



GROUNDDED

A Quarterly publication of WSUE
Grant-Adams Master Gardeners

Newsletter March 2019
Volume 8 Number 1

Grant-Adams Counties Master Gardeners, 1525 E. Wheeler Road, Moses Lake, WA 98837
<http://county.wsu.edu/grant-adams/Pages/default.aspx> · ga.mgvolunteers@wsu.edu
Grant-Adams Counties Master Gardener Foundation · PO Box 1438, Ephrata, WA 98823

Growing Roses in the Columbia Basin

Part I: Choosing the Right Rose . . . by Barbara Guillard

The rose is the most popular gardening flower on earth. It is grown everywhere from Africa to Greenland, from China to the United States. It has been cultivated and hybridized for at least 5,000 years and fossils of rose plants millions of years old have been found. It means that the rose is hardy and adaptable, and there are varieties that grow wonderfully everywhere.

My first memories of roses were of a wild rose, probably *rosa woodsii*, growing along creek banks in Central Oregon where I played when I was very young. It seemed like every farmhouse where we lived in Oregon had at least one very hardy rose, usually a scion of one that came west with settlers from mid-19th century on, like Harrison's Rose. It's sometimes called the Oregon Trail Rose and bloomed for a few brief weeks in late spring. Sometimes it was the only flowering plant in those rugged farmyards. When my family became town dwellers, hybridized roses were part of our flower beds, maybe not as hardy as those "pioneer roses," but they were always plants that we admired and cared for. Modern roses reflect thousands of years of hybridization with varieties that thrive in every climate. I am especially fond of those hybridized with Canadian wild roses because they are so hardy in our region.

The language of growing roses, because of its long history, can get complicated. Most of the roses we buy in the nurseries in the Pacific Northwest come from nurseries in the US, England, Canada, Germany, and France, although they are raised and hybridized in every part of the world. Here are some terms used by the American Rose Society since 1966 that can help you buy the right rose. Three main groupings are used:

- Wild roses (*rosa woodsii*)
- Old garden roses grown before 1867 (Harrison's Rose)
- Modern roses (those hybridized after 1867)

Old garden roses usually bloomed once a year and were noted for their large, heavily scented blooms and rose hips (the large red seed bud left after blooming).

INSIDE THIS ISSUE

GROWING ROSES IN THE
COLUMBIA BASIN

NEWLY CERTIFIED WSU
MASTER GARDENERS

MASTER GARDENER OF
THE YEAR AWARDS

CELEBRATE ARBOR DAY

EPHRATA SEED LIBRARY

INVASIVE SPECIES PEST
WATCH

GARDEN FRIENDLY
COVER CROPS

EVENTS TO ATTEND

MASTER GARDENER
CLINICS



Wild Rose (*rosa woodsia*)
USDA photo

The old garden roses were further divided into many classifications, all of which had identifying characteristics. If you see this phrase used in the description of a rose, you are probably looking at rose characteristics identified before 1867. They include Alba, Ayrshire, Bourbon, Boursalt, Centifolia, China, Damask, Centifolia, Hybrid China, Hybrid Gallica, Hybrid Perpetual, Moss, Noisette, Portland, and Tea. Some nurseries actually specialize in these old rose plants, but modern roses are what we usually find to buy in the local nurseries.



Old Garden Rose: Harrison's Rose
Photo: Rogue valley roses.com

Modern roses were first developed in 1867 with techniques that produced the first hybrid tea. Growers have gone on since then to combine the excellent characteristics of the old roses into thousands upon thousands of different rose varieties with new ones produced every year. The new classifications for the most part are based on growth habit, size, and color. Modern roses are classified as hybrid tea and grandiflora, floribunda and polyantha, miniature and miniflora, shrub (classic and modern), tree rose, and large flowered climber. The American Rose Society website gives clear descriptions of the classifications.

When I moved to the Columbia Basin in the 1980s, I began growing roses in my garden. I had the good fortune to find some very hardy ones, and some of them are still growing almost 40 years later. Here are some of my favorites:

- **'Angela'** (Kordes is the hybridizer designation) is a deep pink floribunda that has been growing in one corner of my garden since the late 1980s. It doesn't have a lot of fragrance, but it blooms all season long in clusters of small to medium blooms; is relatively thornless; and can grow up to 9 ft tall. I usually prune it as its blossoms fade, trying to keep it close to the height of my 7-ft fence. It's hardy and vigorous and does well in our USDA Zone 5. It can be cut back about 1/3 each year.
- **'Pierre de Ronsard'** (Meiviolin), also called 'Eden,' is a hybrid climbing rose that has grown in my garden since the early 2000s. Its cabbage-like blooms always attract attention. It does require a sturdy framework, but the repeat blooms are long lasting and the leaves dark green and glossy. It does well in full sun and is disease and heat resistant. You can expect it to grow to 8-12 ft. I prefer to prune it as I deadhead, although the vine should be cleaned up and pruned back to its main branches in the spring before flowering.
- **'Purple Tiger,'** hybridized by Jackson-Perkins, is the floribunda gypsy in my garden. I love its gaudy purple stripes and its lemony rose scent. It has survived several moves in the yard and now lights up an insignificant corner. Its best blooms come in late summer when most other roses are past their prime. This rose is a compact plant that grows 2 to 4 feet tall and grows safely in Zone 5.



