed ownership.

Weeds with bio-control agents that are effective include:

- Midges and gall wasps on Russian knapweed
- Diffuse knapweed root and seed feeders
- Stem eating flies and pathogens for use on Canadian thistle

- Foliage feeding beetles or root feeding weevils on purple loosestrife
- Stem-boring weevils on dalmation toadflax and yellow toadflax
- Mites on bindweed. Seed-eating weevils on puncture vine are only marginally effective.
- Foliage feeding beetle on St. John's Wart

Flowering rush bio-controls are not presently available but there is research being conducted on weevils, leaf beetles, and flies.

Garden with Bees in Mind . . . *By Kris Nesse*

The sun shines, sap rises, buds pop, gardeners shop—must be March! Yep, we are drawn to those colorful blooms in our local garden centers like moths to the flame, or is it lemmings to the cliff (dire similes intended?). Recent research indicates that the lovely plants we purchase to beautify homes and gardens, and to sooth our souls, may be doing unintended harm.

Growing concern about the effects of neonicotinoid (neonic) insecticides on pollinator populations is causing ripples in the nursery industry, for plant retailers, for legislators, and, of course, for gardeners. In December 2014, Home Depot began requiring special tags informing consumers that plants have been treated with neonicotinoids. The state of Maryland and city of Eugene, Oregon (following a well-publicized mass die-off of native pollinators attributed to applications of neonic insecticides), have adopted permanent restrictions on these insecticides. In 2013, European Union members voted to forbid the use of neonic products with flowering plants. U.S. Senate Bill 163, the Pollinator Protection Act of 2015, proposes labeling nursery plants treated with neonics as well as restricting the use of such insecticides by consumers.

All this action follows more than a decade of concern over a condition known as Colony Collapse Disorder (CCD), along with alarm about the declining populations of native pollinators. Of course, the implications for humans, who rely on pollinators for one out of three bites of food, should be clear.

The reasons for CCD remain mysterious, with research focusing on pathogens, genetic diversity, modern beekeeping practices, malnutrition, and pesticides/fungicides. Many researchers cite the synergistic effects of several variables. For instance, multiple studies have noted, "Prolonged exposure to a non-lethal dose of neonicotinoids renders beehives more susceptible to parasites such as *Nosema ceranae* infections."

First developed in the 1980s, neonicotinoids are now the most widely used class of insecticides, accounting for at least one quarter of the current world market. Highly desirable qualities, like reduced toxicity to humans and pets (compared to other products) and their systemic activity in plants, led to rapid and widespread use. They can be applied as soil drenches, injectables, and even seed coatings. But, desirable traits like high water solubility and environmental persistence also have negative consequences. Surface and ground waters can be polluted. A 2012 study in California noted one half of the urban creeks surveyed were contaminated. Impacts on worms, soil bacteria, and aquatic life have been noted. Research also substantiates an amazing stability in soil, with succeeding crops and wild plants able to take up the chemical for years. Uptake from the soil, and the ability of neonicotinoids to move system-wide in plants, allows for concentration in pollen and nectar. All this makes neonicotinoids "bioavailable to pollinators in sub-lethal concentrations for most of the year."

So, then what happens to the bees with all this exposure over time? Observed effects have included impaired learning behavior, memory losses (can't find their way home), reduced fertility and reproduction, altered foraging behavior, depressed immune systems, and susceptibility to biological infection. A Harvard researcher even noted negative impacts passed on to subsequent generations.

What, then, is the good-hearted gardener to do in their annual quest to local retailers and mail order suppliers for the perfect seeds, plants, and other necessities? WSUE summarizes, "Neonicotinoids do have a negative effect on honey bees and other insect pollinators including important species of native bees such as bumble bees, mason bees, and others." Perhaps the best remedy is to increase awareness. And, remember, consumers DO have choices and voices. Ask your retailer what nursery stock is neonicotinoid-free. Support those who voluntarily stock safe plants. Check labels carefully. In Washington State the WSDA recommends reading insecticide labels to determine if products contain neonicotinoid ingredients: **"Clothianidin, Dinotefuran, Imidacloprid, Thiamethoxam."** Alternative, lower impact pest control is usually possible. When choosing to use any insecticide, FOLLOW PRODUCT DIRECTIONS carefully."

Keep our pollinator friends in mind this gardening season!

