The Grapevine

The newsletter for Yamhill County Master Gardeners

February 2022

Job openings now open for various prestigious white-collar management positions with YCMGA. See page 2.

FREE WEBINAR FROM MONROVIA NURSERIES

TOMORROW Wednesday February 2nd, at 10:00 am.

See details on page 12. ACT RIGHT NOW!

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Nancy Woodworth
Polly Blum

Community Garden
Linda Mason
Susan Burdell

Demonstration Gardens (2)
Sue Nesbitt
Donn Callaham

Education Outreach
Rita Canales

Newsletter
Donn Callaham

Farmers' Mkt. Mac.
Tom Canales

Farmers' Market Newberg
Peter Steadman

Garden-to-Table
Gene Nesbitt
Gloria Lutz

Greenhouse
Linda Coakley

Hospitality
Gail Stoltz

Insect Committee
Gin Galt
Terry Hart

Library
Beth Durr

Plant Sale
Pat Fritz
Marilyn MacGregor

Propagation
Pat Fritz
Marilyn MacGregor

Publicity
Tom Canales

Scholarships
Susan Nesbitt

Social Media/ Website
Tom Canales

Spring into Garden
Carol Parks

Sunshine Committee
Polly Blum

Clinic Volunteers for Education/Outreach events (Special events in McMinnville and nearby towns). Easy short hours, spend time with gregarious volunteers, be looked upon as knowledgeable.

CONTACT RITA CANALES reetcan@gmail.com

Be a Mentor for just one family in the Garden-to-Table program. English-speaking or Spanish-speaking, or both. Interact once per week with a local family (McMinnville or Newberg): feel kind and useful!

CONTACT GENE NESBITT ghnderm@gmail.com

Share Publicity Responsibility so Tom can work on the website only. Involve yourself with social media, newspaper articles, flyers, and more.

CONTACT TOM CANALES canalest@gmail.com

Scholarship Committee needs just one more person to promote scholarships and evaluate aspiring students for scholarships. Expose yourself to the most involved, motivated, and brightest students in Yamhill County.

CONTACT SUSAN NESBITT sue.nesbitt1231@gmail.com

Your Brilliant Ideas are needed for the embryonic fundraising committee. Looking for creative, practical ways to help support YCMGA.

AMY CURTIS OR SUSANNE BEUKEMA rebeukema@gmail.com amy@ayellowfish.com

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Zoom Facilitator for Garden-to-Table classes, February 09 through May 21 (every 2 weeks). Flexible schedule.

Beth LaForce @blaforce@georgefox.edu

Gene Nesbitt @ ghnderm@gmail.com

*** RESOURCES TO EARN YOUR HOURS ***

FREE ON-DEMAND MASTER GARDENER CLASSES

FREE-INTRO-TO-OREGON-MASTER-GARDENER-PROGRAM

Short courses from OSU's Master Gardener online course, allowing you to study fundamentals of gardening.

FREE SPRING-INTO-GARDENING WEBINARS .

SPRING INTO GARDENING WEBINARS

Four webinars from the YCMGA event last April

FREE OSU TREE SCHOOL ONLINE .

KNOWYOURFOREST.ORG/TREESCHOOLONLINE

You can participate in the live classes hosted on School Online or watch past webinars.

OREGON BEE PROJECT POLLINATION PODCAST

BLOGS.OREGONSTATE.EDU/

For people making bold strides to improve the health of pollinators.

FREE LANDSCAPING WEBINARS

LANDSCAPING WEBINARSNATURE

Eleven classes from the Bay Area Water Supply and Conservation District.

FREE XERCES SOCIETY WEBINARS

HTTPS://XERCES.ORG/EVENTS/WEBINARS

The Xerces Society supports all invertebrate conservation.

FLORA OF OREGON ONLINE RESOURCES

HTTPS://OREGONFLORA.ORG

Use the tools for plant identification, mapping, and exploring plant diversity.

SUSTAINABILITY AT HOME

WEBINAR SERIES

University of California series of webinars applicable to sustainable gardening in Oregon.

N.B. IF YOU ARE WATCHING THE VIDEOS SOLELY TO EARN OSU CE HOURS, DON'T WATCH THEM UNTIL YOU'VE CONTACTED CARLA OR HEATHER, TO VERIFY POTENTIAL HOURS.