'Angela'
Photo: B. Guiland



'Pierre de Ronsard'
Photo: B. Guiland



Morden Sunrise
Photo: B. Guiland

The shrub roses bloom early in May and repeatedly until I slow down watering in the fall. They were hybridized by Morden Nurseries in Canada. The roses are out of a group called Parkland Roses, bred to survive Canadian winters and dry summers. I now have three of them: Blush, Sunrise, and Centennial. All of these roses are grown on their own root, so they are slow growing at first. However, because they are not grafted



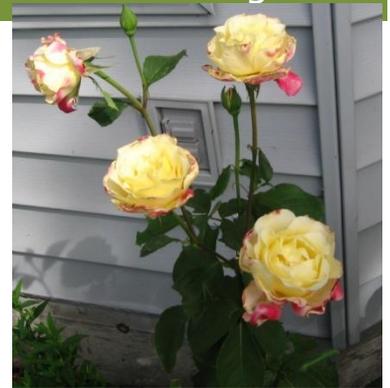
'Purple Tiger'
Photo: B. Guiland

on another root stock as many roses are, they are less likely to die back in a cold winter. The climate, soil, and access to water make the Basin a good place to grow any variety of rose, but especially those tolerant of dry conditions and cold winters.

Look for plants from good sources and good grades for bare root roses. The price is higher for good grades. Grade 1 is top grade, Grade 1.5 has fewer sturdy canes, and Grade 2 is the smallest sold. I have bought low grade roses like the hybrid tea “Double Delight” for \$.99 and miniature rose house plants from local supermarkets but it is certainly not what I recommend to others. Why take a chance on a plant that might not grow well? Choose rose varieties that have recommendations from a reputable group like American Rose Society. Look for hardiness (Zone 5) and disease resistance. Most nursery tags will designate these qualities.



Morden Blush
Photo: B. Guiland



Double Delight
Photo: B. Guiland

Planting: Early spring is the time to begin thinking about buying and planting roses. The nurseries are stocked with the best grades of roses. The

internet and catalogs are full of photos of roses. As soon as the ground is dry enough to be spaded, you can choose the right spot and prepare the rose for planting. After you’ve chosen your rose, whether it’s a hybrid tea, grandiflora, floribunda, English Rose, shrub rose, miniature, or climber, look for the location that will give it the right amount of sun, at least 6 hours a day (full sun for most), rich loamy soil, and good drainage. Although you can plant them with other perennials, tea roses and floribundas need to be 30 to 36 inches apart. Climbers like 4 or 5 feet of space, and miniatures like 18 inches. Crowding encourages the spread of disease due to lack of good circulation around the plant. In the spring most roses are shipped bare root. (Potted roses may be available through most of the growing season.) Bare roots should be planted as soon after receiving them as you can.

Bare root roses should be soaked in warm water for 12 to 24 hours before planting. If the rose is not planted soon after purchase, store it in a cool dark place and keep the roots damp. When you are ready to plant:

- Dig a hole 12 inches deep and 24 inches wide and loosen the soil at the side and bottom of the hole. The roots need room to spread. Consider adding compost or peat moss mixed into the soil if it seems too sandy.
- Fill the hole with water. If it doesn’t drain away in an hour, it’s not a suitable place for your rose. Look for an alternative location like a raised bed to improve drainage.
- Place a mound of soil in the center of the hole and spread the roots over it. The shank of the plant (where the roots and stem come together) should be at ground level (an inch or 2 lower in our Zone 5).
- Place two-thirds of the remaining soil over the roots and tamp down gently. Add water again and let it soak in. Then finish adding soil, water again and tamp down.
- Spread mulch or small bark chips over the top of the soil to keep down weeds and retain moisture.
- This next step is important in our area: Water 3 or 4 times a week until the leaves begin to grow.
- Roses need lots of moisture on new leaves and on the roots in their first year. Mist the canes often and make sure the soil stays damp (but not in standing water).
- **For POTTED** roses, which can be bought all during the growing season, follow the instructions on the packaging for planting and then mulch as you would for bare root roses.

