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*We want to hear from you!
Send your submissions for
the newsletter to
ymastergardener@gmail.com
by September 15th for the
next issue.*

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Yellowstone Master Gardener



NEWSLETTER

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Blending plants, yoga, and life: Bess Lovec

by Elizabeth Waddington

If you could translate a favorite yoga pose, how would you describe it in plant language?

Bess Lovec, Master Gardener since 2015 and yoga instructor, describes nose-to-knee pose (janu sirsasana) as being like strawberry plants propagating by sending out runners that touch the ground and take root. Or perhaps eagle pose (garudasana) like ivy or Virginia Creeper attaching to support and reaching high.

Bess's love of imagery and words comes from a career teaching English literature and her favorite reading was the restorative aspects of Transcendentalist authors like Ralph Waldo Emerson and Henry David Thoreau. In these uncertain times she finds reading about the natural world relieves stress. A dance major at the University of Utah, she worked in Missoula with the U of M dance company before moving to Billings in 1977. She loves teenagers' fertile imaginations and their open-ended discussions, but administrative edicts... not so much. She adhered to Alice Hamilton's advice (another educator and gardener – if you have trouble with administration, “go pull weeds”). When Bess retired from teaching in 2010 she began teaching yoga.

Growing up in North Carolina was a totally different gardening experience than Montana. Her parents always gardened and



Bess Lovec

provided a role model. Her childhood memories include her father building a trellis for cucumbers and squash. It was a strategy of “control whatever you plant, it will grow” vs. our local “plant it and nurture it like crazy so it might thrive” here. She freely admits she tends more flowers and herbs than vegetables since she can load up on fresh produce at Farmer's Markets.

Bess decided to take the Master Gardener classes to satisfy a life-long learning habit. She felt the class was like Earth Science for adults – fun and challenging, concrete and factual. It was a definite swing from the humanities that she was immersed in within her classrooms. It was a great way to learn about different aspects of gardening and be with others who have the same interests. She loved Level 3 and claims the big reward is sitting in with serious college professors to learn more about botany, plant diseases, and pests.

Great gardeners experiment and share information. Bess' first plant experience was in college when she bought a pretty plant without reading the label to see if would be suitable. When she moved off campus in the early 70's, the apartment was filled with spider plants and philodendrons. Her current African violet collection started with a party favor plant and she says that an east window is key –

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RECIPE submitted by Ann Guthals

Grilled Corn Salad

from 'The Official John Wayne Family Cookbook' by Ethan Wayne; Serves 6

Ingredients:

6 ears of corn, husks and silk removed
Vegetable oil for brushing corn
¾ tsp. kosher or fine sea salt, plus more for seasoning
½ tsp. pepper, plus more for seasoning
1 Tbsp. balsamic vinegar
2 Tbsp. extra-virgin olive oil
1 tsp. Herbes de Provence
1 cup fresh basil leaves, packed
1 pint grape or cherry tomatoes, halved

Directions:

Brush the corn with vegetable oil and season with salt and pepper. Place on a grill or grill pan over medium heat. Cook for 8 minutes, turning a quarter turn every 2 minutes. Remove from the grill and let cool.

In a large mixing bowl, whisk together the vinegar, olive oil, ¾ tsp. salt, ½ tsp. pepper and the Herbes de Provence. Cut the corn kernels from the cobs. Add to the dressing along with the tomatoes and stir to combine. Stack the basil leaves on top of each other. Roll up like a cigar and cut with a very sharp knife into thin ribbons. Add the basil to the corn and tomato mixture and stir. Serve immediately or cover with plastic wrap and refrigerate.



BESS LOVEC continued from page 1

nothing else special is needed.

For her next adventure, Bess would love to go to India with a yoga connection since her trip in 2018 was cancelled because of monsoons. But, realistically, she wants to see grandchildren graduate, go to lunch with friends, and host a fine dinner party.



RECIPE by Elizabeth Waddington

Roasted Rhubarb Barbecue Sauce

Fresh rhubarb is roasted, then pureed and cooked with traditional barbecue sauce ingredients in this unique and flavorful condiment.

Ingredients:

4 cups coarsely chopped rhubarb
3 cloves garlic
1 cup water (plus more, as needed)
3 tablespoons balsamic vinegar
1/2 cup brown sugar
1/4 cup ketchup
1 tablespoon Worcestershire sauce
1 tablespoon chili powder
1/4 teaspoon cinnamon
Dash of cayenne pepper
Salt and black pepper, to taste



Directions:

Preheat oven to 425 degrees. Line a baking sheet with foil and spray generously with non-stick cooking spray.

Place the chopped rhubarb and garlic cloves on the prepared pan. Roast for 15-20 minutes, or until rhubarb is soft.