Tales from the Chef's Garden

February means our planning is in place, most of the seeds ordered, soil tests results analyzed, slugs have been baited, tools repaired and ready for action, and gardeners have been doing exercises so we aren't crippled by our first day weeding on our knees. But I haven't talked too much about our planning process. That's our February subject – **planning**. I created an Excel spreadsheet years ago, with plant variety, source, date planted, date transplanted inside and then planted outside, and a final spot for comments. We try to stay on top of that throughout the year because we can't remember in January which tomatoes were prone to blossom end rot and which beans were beastly to harvest.

Each January we, the garden team, meet with the culinary team in the kitchen to discuss (aided by the spreadsheet) what worked and what didn't work from the garden the previous season. And I take copious notes so that I can address the concerns when ordering seeds and when planning how many to plant.

An example of something that overwhelmed the kitchen might be the Shishito peppers. Last year was an amazing pepper year and we had Shishitos coming out our ears. For a time, every plate, breakfast, lunch, and dinner had Shishitos in some form or fashion on it and they still were overwhelmed. Consequently, we're going to drastically reduce the number of plants.

A few of the hundreds of pounds of shishito peppers we harvested.

Another example is lettuce. We couldn't get enough lettuce into the kitchen last summer because of the heat. Before we could use enough it was bitter and bolting. Even with shade cloth they were bitter. All in all it was a "bitter" experience for all humans involved. Since there is nothing we can do about the weather, we are keeping the amount which we plant the same, but I'm looking for varieties which specifically talk about being able to endure summer heat. We'll really pour on the early plantings and back off some on the mid- to-late summer plantings.

Vole damage before Captain Gray & Hercules were employed.

Our biggest failure last season was our celeriac. This is a staple of our winter harvesting. This year we have none! That's right—*none*. It's not because the voles ate them. That was a previous year's problem, which we have eliminated by the acquisition of rodent patrol staffing: cats!

"I'd like to break in right here, while Anna is away from her computer, to say a few words. This is Captain Gray reporting. We have been very successful in our garden patrolling. We kept the voles, mice, and birds at bay. On one glorious day we caught and ate a bunny rabbit. The gardeners lauded us with many honors for protecting the garden from rabbit teeth. The gophers were the job of the gardeners, because

Tales from the Chef's Garden...

gophers stink and are not suitable for cats. We do have our dignity, you know. Now is the season of relaxing in the greenhouse by the heaters, and dreaming of the prey to come as the sun returns. Captain Gray, signing off!"

No, this was due to an insignificant greenhouse pest, the fungus gnat. *Ugh*. Parsley and celeriac roots are particularly susceptible to fungus gnats and to damping off and to fungal diseases in general. So what we have done, because this is an annual problem, is switch our potting media from the long-favored 5F from ProGro to their media which is coir-based. I prefer the 5F as it holds nutrients better and plants seem to do well in it, but the coir media doesn't support fungus gnats. And that is our problem which needed solving. So this spring we will grow celeriac again and this time without the accompanying little gnat friends.

Captain Gray relaxing by heater after hard-working summer and fall.

Captain Gray and his brother Hercules at work guarding the gate (or waiting for mice).

Interspersed in our talks about what worked and didn't work, the chefs throw out ideas of what might be fun to see in the garden for the coming season. This year we're going to bring back leeks. I like them as they are pretty much problem-free, they are super easy to harvest, and they look cool.

A new crop that they wanted was ornamental corn for fall décor. I suggested that we grow popcorn instead so that after being decorative, it can be popped which should make for a lot of entertainment in the kitchen. One of the catalogs that I read suggested laying out the dry ears then stomping on them to release the kernels! Sounds like a mess, and a disaster waiting to break one's leg. However, even though that sounds fun, I suspect that the gardeners will be the ones who end up shelling the corn--by hand.

We go over and over our list, making sure that we've addressed each crop produced and each item on the wish list. Then we have to translate that into seed orders, again checking and re-checking. Inevitably in spite of our thoroughness some seed slips through the cracks. Typically that's because one company is out of a particular variety so we scramble to replace it elsewhere and it gets lost in translation. In the end we will have seeds and we will have plants in the garden in due time.