REFERENCES

American Rose Society, <https://www.rose.org/single-post/2018/06/11/Rose-Classifications> 2018. June 11, 2018.
 Ophardt, M. and Sheila Gray, “Growing Roses in Washington State: A Seasonal Calendar”, Washington State University. November 2015. FS164E, <http://cru.cahe.wsu.edu/CEPublications/FS164E/FS164E.pdf>

Pavek, Pamela and David Skinner, Plant Materials Technical. Note # 21” Roses of the Inland Pacific Northwest: Native and Invasive Species, Identification, Biology and Control,” USDA Natural Resources Conservation Services, April 2013. https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/wapmctn11818.pdf

Planting Bareroot Roses video <https://www.jacksonandperkins.com/gardening-tips-ideas/a/512/>

Photo Credits:

USDA - Wild Rose, https://plants.usda.gov/core/profile?symbol=ROWO&photoID=rowo_002_ahp.jpg

Pioneer Roses, <https://www.roguevalleyroses.com/rose/harrisons-yellow-pioneer-rose>

Newly Certified WSU Grant-Adams Master Gardeners

Seven interns in the WSU Grant-Adams Master Gardener program completed the requirements to become a Master Gardener in 2018 and were presented with their certificates and pins at a recent meeting.

To become a Master Gardener requires an intensive training regimen. The seven trainees passed a series of WSU online classes as well as participated in classroom and field exercises in 2017. Once that phase of the training was completed, the interns volunteered to participate in at least 50 hours of outreach activities in 2018, which included helping with Master Gardener plant clinics and demonstration gardens; growing plants; assisting with training sessions, like the annual gardening symposium; or writing articles for the quarterly *Grounded* newsletter. To maintain their certification, Master Gardeners are required to take a minimum of 10 hours of educational training and volunteer at least 25 hours of outreach in the community annually.

A new Master Gardener training session is being organized for anyone who wishes to be certified and is approved to participate. Those interested in being part of this program should have a strong volunteer work ethic, be able to commit to becoming a volunteer educator for the WSU Extension, be willing to follow the guidelines dealing with pest management, work within the structure and guidelines of the WSU Extension program, and commit the required time. Typically, applicants fill out an application, go through a WA State police background check, and will begin training in the fall. Applicants must have an email address and access to a computer.

For anyone interested in becoming a certified WSU Master Gardener, go to: https://extension.wsu.edu/grant/gardening/master_gardeners/.

On the Master Gardener Volunteer Program page, click on “Gardening Information” and scroll down to “Become a Master Gardener Volunteer.” From there you can access the training brochure and complete the WSU MG Program application, which must either be mailed to the WSU Extension Service at 1525 E. Wheeler Road, Moses Lake, WA 98837, or hand-delivered there. The next training session begins in September 2019. Applicants must be registered by the August 1, 2019 deadline.

Master Gardener of the Year Awards

Each year one or more WSU Master Gardeners are awarded the annual honorary title of Master Gardener of the Year. The title is bestowed on individuals who have met the highest standards as identified from a list of statewide criteria. For 2018 Duane Pitts and Diane Escure were honored.



From left to right, front row: Iris Fung and Kelly Hoyt. Back row: Tina Bradley, RJ Lembcke, Marylou Krautscheid, and Glenn Martin. Not pictured: Sandy Odell.

Duane has been a WSU Master Gardener since 2015 and is leaving his positive mark on the program. He volunteered to serve as a Program co-coordinator when the WSU Master Gardener program was in jeopardy of being discontinued in early 2018. His efforts to keep the program alive and active have been critical to maintaining the program. In addition, Duane mentors MG trainees, has provided several training sessions, helped instruct others in our data collection activities, and helped prepare reports on MG accomplishments. Duane is also a consistent and prolific writer for the quarterly Master Gardener newsletter and other news media sources.



Duane Pitts, with a certificate honoring his accomplishments



Diane Escure

Diane Escure is the other extraordinary recipient of the Master Gardener of the Year Award. She has been a Master Gardener for 9 years and for the last 5 years has served as treasurer for the Grant-Adams Master

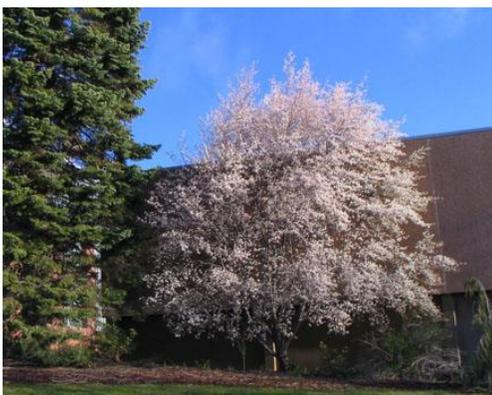
Gardener Foundation. She has helped the group develop a long-range plan, update foundation bylaws, and create a set of board policies to support the bylaws in 2018. These changes in bylaws and board policies helped the group define and separate WSU Grant-Adams Master Gardener program functions from Master Gardener Foundation functions. Her role as a writer and the Master Gardener quarterly newsletter IT Formatter Queen made her indispensable in putting the newsletter into a usable form for public distribution. She has also been an active participant on the annual gardening symposium planning committee, the annual plant sale and as a plant clinician and cashier at sales and events.