References:

Neonicotinoids, bee disorders and the sustainability of pollinator services
http://dx.doi.org/10.1016/j.cosust.2013.05.007
***10 Ways to Protect Bees from Pesticides*, http://agr.wa.gov/fp/pubs/docs/388- TenWaysToProtectBees FromPesticides.pd**
What's the Problem with Neonicotinoids, ucanr.edu/blogs/blog core/postdetail.cfm?postnum=13134
Are failing bees our warning sign? news.harvard.edu/.../are-failing-bees-our-warning-sig.
Neonicotinoid Pesticides and Honey Bee, ru.cahe.wsu.edu/CEPublications/FS122E/FS122E.pdf

Hortus Mustus Cyclamen - Getting Through Grey Days with Cyclamen . . . *By Barbara Guilland*

"Cyclamens, ruddy-muzzled cyclamens/ In little bunches like bunches of wild hares" — D.H. Lawrence

As we grow older and less inclined to be outside during the winter, having the beauty of blooming flowers indoors takes on more importance. February can be illuminated by a nursery-raised Cyclamen '*persicum*', a plant that for several years I have replanted outdoors when warm weather comes. Cyclamen plants carry out the February theme of St. Valentine's Day with its heart-shaped leaves and variety of pink and red blooms. The name apparently comes from Latin, meaning 'circle', which refers to the shape of its tuber. If this plant is set outside after frost, under the right conditions, it will continue to grow and even bloom until late April, and you can continue to enjoy their leaves until they go dormant later in the year. After reading about the hardy varieties of cyclamen plants, with some thought for their needs, I believe they could winter here in the Columbia Basin.

Cyclamen *persicum*

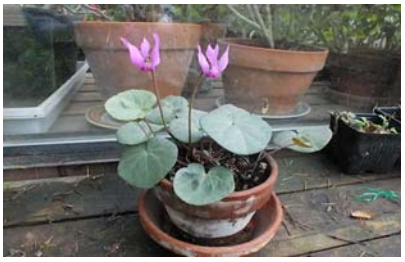
Cyclamen are native to the Mediterranean and North Africa. It's a small genus of plants, of which some are winter hardy, even in Zone 5 with lots of protection. Cyclamen *persicum*, called the florist's cylamen, is usually force-bloomed during the winter months, and is not winter hardy, but its blooms are a mood lifter, so needed when the clouds are low.

Cyclamen for the House

Perpiscum comes in shades of pink, red and white. It has a lovely silver-shot, heart- shaped leaf, making it attractive even when it is not in bloom. It stays under about 8 inches tall. The plant grows from a tuber, usually sprouting leaves in autumn, growing and blooming during the winter and spring, and going dormant in summer in its Mediterranean climate. It can be grown outside, but it doesn't like temperatures below 50 degrees or high heat, so it requires some experimentation with when and where to plant it and when to transfer it back to the house. I usually don't try to take it back in as the summer gets cooler, but treat it as a 1-year plant in my garden, much the way some people treat dahlias or cannas.

If you decide to start with the tuber rather than the blooming plant, Cyclamen *persicum* likes a soil- based potting soil, planting the tuber just above the soil line. It needs careful watering; assume that when leaves are present, the plant is actively growing. Water whenever the plant feels dry but avoid getting water on the crown to reduce rot. After it begins blooming, single flowers wilt as the plant grows. The stem and flower can be pulled out as other flowers form between January through April. As the flowers begin to fade, usually in April, gradually allow the plant to dry out for 2-3 months and it will slowly enter a dormant stage. When it is dormant keep the plant out of the light. The dormant stage is an ideal time to consider repotting it with fresh soil and a slightly larger pot.

New growth will start around September so that is the time to begin to water and feed it again. If the plant is kept in the house all year, rather than planting it in the ground in the spring, it may never go completely dormant. Give it some rest anyway for several months before watering and feeding it. **High humidity** during the winter is essential. You can keep the pot sitting on a tray with water in it, but keep the pot out of the water. Fertilize every couple of weeks with a low nitrogen fertilizer (5-10-10). The plants like bright indirect light in the winter. They don't like heat, cold (below 50 degrees F), or drafts. Author Marie Ianotti in a gardening.about.com article recommends several other varieties of hybrid cyclamen including 'Sierra Series', 'Scentsation', and 'Victoria.' It's likely to be a better house plant, where you can keep an eye on it, than a garden plant. Since I don't intend to bring my plant in the house again, but rather buy a new one, it is not much of an issue. However, I am really tempted to try growing them year round in the garden.



Cyclamen *coum*

Growing Cyclamen in the Garden

The most widespread and hardy of the winter hardy varieties is *hederifolium.* Cyclamen self-seeds and will naturalize, according to the writer in hardy cyclamens.com. It is also tolerant of most garden soils and will take more sun those other nonhardy varieties. Flowers grow on 4- to 6-in. stems that start blooming in late August through October. The foliage lasts until late spring and creates a green winter ground cover if it establishes. The tubers grow larger as they age and are long-lived.