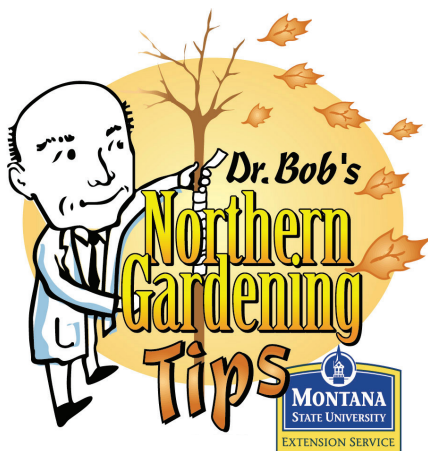
Transfer the rhubarb and garlic to a food processor or blender. Puree with one cup of water until smooth.

Pour the puree into a medium saucepan. Add remaining ingredients and mix well. Add additional water, as needed, until sauce is desired consistency.

Bring to a simmer over medium-low heat. Simmer for 10-15 minutes. Cool before pouring into storage containers. Keep refrigerated.

Makes about 2 cups.





Question to Dr. Bob

by Corry Mordeaux

Should I fertilize my lilacs now?

The rule of thumb is to apply no spring fertilizer to your trees and shrubs after Father's Day. Don't fertilize during the summer. It can keep the plant growing into the fall and delay its hardening for the winter. This will increase the chances of winter injury. Besides, most woody ornamentals in the northern states complete most of their shoot growth by early summer so the fertilizer would do little to help after mid-June. It is also a good idea to supplement spring fertilization with another fertilizer application in the fall after the lilac bush has dropped its leaves but before the ground freezes.

Dr. Bob's wisdom lives on.

Veterans Memorial at Yellowstone County Courthouse

by Paul Scarpari

On May 23, 2020 we planted lobelia, geraniums, SunPatiens® and sweet potato vines in the planters. The theme of the planting this year is red, white, and blue.

The planning for the red, white and blue theme started in January of 2020 when Gail Tresinsky and I started to discuss what flowers would be best for the location. We took into consideration sunlight, moisture and soil. After a few hours of talking we decided on the flowers we thought would work best. We also talked about the number of flowers we would need. Gail then ordered the flowers from The Red Barn Orchard in Park City.

We cleaned up the planter and prepared the soil for planting by adding fertilizer. Steve Restad and I picked up the plants and for a couple of weeks I hardened up the plants by placing them outside every day.

Finally the big planting day arrived. Sherry Doty and I laid out the plants in the design we thought best and planted. We added flags for the Memorial Day weekend.

I want to thank everyone on the committee and involved in cleaning the planter, buying the plants, planting and future watering of the garden, including Sherry Doty, Valeria Jeffries, Marla Patterson, Steve Restad, Ericka Rossman, Rayanne Schuller, and Gail Tresinsky.



Perennials, Propagation, and Plastic

by Ann Guthals

In my ongoing quest to garden sustainably, practice no-till gardening, and reduce the number of plastic pots I have to recycle each year, I have gradually moved my garden in the direction of perennials/self-seeders and growing my own plants.

The plants that come back each year fall into 3 categories: **edible flowers, vegetables, and fruits.**

The two flowers that return on a reliable (and rather prolific) basis are calendula and Johnny Jump Ups. Calendula is so widespread in the garden it is more like a weed than a welcome plant! But the flowers are not only edible, they are bright spots of yellow and orange wherever I let them grow up to full size. Once started, you won't have to re-plant. The Johnny Jump Ups are like little pansies and spread easily. Unfortunately, they don't take heat very well, so they only last for a while. They are tasty in salads during that time, though.



By far the most widespread "perennial" vegetable in my garden is a self-seeder called orach. It is the first "green" to come up in the spring and makes great salads. I have green and red varieties. The mature plant is about six feet tall and covered with hundreds of seeds that



spread everywhere so the next spring there are many more plants to harvest. The person who gifted me my original seeds said the pioneers relied on orach to bring them early greens after a harsh winter without fresh produce.

Another self-starter is the Jerusalem Artichoke (sunchoke). I grew these for many years – the roots form tubers that can be eaten raw or cooked. The plant is several feet tall with small sunflower-like flowers at the top. The upside of this plant is how easy it is to grow and the downside is that it takes over wherever it is planted and is very hard to uproot and get rid of. I finally decided I wanted to use the bed for something else and it took me a couple of years to get all the plants out, as even a small piece will take root and grow!