A special Legacy Award was issued to Cynthia Calbick for her many years of outstanding service. Cynthia’s accomplishments since becoming a MG in 2005 include designing and helping plant the Master Gardener Drought Tolerant Demonstration Garden at the Moses Lake Public Library to which a native plant section was subsequently added. Cynthia led the maintenance efforts at the demo garden for 13 years. Starting in 2005, Calbick taught classes in drought-tolerant gardening for the Moses Lake Parks and Recreation Department every year through 2018 and donated the compensation received to the Grant-Adams Master Gardener Foundation. Many Master Gardeners turn to Cynthia for advice about gardening. Cynthia has spent considerable time starting plants for the annual plant sales, working in the Big Bend Community College greenhouse, volunteering at the online and Moses Lake Farmers Market plant clinics, mentoring new master gardeners, attending state Master Gardener events, and serving on the foundation board.



Cynthia Calbick with her award

Celebrate Arbor Day—Plant a Tree



Amelanchier laevis (xgrandiflora) Apple serviceberry (25- to 30-ft tall and about half as wide). Photo credit: WSU Extension

While browsing seed catalogs, think about planting a welcoming border or spring garden when the weather warms up, and consider planting trees in your landscapes. If space permits, planting one or two trees not only adds vertical beauty but improves the environment. Arbor Day, which is recognized in all 50 states and in many countries around the world, was established as a way to encourage people to plant, nurture, and celebrate trees. Its observance day varies, depending on the best time of year to plant trees in each locale. For Washington State, Arbor Day occurs every year on the second Wednesday in April, which this year falls on April 10th.

Tree People, an environmental nonprofit organization whose mission is to inspire, engage and support people to take personal responsibility for the urban environment, has identified 22 benefits

of planting trees. Here are some of its top ones:

- **Trees combat climate change**--Excess carbon dioxide (CO₂) is building up in our atmosphere, contributing to climate change. Trees absorb CO₂, removing and storing the carbon while releasing oxygen back into the air. In one year, an acre of mature trees absorbs the same amount of CO₂ produced when you drive your car 26,000 miles.
- **Trees clean the air**--Trees absorb odors and pollutant gases (nitrogen oxides, ammonia, sulfur dioxide and ozone) and filter particulates out of the air by trapping them on their leaves and bark.
- **Trees provide oxygen**--In one year an acre of mature trees can provide enough oxygen for 18 people.
- **Trees conserve energy**--Three trees placed strategically around a single-family home can cut summer air conditioning needs by up to 50%. By reducing the energy demand for cooling our houses, we reduce carbon dioxide and other pollution emissions.
- **Trees block things**--Trees can mask concrete walls or parking lots, and unsightly views. They muffle sound from nearby streets and freeways and create an eye-soothing canopy of green. Trees absorb dust and wind and reduce glare.
- **Trees increase property values**--The beauty of a well-planted property and its surrounding street and neighborhood can raise property values by as much as 15%.

In fact, the many benefits of tree planting were recognized by J. Sterling Morton, founder of the Morton Salt Company, and his wife almost 150 years ago. That was when Arbor Day was first established in the newly formed Nebraska Territory, a land devoid of trees. Morton established “Plant Trees” as his family motto and encouraged tree planting to improve the environment and beautify the landscape to attract settlers to the area, which then became the state of Nebraska in 1867. On April 10, 1872, his idea to set aside a day for planting and calling attention to trees became the first Arbor Day, and it was reported that Nebraskans planted one million trees.

The birthplace of Arbor Day was Nebraska City, where the Mortons lived in their home that they called Arbor Lodge. In 1885, Nebraska declared J. Sterling Morton's birthday, April 22, as Arbor Day. Morton served as U.S. Secretary of Agriculture under President Grover Cleveland from 1893 to 1897. He later founded the Morton Arboretum in Lisle, IL, 25 miles west of Chicago, in 1921.



The Morton Arboretum, Lisle, IL. Photo: courtesy of The Morton Arboretum

Called the “Champion of Trees,” The Morton Arboretum sits on 1,700 acres and offers a public garden and outdoor museum with a library, herbarium, and program in tree research, including the Center for Tree Science. Its research focuses on three key areas: tree health, tree improvement, and woodland conservation. Through the years the arboretum has acquired over 220,000 plants from 40 countries with a northern temperate climate. Of these, 90 different kinds of plants on its grounds are considered threatened or endangered on state, federal, or world lists.

The Morton Arboretum offers additional benefits of tree planting for the environment:

- **Trees treat water pollution**—Their root systems can collect contaminants as water seeps through the soil.
- **Trees help handle storm runoff and reduce flooding**—During heavy rainstorms, trees reduce the amount of storm water that runs off pavement and roofs by channeling rain to the earth around their roots, where it can soak in and be filtered, and by collecting raindrops in their leaves, where the water can evaporate.
- **Beauty**—Trees add meaning and beauty to our environment.
- **Evergreen trees**—Evergreens help block winter winds that can save on heating costs.