By the end of the month we will have peas in the ground and hot peppers sowed in the greenhouse. I love February in the greenhouse. It's spring!

Anna Ashby, Master Gardener
Master Beekeeper

Flax: Multipurpose Plant

Why the interest in Flax? **Flax** is remarkably versatile; every part of the plant is used. The seeds are 45% oil, the straw is used for paper and linen, the meal is a protein-rich food, the straw is used structurally, and the seed husks make excellent bedding for animals.

People have been cultivating flax for over 7000 years. **Fiber flax** was brought to Oregon in

1843, and the Willamette Valley was a major producer of high-quality flax fiber from the late 1800's until about 1960. Mechanical harvesters and improved processing machinery developed by the USDA in Corvallis in the 1940s ushered in the age of efficient mechanization for fiber flax. (The original flax harvester used by OSU in the 1940's is now at the Heritage Center Museum in McMinnville).

- ***Linseed oil*** (made from flax seeds) is a drying oil, which becomes a hard, tough, elastic substance when exposed in a thin film to air. It is used in paints, resins, varnishes, printing inks, and linoleum. (*Linoleum is a mixture of solidified linseed oil mixed with gums and cork dust or wood flour. Linoleum has become popular recently because it is considered a "green" building material).*

- Fiber from flax straw makes strong, ***high quality paper*** (used for U.S. currency, tea bags, book paper).

- The straw is a ***carbon-neutral fuel*** that burns cleanly and has the same heating value as soft coal.

- Because paper fibers lose strength each time they are recycled, adding small amounts of flax fiber to paper pulp greatly increases the ***strength of recycled paper.***

- The automotive and aerospace industries are using flax fiber to ***replace fiberglass*** due to flax's high performance, light weight, and the small ecological "footprint" of flax. Flax fiber takes much less energy to produce than fiberglass and is biodegradable.

- ***Flaxseed meal*** is a good source of dietary protein. Most flaxseed meal is fed to animals, though whole flax seeds are used in cereals, breads, and other baked foods. Flax seed is also an excellent source of dietary fiber: the dietary fiber content of flax seeds is 25 percent.

- ***Fiber*** Flax

cultivars produce long fiber and short fiber. Long fiber is spun and woven to produce very high-quality ***linen fabric*** which is used to make fine cloth-

ing, sheets, tablecloths, and other household goods (and was also used to wrap mummies). Short fiber generally is blended with cotton or wool and spun into yarn to make a wide variety of apparel, ***upholstery***, and carpet fabric. Long-fiber flax is used in ***wrinkle-free linen/*** cotton blends which feel cool in hot, humid climates and need no ironing.

- The by-products of fiber flax processing are shives and seeds. Shives are the woody core of the flax stem separated from the fibers. Since the 1950s, shives have been used to make strong, lightweight ***particleboard panels*** in Europe. Shives are also extremely absorbent and can be used as ***animal bedding*** or to absorb liquid spills.

The advent of synthetic fibers in the late 1950s as well as development of easier-to-grow and more profitable crops like grass seed hastened the decline of the Oregon flax industry. In 1960 a company that contracted to purchase flax from farmers went bankrupt before buying the flax, leaving the farmers with a worthless crop. Now no one wants to produce it until there is a large reliable market, and the market won't form until the farmers produce it in quantity. However, it always has been and still is an important crop in Europe and Canada. It's grown in several states (see references) and OSU began a flax trial in 2012.

Synopsis of articles from OSU, Iowa State, N. Dakota State, Perdue University, Amherst University, University of Wisconsin

Extreme Topiary

Awful Name, Great Idea

From UCDavis, here is a gentle yet effective way to get rid of incipient weeds. This poster describes the process and why it Is so efficient.

Stale seedbed preparation

Steve Fennimore
Department of Plant Sciences, University of California, Davis, Salinas, California 93905

Summary. This is a method of weed control practiced before planting. Most weeds germinate from very shallow layers in the soil – the top 2 to 3 cm. By allowing the weeds to emerge and be killed before planting with little disturbance to the soil, it is possible to reduce the number of weeds that will infest the crop.