I grow several varieties of sorrel, my favorite being lemon sorrel which has a citrusy tang. I also grow garden sorrel and red-veined sorrel. These are perennial plants and the red-veined spreads easily. Sorrel is good in salads and soups. The sorrel lives mostly in the herb bed with the other perennial herbs where there are two kinds of mint, oregano, sage, three kinds of thyme, and lavender. Parsley self-seeds itself there, too.

I have discovered over the last few years that kale will come back if you don't pull up the roots. I cut the plants down to about 2 inches high and the next year the stubs grow new green leaves. I have not had them bolt. I let the collards come back and they did bolt, though this year it looks like they are growing and not bolting, so it may depend on the conditions. One advantage of perennials

is that they are already established and growing when we start planting seeds each year. One also does not have to disturb the soil as the plants are already growing in early spring.

Two other perennial vegetables one could grow are rhubarb and asparagus. I have not had the conditions or space to grow these but luckily have a friend who brings me wild asparagus each spring!

I much enjoy the perennial fruits I grow – their flavor



is unmatched by anything store-bought. I grow grapes, raspberries, strawberries, apples, and plums. My ancient plum tree is still producing and last year I let one of its volunteers grow into a small tree. This year it bloomed profusely and I will find out whether it is true genetically to its mother tree. If so, I may let a couple of other volunteers mature and have a small “free” plum orchard eventually.



To follow my philosophy backwards in the season, I have grown several cuttings of houseplants over the last few months (partly because of no access to a nursery for a while due to the coronavirus), and in the past have grown my own marigolds for the garden as well as tomatoes and peppers. I have seed-starting trays that work well for this. A friend has discovered Aero gardens and in addition to growing lettuce for immediate consumption, has grown starts for the gardens in these. I am about to try my first one, to grow lettuce indoors. All the starts that are successful mean that many fewer plastic pots to try to recycle.



This year I have started from cuttings the following: two kinds of Peperomia, an African violet, and a jade plant. I used potting soil for all and did not use growth hormone. Some violets grow “babies,” some do not. For ones that do, I take the plant from the pot and use a sharp knife to separate into separate plants. Then I re-pot each “baby.” I think it is slower growing without special soil or hormones, but works just fine if you are patient.



A greenhouse would be a welcome addition to this whole process but our property is not conducive to my having a greenhouse. So I use indoor methods the best that I can to substitute.



I hope this has given you ideas on how to have fruits, vegetables, flowers, and indoor plants without having to buy new plants every year and without disturbing the soil.

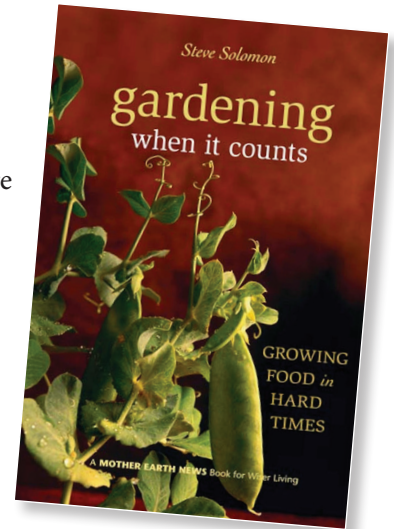
BOOK REVIEW by Ann Guthals

Gardening When It Counts

Growing Food in Hard Times

by Steve Solomon

I first read this book when it came out in 2005. The “hard times” referred to in the title were climate change, peak oil, increasing fresh water scarcity, and increasing cost of inputs as oil prices climb. Today in 2020 we face hard times, some the same as identified in this book and some different. I decided to re-read it to see if it still speaks to me as strongly as it did in 2005.



The answer is yes but my reaction to all of the content is not the same. The author’s goal is to educate the reader to grow the most nutritious food possible in the largest quantities as frugally as possible, both in time and money. I still appreciate this approach and have tried to practice many of his ideas in my own garden over the years.

The topics covered in depth are: obtaining land, using and caring for tools, soils and fertilizing, where and where not to get plants and seeds, watering, making and using compost, garden pests and diseases, and choosing what plants to grow.

Mr. Solomon has extensive experience in raising plants for food and thus is qualified to offer detailed advice. He has raised much of the vegetables for his own family for years and he also started and ran a seed company in Oregon for several years. He has written several other gardening books. He now lives in Tasmania.

Most all of the sections were just as helpful on a second reading as the first time. I was especially interested in the chapters on composting, pests and diseases, and choosing plants to grow. He is very consistent in explaining the differences between gardening on clay versus other soils, which is helpful in our area. And his advice is very down-to-earth, detailed and practical, explaining why he makes the choices he does, even when it may mean a bit more expense up front. For example, if your garden plants will face challenges from conditions or pests or poor germination rates, he suggests that you “overseed” and

continued on page 6



BOOK REVIEW: GARDENING WHEN IT COUNTS *continued from page 5*

thin appropriately. He quotes a Native American legend for growing corn that says: “Dig a hole. Put in a dead fish and cover it. Plant four corn seeds well above the fish – one for the worm, one for the crow, one to rot, and one to grow.” If the problem is that all the seeds grow, then thinning can correct that problem.