The Morton Arboretum encourages people to be tree champions in their communities by:

- Watering trees (especially young ones) when they are dry. Trees like long, slow drinks.
- Spreading a 3-in. layer of mulch around them, covering the roots, but avoiding the trunk.
- When planting new trees, choose the right kind for their location.

To learn more about hardy water-wise trees that grow well in eastern Washington, go online to view Washington State University's free fact sheet “Hardy Plants for Waterwise Landscapes: <https://public.wsu.edu/~lohr/wcl/trees/trees.html>

For suggestions on how to successfully plant bare root or potted trees in your yard this spring, Washington State University Extension also offers a free comprehensive guide “Planting Trees and Shrubs in the Landscape” (Fact Sheet FS047E), which can be found online at <http://cru.cahe.wsu.edu/CEPublications/FS047E/FS047E.pdf>.

The Arbor Day Foundation, a national 501(c)(3) nonprofit conservation and education organization, also provides extensive information on tree identification, selection, and planting care. For a \$10 annual membership fee, it will send 10 tree seedlings suitable for planting in the spring in our area. Visit <https://www.arborday.org/trees/> for more information. The Foundation’s message is “Trees Are Simply Amazing. They clean air and water, slow climate change, ease poverty and hunger, prevent species loss, and feed the human soul. All we need to do is plant and care for them. Let’s work together to make it happen around the world.”

References

- <https://www.arborday.org/>
- <https://www.treepeople.org>
- https://www.mortonarb.org/files/Value_of_a_Tree_BRCH_OPTIM.pdf
- <https://www.arborday.org/states/state.cfm?state=wa>

Ephrata Seed Library Event . . . by Pat McAfee

The Ephrata Public Library hosted its annual free flower and vegetable seed exchange on March 2, 2019. The event was an opportunity for the community to learn more about the Ephrata Seed Library program, to hear about the benefits of growing, saving, and exchanging open-pollinated seeds that grow well in the Columbia Basin, and to take home free seeds to plant this spring.

Seed swapping first began at the Ephrata Library on January 28, 2017, when over 30 new and avid gardeners brought seeds from their gardens to exchange or picked up new seeds from the library, watched demonstrations on how to save seeds, and asked questions about how this new program works.



Seeds for exchange are kept in separate file cabinets at the Ephrata Library

The Ephrata Seed Library is a collaborative effort of the WSU Grant-Adams Master Gardeners, and the Ephrata Public Library which is part of the North Central Regional Library System. The Ephrata Seed Library houses a wide selection of open-pollinated vegetables, flowers, and herb seeds and makes them available to the public free of charge. The hope is that gardeners using this community resource will plant them in their yards and collect some of the seeds from these plants in the fall to replenish the library’s stock. The Seed Library is self-service. Seeds are organized into three categories—beginning, intermediate, and advanced, depending on how easy or difficult the seeds are to save. Every plant variety has its own page in the notebooks. To check out a number of seed packets, the borrower enters their name, date, and number seed packets taken. There is also space for them to enter the date the seeds are “returned or repaid.” The Seed Library operates on the honor system.



Master Gardeners Iris Fung, Glenn Martin, Marta Tredway, and librarian Alissa Herbst answered questions at the recent annual Ephrata Library Seed Exchange. Photo: Pat McAfee

The Ephrata Seed Library is the only one in Grant, Adams, Douglas, Chelan, and Okanogan Counties that coincides with a portion of the North Central Regional Library service area. Gardeners interested in obtaining seeds can visit the Ephrata Public Library (45 Alder St. NW) Monday-Thursday from 9 a.m. to 8 p.m.; Friday, from 9 a.m. to 5 p.m.; and Saturday from 11 a.m. to 4 p.m. A library card is not required to check out seeds, and informational handouts will be provided on how to grow the seeds selected. Librarians

Alissa Herbst and Aaron Loeffelbein are also available to answer questions about the program or refer them to a WSU Grant-Adams Master Gardener.

For more hands-on information on effective seed collecting, cleaning, and saving, the Ephrata Seed Library will host a special educational session for the public in September 2019, with a date yet to be determined. To ensure an adequate supply, the Ephrata Seed Library supplements its seed inventory each year by purchasing open-pollinated seeds that do well in our area.

What are the benefits of saving seed each year?

- While nurseries, home improvement stores, and hardware stores sell seedlings every spring at many locations, the variety of plants is limited and may not be available the following year. Saving seeds of the plant varieties you've grown every year costs you nothing and gardeners can determine how well they've performed in their respective gardens. Participating in the library seed exchange program offers individuals the opportunity to try new plants that do well in our climate. It also helps maintain a biodiversity of seed that may be lost over time.

What is an open-pollinated seed and is it the same as an heirloom or hybrid seed?