Fig. 1. Here the soil is prepared for planting: A. rain is needed to germinate weed seeds; B 7-10 days after the rain the weeds emerge and are killed with shallow tillage, C. the planting bed is ready for planting.

How to prepare a stale seedbed:

1. The area should be smooth and ready to plant
2. Irrigate area or wait for rain sufficient to germinate weeds
3. About 7 to 10 days after the rain or irrigation, perform shallow tillage with a rake, or hoe to kill the weeds. Also can spray with glyphosate herbicide (Roundup) to kill weeds.
4. Again irrigate or wait for rain sufficient to germinate weeds.
5. About 7 to 10 days after the rain, perform shallow tillage with a rake, or hoe to kill the weeds. Instead of tillage your can spray with glyphosate herbicide (Roundup) to kill weeds.
6. The area is now ready for planting.

Fig. 2. Lettuce grown without a stale seedbed preparation (left) and lettuce grown following stale seedbed preparation (right)

Final notes

Important! To cultivate the weeds do not till the soil deeper than 3 to 4 cm to avoid bringing weed seed from deep in the soil. Use a rake, not a shovel.

Heather's Highlights

It is hard to believe that February is upon us already. This should be a busy month within our program with many activities starting up. Garden-to-Table will be starting mid-month, taking in a new group for a hybrid class. Greenhouse seed-starting is starting soon, as well as the planning for Spring-into-Gardening workshops which begin in March. Master Gardener training will also be hybrid this year and will begin online on the 11th and in-person on the 24th. Our classes are full with 20 trainees joining us this year. In this format the lectures will be online and the Thursday in-person classes will be shorter (1½ hours) and focused on hands-on activities. Some of the classes will be at the Weiser Pavilion, and others will be at the PWA. It is possible we may have some extra space for certified Master Gardeners to attend a few of the outdoor classes, however there will not be the traditional lectures for attending this year. Instead, there will be additional continuing education opportunities to attend later in the year, as well as Level-Up webinars which start February 8th starting with the "Science and Practice of Seed Starting". Here is the description for the first months of the series:

https://extension.oregonstate.edu/mg/growing-oregon-gardeners-level-series-2022

Enjoy your February and hope to see you all soon!

Weeds "Slip the Cuffs"

Weed resistance to various herbicides is an old and ever-changing story. It usually develops when a weed is exposed to multiple treatments of the same family of herbicide, and each year a few weeds live through the application.

This could mean that new herbicides could be useless even before they are sold.

Weed resistance to herbicides (from exposure to the herbicides) increases by about 10% per year, forcing the use of constantly varying families of herbicides. But now there is a completely new and very worrying twist to weed perpetuation. In Illinois the pernicious weed "waterhemp" is now impervious to six different *families* of herbicides. What is much more concerning is that these plants ***have never been sprayed with an herbicide.***

The plants have developed "metabolic resistance." They have developed detoxification genes, without ever being exposed to the herbicides, that make them immune to certain chemicals. What's more, the weeds keep altering their genetic structure to make them resistant to more and more different herbicides, again without ever being sprayed.

Tall plants in field are waterhemp

What this means is that it is likely that herbicides developed in the future may be useless even before they are offered for sale.

The same thing has been observed in Tennessee since 2019, so that now in places herbicides provide less than 40% control, with the control level dropping every year. A solution to this genetic change, if there is one, has not yet been found.

Farm Journal, 12-21, pg. 56

YCMGA President Sue Speaks...

The Yamhill County Master Gardener Association (YCMGA) has many active committees which are responsible for the Association's programs and accomplishments. While some groups are active all year, others are more seasonal. There is a list is on the first page of this newsletter. More information about each committee is available in the YCMGA Resource Manual.

In this and the next couple of newsletters I would like to focus on the work of some specific committees. Participating in one or more groups is a great way to meet people with similar horticultural interests, learn new information and, of course, help the Master Gardener program and YCMGA.

Greenhouse

The purpose of this committee is to propagate annual vegetables and flowers from both seeds and plugs for the YCMGA Plant Sale. In addition to planting seeds this group monitors the seed germination, waters, transplants, monitors the greenhouse temperature and ventilation (both cold nights and hot days cause problems) and prepares the plants for sale.