Speaking of which, the section on thinning was most informative. He explains why you need to leave room for plants and especially roots to spread and grow and seek nutrients and water. He says he knows it’s hard to pull up little plants but to think of plants in the wild who have to sow many more seeds than we do in our gardens to have even one plant be successful.

The book was written to teach beginning gardeners how to grow a lot of food. But experienced gardeners will learn a great deal from him as well. He will certainly make you think about how you garden and why you make the choices you do and maybe you will learn new ways of growing that you can try to be even more successful.

The one section that I viewed differently now versus in 2005 was the part on preparing the soil. He digs a lot. The last few years I have tried no-dig, no-till gardening – I have seen benefits to this method though I’m still just a beginner at it. It makes sense to me that one should try to

preserve the structure of the microorganisms in the soil as much as possible even while planting a garden in the spring. So I no longer practice his methods of digging the soil and it was interesting to read and think about them again in the context of trying a different method.

The author grows a large garden by suburban standards, between 2000 and 3000 square feet. Some of his techniques, such as how he constructs his compost pile each year, would be challenging in a suburban back yard. So there is a need for translation of some of his methods to adapt them to smaller gardens.

I would say the most helpful chapter was the one on choosing plants to grow. He divides garden plants into three categories: low, medium, and high demand vegetables. He identifies plants in each category, explains the care needed (main difference being in how fertile the soil is), and describes reasons for choosing to plant or not plant each one.

Gardening in Montana under the best of circumstances is difficult. Now with stronger and less predictable storms, pandemic restrictions, and wildfire summers, we certainly are facing “hard times” that will probably not get much easier in the next few years. So I think reading this book would be time well spent for those of us facing these challenges.

Level 3 Master Gardener 2020 Course Cancelled

by Dara Palmer, Montana Master Gardener Coordinator

As I am sure you are aware with the COVID-19 pandemic, things across our state have changed with regard to in-person gatherings and public safety. After a long, and difficult assessment of the Level 3 course and it’s hands-on, group oriented nature, we feel it is in the best interest for everyone involved to postpone the upcoming August Level 3 course. I know this is disappointing, it is for me also. However, there is a bright side... starting July 6th, we will finally have our new Extension Horticulture Specialist and I feel that her input and assistance with the

course will greatly enhance any future Level 3 experience.

Please know that this decision was not made lightly. Many factors were considered in the conversation, such as MSU changing the start date of university classes. Due to COVID they moved the first day of classes up two weeks, causing move-in weekend

to coincide with the Level 3 class. This is not ideal as the likelihood of available lodging in Bozeman that weekend

will be slim to none. Also, as small businesses are feeling the effects of the downturn in the economy, several vendors are no longer available. Speakers and tour personnel are also concerned with their safety as well as that of the public, and the protocols we must abide by for sanitation and social distancing are really not feasible for this hands-on course.

As someone once said, “this too shall pass”. I am looking forward to next year for new dates for the course, June possibly, but likely August of 2021. August is better for touring sites and also for the speakers.

Thanks for understanding.



Gardening Advice or Myth (GAoM) *Weeding out fact from fiction*

by Suri Lunde

Below are a few gardening advice/myths that we often hear but may or may not be solidly rooted in science or actually work.

GAoM 1: Drought-tolerant plants don't need watering

Most "drought-tolerant" plants such as echinacea, sedum, black-eyed Susan and Russian sages can survive through an average summer without supplemental watering. However, young plants need a consistent supply of water (i.e. usually not drought-tolerant) during their first growing season because their roots are getting established. After that, drought-tolerant plants can generally fend for themselves. But even the toughest of plants will benefit from a monthly soaking.



GAoM 2: Adding sand to heavy clay soil improves drainage

This practice turns the clay soil into a rock-hard, mortarlike substance. To improve and loosen clay soil, use compost because it is light in composition and also improves nutrient quality. For immediate results, till a 2-inch layer of compost over the entire planting area. Alternatively, top-dress an already-planted area with compost; it will just take a year or two for the compost to infiltrate the clay.

GAoM 3: Veggies must have full sun

Tomatoes, peppers, cucumbers, squash, and eggplant need at least six hours of full sun. But more forgiving veggies can get by with less – in some cases, as little as two hours. If your garden is somewhat on the shady side, try growing beans, broccoli, carrots, cauliflower, coriander, leeks, onions, peas, radishes, and rutabaga.