Two varieties of hardy cyclamen, *purpurascens* and *cuom*, also weather through below-zero temperatures. Because February and March are so colorless in the garden, I like the idea of cyclamen growing alongside the hellebore and shamrock in the protected flowerbed on the north side of my house. Cyclamen are in growth during the winter. Flowering time begins for the *coum* in February while *purpuascens* blooms from July to September. I'm really excited to try one of these varieties next year.

References:

en.wikipedia.com/cyclamen has a thorough treatment of the varieties and growth cycles of cyclamen, including pictures. There is also an international website called The Cylamen Society, where I began reading about cyclamen.

Sunset New Western Garden Book (2012) , page 275.

A Flowering Houseplant That Requires Very Little Care by Marie Iannotti

About gardening/cyclamen.com was very useful for more information on detailed indoor care.

How to Grow and Care for Cyclamen in the Garden at HardyCyclamen.com provided advice on varieties that might grow in this area and great pictures of cyclamen used in the garden.

Spokane Master Gardener handout "Holiday Gift Plants" (C061) also gives a brief description of care for cyclamen.

Master Gardener Presentations Available by Request

Listed below are topics and contact information for various presentations given by the WSU Grant-Adams Area Master Gardener Volunteers. If you find a topic that you are interested in having presented to your organization, please contact the Master Gardener directly.

General Gardening		
Cynthia Calbick	Putting Your Garden to Bed in the Fall	30 min
(509) 765-5474	Plant Propagation – Multiply Your Garden Plants	1 hr
	Drought-Tolerant Gardening	1 – 4 hr
Barbara Guilland	Basic Gardening Skills	1-3 hr
(509) 765-3219	New Paths: Making Gardening Easier	45 min – 1 hr
	Everyone Lives in a Watershed	30 min - 1 hr
Mona Kaiser	Putting Your Garden to Bed	30 min - 1 hr
(509) 246-0641		
Native Plants		
Cynthia Calbick	Native Plant Gardening	1 – 4 hr
(509) 765-5474	Landscaping with Native Plants	1 hr
Vegetable Gardening		
Kris Nesse	Variety of topics, in any combination	30 min – 2 hr
(509) 690-8542	(Vegetables, Herbs, Soil, Seed Starting, Raised Beds, Tips to Extend the Harvest)	
Ornamental Gardening		
Mona Kaiser	Using Ornamental Grasses in the Landscape	30 min – 1 hr
(509) 246-0641	Proper Rose Pruning	30 min – 1 hr
	Beneficial Insects vs. their Insect Pest Enemies	30 min – 1 hr
	Deadheading Perennials, When, Why, How	30 min – 1 hr
	Staking Guidelines and Options for Perennials	30 min – 1 hr
	Lawn Care, Early Spring through Late Fall	30 min – 1 hr
Trees and Shrubs		
Barbara Guilland	Trees and Tree Care in the Columbia Basin	1 hr
(509) 765-3219		
Shoreline Management		
Cynthia Calbick	Shoreline Garden Design	1 hr
(509) 765-5474		
Barbara Guilland	Redesigning Shoreline	30 min
(509) 765-3219		
Pest Management		
Barbara Guilland	New Invasive Insects: Spotted Wing Drosophilia	1 hr
(509) 765-3219	and Brown Marmorated Stink Bug	
Wildlife Habitat		
George Roper (509) 488-3719	Attracting Birds to Your Backyard	45 min
Kris Nesse (509) 690-8542	Attracting Native Pollinators	30 min – 2 hr
Soil Fertility		
George Roper	Worm Composting	45 min
Specialty Topics		
Linda Crozier	Mosaic Stepping Stone	5 hr
(509) 488-3538		
Terry Rice	Winter Sowing	1 - 2 hr
(509) 488-3871		
Terry and Linda	Mother's Day Garden in a Pot (5/2/15)	30 min – 1 hr
	Hypertufa (4/18/15)	
Nicole Meaney	Pollinators in the Garden	30 min – 1 hr
(206) 484-8272	Gardening with Chickens	30 min – 1 hr

Note: Classes given by Linda Crosier and Terry Rice are through Othello Community Schools Program. Some talks by Cynthia Calbick are through Moses Lake Parks and Recreation Department. Fees may apply if offered through city programs. WSU Extension programs and policies are consistent with federal and state laws and regulations on nondiscrimination. Evidence of noncompliance may be reported through your local Extension office. If special accommodations for attendance are required, please notify at least one week prior to presentation.