Meeting: 9 a.m. Tuesdays, February through May at the Greenhouse at the Yamhill County Fairgrounds.

Chairperson: **Linda Coakley**, lindadcoakley@comcast.net.

TO PARTICIPATE: Due to Covid-19 the number of people in the greenhouse at any one time is limited. If you are interested, please contact Linda Coakley at the above email address. *Please do not just show up.*

Spring-into-Gardening

The purpose of this committee is to plan an educational event(s). This year there will be four in-person workshops this spring and early summer. Help is needed to both distribute publicity materials and to assist the instructors. Watch for specific emails regarding the dates, times, places and specific assistance needed in the near future.

Chair People: Carol Parks and Rita Canales

Scholarships

The purpose of this committee is to identify high school seniors interested in agriculture and horticulture, solicit applications and award college scholarships.

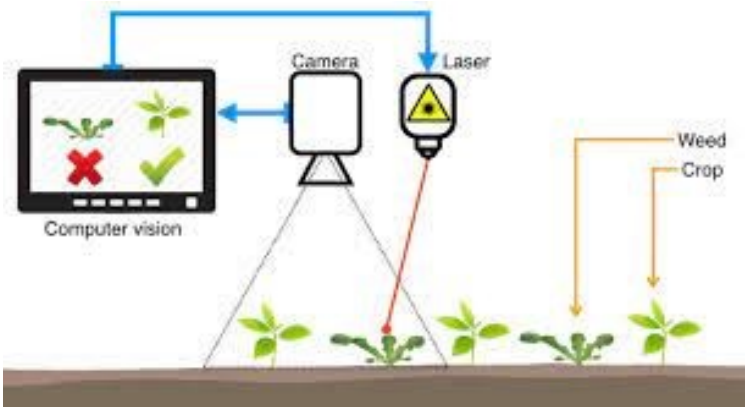
Chair People: Sue Nesbitt, sue.nesbitt1231@gmail.com and **Terry Hart**, terry.hart@gmail.com.

This group is looking for another member.

TO PARTICIPATE: The work of this committee is done primarily via email and phone calls. Please contact either Sue or Terry if you are interested.

Crackle, Pop, Fsssst

Laser Weed Control is Here!



It was only 7 months ago that laser weed eradication for farms was being introduced. And now, it is commercially available and comes in several forms.

The fully autonomous "LaserWeeder" covers 15 to 20 acres per day, killing 100,000 weeds per hour. Since it is autonomous is can operate 24 hours a day and all week. Using GPS, AI, and computer vision, it covers every inch of a field, with no overlap and no missed areas.

Computer artificial intelligence mimics human sight through 20 cameras which identify, track, and target weeds. The machine is set to identify the crop or crops, and then destroy any other plants. While the vehicle is moving at about 2 mph, it identifies the weeds, processes the image, and fires a laser at that specific weed.

Although it kills any weed up to 3 feet tall, the smaller the weed the faster the kill. Each laser is always being adjusted in real time to output only enough energy for a particular weed, so that in smaller weeds the unit can do its work more quickly.

The laser beams are generated from sealed glass tubes in the machine and can be fired every 50 milliseconds. Accuracy of the laser beams is 3mm (about 1/8th of an inch) so the beam is directed right down the center of the plant, exploding the plant cells and annihilating the meristem (all the growing, actively dividing cells).

Depending on moisture content, the weeds make a popping noise, and the smell of burnt plants is distinct. Left behind are simply the burnt remains of the plant, including the root system.

Though the machines are initially expensive, they eliminate the need for personnel, spraying, and herbicides. They destroy more weeds than herbicides as well, and avoid the problems of herbicide resistance plaguing modern agriculture. Agronomists are not exaggerating when they say they feel that this invention will be a turning point in agriculture, with the same profound effect of the invention of the cotton gin and farm tractor.

Information from Farm Journal Magazine
Chris Bennett, December, 2021

The ***Gardener's Pen*** wants a brief description of any unusual events or special areas of expertise that your county may have that could help other counties. I will share a few of them in the next issue. It may be a past event that your county has developed or an upcoming one that is offered online and other MG's can join to learn a new skill.