GAoM 4: Organic pesticides are safer than synthetic ones

Not necessarily. Misused pesticides can be harmful, regardless of whether they are considered natural or synthetic. If misused, natural poisons, such as pyrethrin (an insecticide extracted from chrysanthemum flowers), are hazardous to people, pets, bees and frogs. If you must use a pesticide, base your selection on how dangerous the active ingredients are, how persistent it is, and how

effective. Whenever possible, it's best to select the least toxic control option available. Safer choices include products that contain *Bacillus thuringiensis* (Bt), and insecticidal soap. Always read the instruction label and if you have questions ask before using.

GAoM 5: You need both a male and female tree in order to get fruit.

Some fruit trees are self-sterile, meaning they will not set fruit from their own pollen. To get the tree to set fruit, another variety of the same fruit must be planted nearby, ideally within 50 feet. Plant breeders have developed self-pollinating trees that do not require a second variety. Self-pollinating peach, apple, and pear trees provide their own pollen and they fertilize themselves.

GAoM 6: Ants are integral to helping peony flowers open.

Ants are only attracted to the sugary secretions produced by the peony bud and do nothing to help the flower open. In exchange for the nectar, ants help keep away other insect pests that may damage the flowers.



Conclusion: Let's promote truthful gardening wisdom and debunk gardening myths. By letting unequivocal gardening myths die, we all gain a better way to grow showy perennials, overflowing hanging baskets, and bountiful vegetables.

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MISSION STATEMENT

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“Use It Up, Wear It Out, Make It Do, Do Without”

by Elizabeth Waddington

If you grew up with parents who were Depression children or grandparents who managed a household during WWII, you are likely familiar with the frugality that gave rise to this phrase. Our modern consumerism took a sharp decline when COVID-19 limited our ability to travel, eat out, and locate the goods we were accustomed to purchasing for our household.

Due to the “stay home, stay safe” mandates, the 2020 pandemic has created a new fervor for making do with what you already have. Whether it was stocking up on foods to cook at home, or finally doing the home projects you had been procrastinating, our resourcefulness is creating a new generation of homesteaders.

My 30-something son for the first time wanted to grow his own vegetables. After seeing us build our raised bed boxes out of scrap lumber (we probably have the only converted eyewash station from a laboratory remodel) he decided to build his out of supplies he had around his place. As a stone mason it was leftover cinder block. We even had the landscape fabric from last year’s end of season yardwork that he could use. His decorative trellis is an old metal bedframe that had been left by a previous tenant. Expenses for the two households to outfit raised bed gardens in 2020 – a fair amount of time and sweat, about \$35 worth of plants (home grown seedlings were from freebie seeds at last year’s MG booth at SouthPark), and a Big Yellow Bag of garden soil from Tvetene (\$104). Next up for our beds are row covers... but that may have to wait because we don’t have quantities of PVC pipe and polypropylene fabric lying around.

Making do isn’t just for gardening. When our grandson requested a butterfly net for his fourth birthday and Mom couldn’t find one to buy, Gram E and Grandad came to the rescue using more stuff around the house: wedding décor tulle, close line wire, short piece of dowel, and the ever-handy duct

tape. Happy kid caught a butterfly the first day he ventured out with it.

Want to preserve your bounty for your own family? Blanching (quick steam and immediate



ice bath) and filling zipper seal freezer bags is a quick and easy way to preserve small batches. If you have an abundance of canning jars (you’ll need new seals) water bath canning is an option. After the produce is prepped, the filled jars are submerged by 1-2" of continuously boiling water. No pressure is used, and you can use some modern appliances such as an InstaPot or an electric water bath kettle with temperature controls. Some vegetables require pressure canning so be sure to read and follow directions precisely.

If you are so lucky to have truly bountiful garden produce, consider sharing through the local food bank. You can pick up credits for Master Gardener hours by donating.

Remembering the campaign for Victory Gardens in WWII, you can sense the comradery of self-sufficiency that was sweeping the nation now as well as then.

MontGuides:

https://store.msuextension.org/Products/Drying-Fruits_MT200909HR.aspx

https://store.msuextension.org/Products/Freezing-Vegetables_MT200908HR.aspx

https://store.msuextension.org/Products/Freezing-Fruit_MT200910HR.aspx

https://store.msuextension.org/Products/Home-canning-Using-Boiling-Water-Canners-and-Pressure-Canners_MT200905HR.aspx



The Root of the Matter

by Corry Mordeaux

Many eons ago and in a different age Master Gardeners had continuing education sessions. One was with Mike Garvey. Gravey is the local tree guru and arborist. Mike told us that when planting trees they should be mostly bare root. If you had B&B (Balled & Burlapped) or container plants, then you should wash the roots until they were bare then plant them. The wise Master Gardeners in the audience all looked at each other in disbelief. Why, that would kill the roots hairs and eliminate the mycorrhizae. No way would trees and shrubs survive that treatment.”