- Open-pollinated or non-hybrid seeds means that they were fertilized by any number of natural means (bees, moths, birds, wind, rain) and they will produce the same characteristics as their parent plants. As long as pollen is not shared between different varieties within the same species, the seed produced will remain true-to-type year after year.
- Heirloom seeds have survived many generations, and in some cases, even centuries. They are open-pollinated and produce the same characteristics as their parent plants. However, not every open-pollinated seed is an heirloom. To be an heirloom, the open-pollinated seeds must breed true for seven generations.
- Hybrid seeds, often labeled as F1, are deliberately created to breed a desired trait when the pollen of two different species or varieties is crossed by human intervention. The first generation of a hybridized plant tends to grow better and produce higher yields than the parent varieties due to a phenomenon called 'hybrid vigor.' The drawback is that any seed produced by F1 plants is genetically unstable and cannot be saved for use in following years. Not only will the plants saved from these seeds not be true-to-type, but they will be considerably less vigorous. Gardeners who use hybrid plant varieties must purchase new seed every year.

Are hybrid seeds genetically modified (GMO)?

- Not likely. GMO seeds are geared for the commercial gardening market, like sugar beets, soybeans, canola, or corn.

References

Seed Saving. Washington State University Spokane County Extension Master Gardener Program. C166. April 22, 2015. <https://s3.wp.wsu.edu/uploads/sites/2076/2015/08/C166-Saving-Seeds-15a.pdf>

Rose, Valerie. Seed Saving. September 3, 2010. <https://s3.wp.wsu.edu/uploads/sites/2073/2014/03/090310.pdf>

Ells, J. E. and D. Whiting. Saving Seed. Colorado State University Extension. August 2013.

<https://extension.colostate.edu/topic-areas/yard-garden/saving-seed-7-602/>

Lewis, Patricia, "Seed Saving for a Self-Sufficient Garden," Self-Reliance.com, Spring 2019

Exploratorium of Gardening, Why Save Seeds? <https://www.exploratorium.edu/gardening/control/seeds/two.html>

Seed Library. Jefferson County, Washington Master Gardeners. <https://extension.wsu.edu/jefferson/master-gardener-seed-library/>

Invasive Species Pest Watch First Detector Network

Washington Invasive Species Council is leading a new group of partners that will identify and report pests through what is called the Washington Pest Watch First Detector program. Cooperating in the effort is the USDA Animal and Plant Health Inspection Service's Plant Protection and Quarantine and Wildlife Services, Washington State University Extension, WSU's Plant Pest Diagnostic Clinic, the Western Plant Diagnostic Network, Washington State Department of Agriculture's Plant Protection Division Pest Program, and the Washington State DNR Urban and Community Forest Program.

The Pest Watch program is partially funded by the USDA Farm Bill and supported by Washington State. Though the program is led by agencies and universities, it depends on the efforts of citizen scientists to help protect the state's natural resources and economy from the damaging effects of invasive species.

Having a knowledgeable public helps control invasive species because the sooner a problem is recognized, the quicker it can potentially be eradicated. Early detection results in rapid response.

Being on the lookout for new plant and insect species is important. Invasive species cost 137 billion dollars annually in crop reduction (including gardens and yards), and adversely impact forest health and fisheries. Millions of acres are potentially threatened by invasive species. What is different about the latest rapid spread of invasive species is that both world population and world trade have grown so much and there is so much movement of goods, services and people that it encourages invasive species to move too. Invasive species have always moved across land and sea a bit, but with the accelerated pace of trade and movement around the world, they are moving or hitchhiking much more quickly than before.

Several insect species are being watched such as the brown marmorated stink bug, European chafer, gypsy moth, sirex wood wasps, and spotted wing drosophila. Other species occur in other parts of the nation or are found in adjacent states or Canada and may be headed to Washington State next; they include the Emerald ash borer, Asian long-horned beetle, Japanese beetle, and spotted lantern fly.

There are several ways to participate. There are links to report to or seek identification of invasive species or noxious weeds. One way is by downloading Apple or Android mobile applications. First detectors can go to the Washington Pest Watch website (https://invasivespecies.wa.gov/council_projects/wapestwatch.shtml) to get on mailing lists, to find fact sheets, connect with partners, or get trained further. Individuals are encouraged to check out the website for ongoing projects or to participate further.

Additional weblinks for more information:

The webinar recording of "What the Bug is That? New Invasive Insects on the Horizon" is available at <https://youtu.be/qv9rbTQdnt8>.

Learn more about Washington Pest Watch and keep involved by visiting https://invasivespecies.wa.gov/council_projects/wapestwatch.shtml.

Garden Friendly Cover Crops . . . *By Mark Amara*

Cover crops are as good for soils on small or large garden plots as they are on large farms. Besides providing weed control and (wind and/or water) erosion control, their cover shades the soil, and their residues protect the ground surface standing, mowed, flailed or crimped, or tilled into the soil. As growing crops, they can break up compacted layers, recycle nutrients, take up excess fertilizer, help reduce weed pressures and diseases and control insects, including nematodes. And, as cover crops mature, their flowers and pollen help attract beneficial insects to the garden. When cover crops are incorporated into the ground as green manures, they add nutrients and organic matter to the soil.