Send a note to Ann Kinkley before **February 10th**.

Pesky Profiles

By Heather Stoven

No Need to be Bitter!

Winter is here, which means it is time for winter weeds. Actually, many winter weeds start to germinate as the weather starts to cool and the first rains of fall arrive. So, many of these weeds have already been proliferating for some time now, taking advantage of the space created by first frosts and the dieback of other warm-weather crops.

One commonly seen winter weed is bittercress, *Cardamine hirsuta,* a member of the mustard family. Bittercress is a relatively small weed forming clumps generally 4-8" tall and wide. The leaves contain 4-8 pairs of alternately arranged rounded leaflets. Bittercress have small, white flowers, each with 4 petals.

The seeds develop in seedpods called siliques, which can forcefully dehisce up to 15 feet! How amazing is that? After learning this, it makes sense why these weeds are typically so prolific in the garden.

Fortunately, bittercress is easy to remove by hand pulling or hoeing. Now that you know about its explosive seed dispersal mechanism, you can see why this weed is best pulled before it goes to seed.

Free Webinar

February 2nd from Monrovia nursery.

Be sure to email "katie@monrovia.com" RIGHT NOW to be put on the webinar list!

"Must-Have Plants and How to Use Them: Uncovering your garden style"

Webinar at 10 am PT on February 2nd, 2022

Meet the Rabbitbrush Fairy Cuckoo Bee

No one in Oregon had ever seen bees in the genus *Neolarra.* These bees are also rare elsewhere with *Neolarra vigilans* having been identified at only two locations, first in the Petrified National Forest in Arizona in September 2010 and next at the Colorado National Monument in August 2011. It was never reported north of Colorado.

OSU Master Melittologists Michael and Dan O'Loughlin blew apart where we thought these bees lived when they discovered the minute and slender *Neolarra vigilans* on a lawn at the house of a friend in the town of Burns, Oregon in July 2019. The brothers have since found more species of *Neolarra* south of the Alvord Desert in Harney County and back on their friend's front yard. Their discovery of *Neolarra vigilans* in Oregon represents a revision of the range of these bees several hundred miles north of what was previously known.

Since 2018 OSU volunteers have contributed 100,000 new bee records to Oregon's database

Bees in the genus are found only in North America: they are cleptoparasites on the nests of the smallest bees in the U.S., the fairy bees of the genus *Perdita*. The Rabbitbrush Fairy Cuckoo Bee waits for a fairy bee female to depart from her ground nest and then sneaks down the tunnel to lay an egg in the cell with the fairy bee egg (see attached picture).

Although little is known about the strategies used by *Neolarra* to overwhelm its host, it comes from a diverse group of cuckoos who share common behaviors. The *Neolarra* eggs are likely inserted into the wall of the cell where they are hidden from the returning host bee. After the cell is sealed, the young *Neolarra* larva will develop a hard sickle-shaped tooth which is used to kill the host egg or young larva. The *Neolarra* larva is then free to consume the pollen provisions and complete its development.

The discovery by the O'Loughlins is one of many discoveries of high scientific value made by


Neolarra vigilans

Oregon's Master Melittologist volunteers. Over the next decade, volunteers are working to build an Atlas of Oregon bees that contains range maps for all the species in the state (estimated at 600-700 species) and lists the plants they prefer to gather pollen and nectar from.

The Oregon Bee Atlas is a one-of-a-kind program in the U.S. that is led by volunteers working under the umbrella of OSU Extension. Since 2018 volunteers have contributed 100,000 new bee records from every county in the state. The Atlas will help Oregonians make informed conservation decisions.

***American Entomological Society 65*(4), pp.347-362.**

"Trees are as close to immortality as the rest of us ever come." — *Karen Joy Fowler*

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The Grapevine

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For free subscription by email, send request to above address.

General meetings of the Yamhill County Master Gardeners™ Association are announced in this newsletter and are open to the public. Contributors vary by monthly edition.

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http://extension.oregonstate.edu/yamhill/

Yamhill County Master Gardener™ Association Executive Board 2022

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Heather Stoven
Yamhill County Extension Faculty
for Community Horticulture