Recently my mind was changed after doing a correspondence course, “The Science of Gardening” (The Great Courses) and reading Fine Gardening magazine’s “Root washing is the best way to get your plant established,” both by Professor Linda Chalker-Scott of Washington State University. She echoed Mike’s comments. Both Mike and the Professor indicated that when you put a B&B or container plant in the ground their roots find it hard to get established. The roots like the medium they were originally planted in and tend to stay within that soil. The plant continues to put its energy into top growth when it should be putting its effort into the roots.

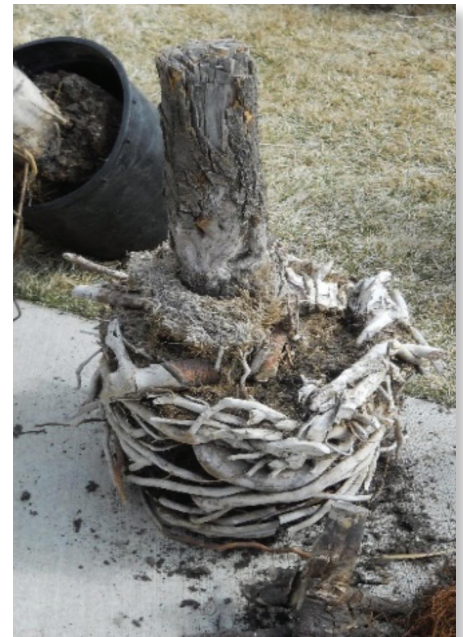
I have planted nearly 200 trees and shrubs at Draggin Ass Acres. Most of these plants were bare root. All the bare root plants have taken hold and the only ones I have lost have been some of the B&B or container plants. It took about three years for a very expensive Ginkgo to die. When I dug it up, the roots had not grown out of the B&B material and were circling. Before that I bought a pear tree from a well known nursery. I was told that, if I took it out of the wooden basket in which it was planted, I would void the warranty. Two years later that

pear was gone. It seems obvious that roots of B&B or container plants may stay within the original soil and not cross over to a new medium. When the plant stays in the soil of the B&B or container in which planted the roots will have a tendency to circle and will not extend out. This, of course, will eventually kill the tree. During his class, Mike Garvey presented several examples of root circling.

Water also has trouble crossing over to a new medium. This means the roots will not extend out from the root ball nor will water cross over to the medium in which the plant was originally contained. This makes it hard for the plant to get water.

Jumping back to the root washing idea. Working with a B&B plant, cut off all the wrappings (wire and burlap). Using your hori-hori knife dig out all the soil (usually clay) that you can. Then put the ball into a tub and soak the soil. What soil is left can be gently washed away. The washing method would be the same for a container plant. Now spread the roots out like a wheel. Trim off broken or circling roots. Take care not to do your root preparation in the sun. It takes just minutes for sunlight to kill roots.

For planting, dig a hole no deeper than the now radial roots, but have the hole about two times as big as the root ball. Usually you should not stake up the tree or shrub. However, circumstances may dictate differently. Again, usually no fertilizer need be added to the planting. I normally



Mike Garvey’s specimen of circling roots

put some water in the hole before planting. Remember that the root crown needs to be at the same level as it was previously planted, or at least even with the ground or a slight bit higher. Fill the hole with the soil that you dug out which will put the roots in direct contact with native soil. Press the soil down gently and add more water. This will eliminate air pockets around the roots. The plant requires watering daily. The plant will now put its energy into root growth. Do not expect massive top growth. There is no need to prune the existing top growth. I usually look for good top growth in two to three years.

I believe root washing is the way of the future. I would guess that many, if not most, landscapers would not agree with root washing for several reasons. One reason is that it is time consuming.

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Mental Health Benefits of Gardening

by Ann McKean

During the unprecedented events of this spring, the green industry saw record interest from the public, including a thrilling number of people who have never gardened before. Some people who spent more time at home looked out the window and decided it was a good time to work on their landscaping, while many more took comfort in planting fruits and vegetables. Gardening gave them a sense of security in a time of fear and uncertainty.