Cover crops are divided into perennials, planted for year-round cover, and annuals for seasonal coverage. Perennial cover takes longer to become established. However, having year-round grasses and/or legumes between trees and shrubs or separating garden rows can help control weeds and reduce potential erosion. It seems that most gardeners prefer the annual varieties like grasses and grains as they establish quickly, put down extensive root systems, capture unused nitrogen in the soil, and can be replanted over and over. It is important that crops are terminated by mowing or tilling, preferably prior to or at seeding, to reduce spreading, reseeding, and deterring further uptake of nutrients from the soil.

Gardeners often plant cover crops in the fall to provide winter cover, but they can do equally as well in other seasons. Reasons for planting during a particular season vary with the gardener, species planted and expected benefits. Legumes are natural choices for those who wish to add nitrogen to the soil, and grasses

are a good choice to help compete with weeds on a broader scale and for quick establishment. Rather than planting homogeneous stands of one type of crop, mixtures are often planted to achieve multiple benefits.

Examples of annual grasses and grains that thrive in our area include winter wheat, triticale, oats, barley, and annual ryegrass. Recommended annual legumes include vetches, clovers, Austrian winter pea, and fava bean. Additional cover crops are restricted to frost free periods, typically planted in late spring and summer, and include buckwheat, yellow mustard, sorghum-sudangrass, and millets. Some additional experimentation is being done by local farmers with technical support from Washington State University using legumes like cow peas and sunn hemp as well as sudangrass, black oats, and radishes that show promise for use by home gardeners.

Columbia Basin lands in Grant and Adams Counties have high potential for erosive winds due to the ways and times soils are worked, ground is prepared, or crops are harvested, especially with our light textured soils. Critical wind erosion periods are in the spring and fall when soils have a tendency to be residue free because either crops have yet to be planted where ground is prepared, are too small to ward off deleterious wind effects, or have been harvested leaving inadequate crop residues on the soil surface. Our light-textured soils consist mainly of sandy loams, sands, or silt loams that have a high tendency to blow if left unprotected. Alternatively, if there is excessive rain or too much irrigation on unprotected soils, there will be erosion or leaching of essential nutrients, fertilizers, and chemicals.

Since Columbia Basin soils are naturally low in organic matter, typically with less than 1% in the native state, whatever gardeners can do to add beneficial vegetal material has to be good for the soil not only to help deter erosion but to improve tilth, control weeds, and build a healthier ecosystem.

Check out the sources below for seeding rates, availability, planting dates, species and further justifications.

References

Cover crops for home gardens East of the Cascades. Washington State University Extension Fact Sheet FS117E. By Craig Cogger. Chris Benedict, Nick Andrews, Steve Fransen, and Andy McGuire, 2014.
<http://cru.cahe.wsu.edu/CEPublications/FS117E/FS117E.pdf>

Managing Cover Crops Profitably. Sustainable Agriculture Research and Education (SARE). Handbook Number 9. Third Edition. June 2012.
<http://www.sare.org/Learning-Center/Books/Managing-Cover-Crops-Profitably-3rd-Edition/Text-Version/Benefits-of-Cover-Crops>.

<http://county.wsu.edu/spokane/agriculture/crops/Pages/CoverCrops.aspx>.

<http://smallfarms.oregonstate.edu/sfn/f10wintercovercrops>.

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/landuse/crops/?cid=stelprdb1077238>.

New Publications or links to useful information

- EM113 E Common Spiders of Washington at <http://cru.cahe.wsu.edu/CEPublications/EM113E/EM113E.pdf>
- New Pest Alert - USDA-APHIS: <https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/spotted-lanternfly/spotted-lanternfly>
- Note that the Gardening in WA State website has been doing a great job of adding new publications as they come available.
- https://www.fs.fed.us/wildflowers/features/posters/WesternBumblebeesPoster_print.pdf Downloadable western bees poster
- Best Management Practices for Turf Care and Pollinator Conservation
<https://www.ncipmc.org/action/bmpturf.pdf>