Master Gardener Recruitment for New Members Begins

WSU Extension Master Gardener Basic Training begins in September 2015. (You will need your own computer and email address.) Applications are due by August 1, 2015. The training, which is online from WSU, also includes local classroom work and field trips and covers 18 topics that range from Basic Botany and Entomology to Vegetable Gardening and Water Conservation:

Basic Botany · Garden Management · Basic Entomology · Insect Identification & Management · Integrated Pest Management · Pesticide Safety & Use · Soil Management · Disease Identification & Management · Composting · Lawn Care & Management · Vegetables · Small Fruits · Tree Fruits ·Weed Control · Landscape Plants · Pruning Principles · Water Quality Issues · Ornamental Plant Care · Plant Problem Diagnosis

If you are interested in becoming a volunteer in the Master Gardener Program, fill out an application form and send it in by August 1, 2015. A brochure explaining this WSU program and how to apply can be obtained at:

http://county.wsu.edu/grant-adams/gardening/Documents/OMGBasicTrainingBrochure.pdf

Course Content

The training includes classroom work, field trips, and tours. Topics include the following:

- Basic Botany
- Garden Management
- Basic Entomology
- Insect Identification & Management
- Integrated Pest Management
- Pesticide Safety & Use
- Soil Management
- Disease Identification & Management
- Composting
- Lawn Care & Management
- Vegetables
- Small Fruits
- Tree Fruits
- Weed Control
- Landscape Plants
- Pruning Principles
- Water Quality Issues
- Ornamental Plant Care
- Plant Problem Diagnosis

Frequently Asked Questions

Q. ***What is required to become a certified WSU Master Gardener?***

A. Attend 60+ hours of basic training and complete all assignments. Perform 50 hours of Master Gardener volunteer service.

Q. ***Do I need to be recertified every year?***

A. Yes, you must attend 12 hours of approved advanced training and perform 30 hours of volunteer service per year.

Q. ***Is there a cost to attend the training and being part of the program?***

A. Yes, the fee for volunteers to participate in the program is $170.00. This covers $70.00 for the online training program with WSU and the local fee of $100.00. (There is a rebate of the online training $70.00 fee when volunteer hours are complete.)

Q. ***Can I just take the training without committing to the volunteer time?***

A. Yes, if you are employed in the landscape, nursery industry, or work for a government agency that requires horticultural skill, you may take the class for a fee of $170.00.

WSU Grant-Adams Area Extension

2015 Master Gardener Basic Training

Become a
Master Gardener Volunteer

What the program can offer you…

WASHINGTON STATE UNIVERSITY EXTENSION
Master Gardener Program

Mark Your Calendar for Upcoming Events:

Friday, March 13 Noon – 7 pm **Saturday, March 14** 9 am – 7 pm **Sunday, March 15** 10 am – 4 pm	**39th Annual KPQ Home and Garden Show** Free: Over 150 exhibits	**Town Toyota Center, Wenatchee**
Saturday, March 14 7:30 am – 5 pm	**Spokane Master Gardener Cabin Fever Symposium** Keynote Speaker Susan Mulvihill, "Breathtaking Gardens Around the World" Cost $75	**Centerplace at Mirabeau Point Park, Spokane Valley** To sign up, go to: http://www.mgfsc.org/Cabin_Fever.html
Friday, March 27-Sunday, March 15	**Sandhill Crane Festival** Numerous tours, activities, lectures, including one on Heritage Gardens Adults: $10 Seniors: $7 Kids under 12: Free	**Othello** Call 1-866-726-3445 to sign up or go to: http://www.othellosandhillcranefestival.org/images/stories/SCB%202015%20Brochure.pdf
Saturday, April 11 9 am – 2 pm	**Volunteers needed to plant in Native Garden.** Share your knowledge or learn about native plants.	**WSU Wine Science Center Native Plant Garden** To RSVP, contact Gretchen Graber: gretchen.graber@.wsu.edu.
Saturday, April 25 9 am – 1 pm	**1st Annual Columbia Basin Eco-Gardening Symposium—Cost: Free** Jointly sponsored by WSU Grant-Adams Master Gardeners and Grant County Conservation District, topics include drought-tolerant gardening, lawns, native plants. **Keynote speaker**: Paula Dinius, Trees and Shrubs for Low Water Use Gardens in the Columbia Basin	**Big Bend Community College** **ATEC Center 1800, Moses Lake** Register at www.columbiabasincds.org or call 509-765-9618 to register by phone
Saturday, May 9 8 am – Noon	**Annual Master Gardener Plant Sale and Raffle**	**McCosh Park, Moses Lake**
Tuesday, May 12	**New Tree Care Essentials** This program will cover species selection, quality nursery stock, proper planting and early formative pruning.	**Chelan County Extension, Wenatchee**