Mental health professionals are increasingly recognizing the benefits of gardening. Gardening brings people together, whether through Master Gardeners, visiting with neighbors over the fence, or families enjoying the fruits of their labors around the dinner table. It also brings a sense of connection to the natural world that can be comforting and fulfilling on emotional as well as physical levels. Working in a garden is hard work that benefits the mind as well as the body. While it strengthens our muscles and increases physical endurance, it also improves our mood and decreases anxiety. It fosters observation and creativity and keeps us in the present moment, which brings respite from worries and fears, resulting in a greater sense of calm. After working hard in the garden, the empowering sense of accomplishment and being purposefully present in nature is its own reward.

A 2019 review of studies enumerating the positive aspects of gardening and natural spaces has confirmed that gardening and green space boosts energy, improves memory and strengthens the immune system. It also

reduces stress, the risk of dementia, heart attack and stroke. A 2013 study in the American Journal of Public Health showed that gardeners have a significantly lower body mass index and lower odds of being overweight than non-gardeners. Other studies have shown that gardening lowers blood pressure and cortisol levels and improves mental clarity, mood, and the over-all sense of wellbeing. In addition, studies have also demonstrated that horticultural therapy (the intentional guided engagement of a patient in

gardening and plant-based activities) shortens mental health facility and hospital stays.

Gardening is healing, and as gardening reconnects us with each other and the natural world, it also reconnects us with ourselves. In an increasingly stressful world, Master Gardeners will continue to play a valuable role in sharing the joy of gardening with our community.

Resources:

<https://www.sciencedirect.com/science/article/pii/S2211335516301401?via%3Dihub>

<https://agrifetoday.tamu.edu/2020/05/18/gardening-can-influence-and-benefit-your-mental-health/>

<https://ellisonchair.tamu.edu/files/2019/07/An-Update-of-the-Literature-Supporting-the-Well-Being-Benefits-of-Plants-A-Review-of-the-Emotional-and-Mental-Health-Benefits-of-Plants.pdf>

On Snakes

by Bess Lovec

Hiss! Gardeners who use Facebook may have noticed a lot of photos of snakes this past spring. These fellows have received a bad rap from various versions of mythology, religion, and literature for thousands of years. Just think of how we treat them in language: “a snake in the grass” (hardly a positive insinuation), or “they’re selling snake oil” which indicates trickery, because snake oil does not really exist. After inheriting

the legend of the snake tempting Eve in the garden, we have considered them as bad. Even the verb version of the word means to steal or scheme.

Yet they help the balance of nature by consuming rodents. Rats are the second most adaptable species on our planet. Rodents decimate crops, spread diseases, and destroy property, so having snakes around helps us and our gardens.

The difficulty in Yellowstone County is identifying a bull snake (*Pituophis*

catenifer) from a rattlesnake (*Crotalus atrox*). They both have lovely markings plus hiss. The clearest difference is that a rattler lifts its tail when it rattles, while a bull snake leaves its tail on the ground. A bull snake does not have rattles but can make the sound with its mouth or by moving its tail on leaves. Don’t get close enough to identify a bull snake’s circular eyes and a rattlesnake’s vertically oriented eyes. Their colorations and heads differ, but unfortunately those differences are too subtle to trust during encounters.

continued on page 11



Your Very Own Garden Potatoes

by Sheri Kisch

How good is it to have fresh produce, tomatoes, potatoes, carrots and peas from your garden? Everything has so much more flavor! So you wonder “can I use the potatoes sprouting in the pantry since I got kind of a late start and everyone is out of potatoes?”

If you would have asked Dr. Bob Gough that question he would reply “This is America and you can do anything you want.” But should you? There is a whole world of information on what can happen using uncertified seed potatoes and it’s not pretty. You’ve heard of the Great Potato Famine in Ireland in 1845-49 killing 1 million from starvation and related issues. It was caused by the water mold *Phytophthora infestans* late blight of the Solanaceae family (tomatoes, potatoes, eggplant and peppers to name a few).

The water mold occurs in humid periods between 40–80 degrees. The disease can travel quickly through wind to your neighbor’s garden and across Montana potentially ruining the 46 much respected certified seed potato businesses. The oospores can remain in the soil for several seasons limiting what you can plant and where. This is why it is recommended to rotate your families of vegetables every year and keep a close watch for signs of disease.

Late blight can destroy your crop in as little as 10 days. Do you know what to look for? Would you send a sample

ON SNAKES *continued from page 10*

I’ve seen rattlesnakes numerous times in public parks, both east and west, around Billings. Practice physical distance – we have another opportunity to stay six feet away! Young ones are not less poisonous than their parents. However, if we’re on public lands, even though rattlesnakes are poisonous to most mammals, we don’t have the legal right to kill them. What we choose to do in our yards might differ, especially if among toddlers or dogs.