Mark Your Calendar—Upcoming Events

<p>March 23, 2019 – Othello Sandhill Crane Festival 10 a.m. - 5 p.m., Othello High School gym</p>	<p>WSU Grant-Adams Master Gardeners will be answering plant clinic questions and selling carefully nurtured plants.</p>
<p>March 23rd & March 24th, 2019 – Columbia Gorge Boot Brush Kick-Off</p>	<p>Volunteers will spend a day promoting the boot brush at popular trailheads. Please join our efforts to help spread the word (and not weeds!) at various trailheads throughout the Gorge! If you're interested in volunteering, visit https://columbiagorgecwma.org/eventa/2017-2/and pick a day and trailhead you prefer!</p>
<p>March 29, 2019 – Invasive Species and Exotic Pest Workshop 8 a.m. - 3 p.m., Bellingham Ferry Terminal, Bellingham.</p>	<p>Discussions of pathways for invasive species, decontamination, landowner permission and data collection in Northwestern Washington and British Columbia, species of special note: spotted lanternfly, Japanese beetle, knotweed, sudden oak death, white note syndrome, feral swine, and much more. https://extension.wsu.edu/whatcom/invasive-workshop/</p>
<p>March 30, 2019 – 10th Annual Cabin Fever Gardening Symposium Spokane Valley</p>	<p>This full-day event sponsored by the Master Gardener Foundation of Spokane County and WSU Spokane County Extension. The theme is Back to our Roots with sessions planned throughout the day. https://www.mgfsc.org/</p>
<p>April 11, 2019 – Soil, Turfgrass and Trees</p>	<p>2019 Horticulture Series sponsored by the Chelan County PUD and WSU Chelan County Extension. This class is presented by Paula Dinius, Urban Horticulturalist and Ben Thompson WA DNR Urban and Community Forestry Specialist who will discuss how soil affects turfgrass health, and how turf and trees impact each other. Participants will learn how to evaluate soil and manage turf and trees growing together in the landscape. Contact Paula Dinius at https://extension.wsu.edu/chelan-douglas/urbanhorticulture/</p>
<p>April 13, 2019 – Fifth Annual Columbia Basin Eco-Gardening Symposium 9 a.m. - 1 p.m. Columbia Basin Technical Skills Center 900 E. Yonezawa Blvd., Moses Lake</p>	<p>To kick off the gardening season in the Columbia Basin, a half-day gardening workshop will be held for the public on gardening solutions. The event is organized jointly by the WSU Grant-Adams Master Gardeners and Grant County Conservation District. Kurt Braunwart, Owner of ProGene Plant Research, Othello, will speak about the benefits of using cover crops in the garden. Julie Sanderson, Botanist with the Chelan County Noxious Weed Control Board, will discuss weed identification and weed control options, and Isaac Madsen, WSU Crop and Soil Sciences Research Associate, will talk about soil health and soil management for gardeners. The event will features door prizes, a vendor marketplace, and refreshments provided free of charge. Space is limited so attendees are encouraged to pre-register through the Grant County Conservation District by calling (509) 765-9618, by signing up in person at the Conservation District office at 1107 S. Juniper Drive, Moses Lake, or by registering online at: http://www.columbiabasinccds.org/</p>
<p>May 4, 2019 – Grant-Adams Master Gardener Annual Plant Sale 8 a.m. - 1 p.m. Moses Lake Farmers Market in McCosh Park</p>	<p>As the primary fundraiser for the Master Gardener Foundation of Grant-Adams Counties, proceeds from the sale support MG horticultural and environmental advocacy activities, including demonstration gardens, presentations and classes, an annual public symposium, plus educational materials and references for plant clinics. Big Bend Community College allows the Grant-Adams Master Gardeners to use its on-campus greenhouse to grow plants for the sale. A variety of reasonably priced annual and perennial plants will be available. Need tomatoes? Numerous varieties, both heirloom and hybrid, can be found at this once-a-year event. Customers will find other seasonal vegetables, herbs, annual flowers, <i>locally adapted</i> perennial trees, shrubs, flowers, and grasses. Master gardeners will be available with care and planting information. And, a WSU Master Gardener Plant Clinic will be held concurrently for those who have general gardening questions.</p>

Master Gardener Plant Clinics

WSU Master Gardener volunteers are available to address home gardening questions all year long. You may contact a WSU Master Gardener volunteer by calling or bringing your questions or samples to the WSU Grant Extension Office at 1525 E. Wheeler Road, Moses Lake, Monday-Thursday, 8 a.m.-5 p.m., (509) 754-2011, Ext 4313, or by sending questions to the following website: ga.mgvolunteers@wsu.edu. Messages sent or called in or samples brought in will be answered by the Master Gardener volunteers in a timely manner. For face-to-face contact, or if you have a plant or insect sample that you would like to have identified, please see the Master Gardener volunteers at one of the following locations:

- **Othello Ace Hardware:** 420 E. Main Street, last Saturday of each month, May through September, 9 a.m. - Noon
- **Moses Lake Farmers Market:** McCosh Park - Dogwood St. side, Saturdays, May through October, 8 a.m. - 1 p.m.

Master Gardeners are also available to make presentations. For a list of presenters and contact information, go to the gardening information page of the WSU Grant-Adams Master Gardener website:

<https://s3.wp.wsu.edu/uploads/sites/2082/2019/03/2019MPresentations.pdf>

Grant-Adams Counties Foundation Officers:

Barbara Guiland, Co-President, 509- 765-3219
Terry Rice, Co-President, 509- 531-0068
Marta Tredway, Vice President, 509-787-4646
Diane Escure, Treasurer, 509-754-5747
Mark Amara, Secretary, 509-760-7859

Grounded Staff

Mark Amara
Diane Escure
Barbara Guiland
Kris Nesse