One of my high school biology teachers wisely encouraged those of us who wanted high scores to hold his five-foot black garden snake from the hills of North Carolina around our neck for a full five minutes. That snake wasn’t slimy, even though he was shiny. And prior to 9-11, my daughter brought her California king snake home for Christmas. I fed it dead mice while my daughter visited friends in Missoula. These snakes calmed down when I calmed down. So I’ve had helpers move me towards “Snake Appreciation.” Let’s give bull snakes a break, though.



into the Schutter Diagnostic Lab (diagnostics.montana.edu/) to find out? Is the problem you are seeing Early Blight, Septoria Leaf Spot, drought stress, Potato Mosaic, Blackleg, Potato Leaf Roll or Late Blight?

You may be surprised to know that you can order over 40 seed potato varieties before April 1 both organic and non-organic and pick them up at local nurseries, garden centers, and hardware stores. You can choose from red, white, purple or gold. The seed potatoes go through extensive testing, sometimes over three years before they come to market.

Montana Certified Seed Potatoes and Garden Tips

- Buying certified Montana Seed Potatoes is a way to protect Montana’s seed potato farms.
- Don’t use table stock or uncertified out of state potatoes.
- Choose tomato and potato varieties that are resistant.
- Cut larger tubers with a clean sharp knife so that each piece contains at least 2 eyes.
- To prevent rot, cut tubers two days before planting to let the surface dry out.
- Don’t plant in wet soil. Optimum soil temperature is at 55-70 degrees.
- Don’t allow any living tissue (tubers or vines) to overwinter. Destroy volunteers.
- Plant tubers 6-8” deep, rows 20-30” apart, and seed pieces 10-14” apart for good air circulation.
- Use a trellis or supports to keep tomatoes off the ground.
- Try soaker hose instead of overhead irrigation.
- Learn about weather conditions that spread Late Blight. Cool and wet conditions can spread and dry can hold disease.
- Cut the vines at the end of the growing season. Leave the tubers in the ground for two weeks to get a good skin set. Harvest all potatoes to prevent volunteers.

I realize this article may come late for this season in some respects but you can put it in your garden organizer for next year.

Looking for more information, I found:

- <http://potatocountry.com/> has a free digital magazine you can view. Click on the magazine picture on the right and then arrow through the pages.
- <http://montanaspud.org/>
- <https://www.montanaseedpotatoes.com/availability>
- <https://www.holbrookseedpotatoes.com/products/>



Metra Greenhouse and Garden Education Center

by Amy Grandpre

The morning of June 1st turned out to be perfect for pulling a new plastic roof on the Metra Greenhouse and Garden Education Center greenhouse.

What made this extra special were those who came to accomplish this task – most of the very same Master Gardeners who were involved with the raising and covering of the green house the very first time in 2014:

- Bob Wicks
- Corry Mordeaux
- Merita Murdock & Jeff Schaezle
- Sharon Wetsch
- Ron Hendricks (and brother Charlie)
- Tom Kress

Also involved in the 2015 original cover installation were Murry and Robin Lyda, Mike Ervin, Rick Shotwell and Randy Miller.

Thanks to one and all for once again, pursuing the dream.

2020 Greenhouse Cover Installation

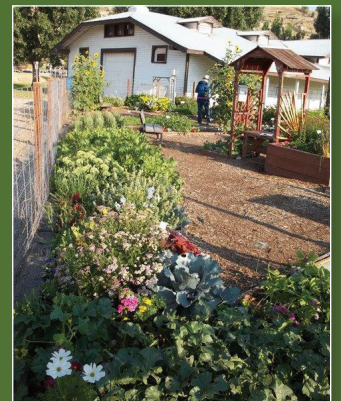


2015 Greenhouse Cover Installation



Metra Gardens

If you're feeling a bit confined and are looking for some place to go why not take a nice quiet trip to the Metra Gardens and greenhouse? There is an abundance of beautiful plants, shade trees to linger under and birds to listen to. If you feel so inclined to pull a weed or two I am sure no one will mind. Since you are in the area you might get more ideas at Amy's garden. Square foot gardens are going in along with many other plants. Stay safe and stop and smell the flowers.



Summary of Yellowstone County Master Gardener Association Quarterly Meeting (June 10th, 2020)

- Brian Godfrey, President, sent an email to Dara Palmer, Montana Master Gardener Coordinator, regarding the **2020 Celebration**. He has not received a response. Sharon Wetsch suggested waiting until 2021 to have the celebration due to possible issues with COVID-19. The fear is a low turnout, too many unknowns. A motion was made to approve the delay in the celebration by Tom Kress and Cindy Roesler seconded. All approved. Amy Grandpre will call Dara and suggest September 2021. Amy is going to cancel the room at the Montana Pavilion.
- **Master Gardener Class update:** The last two classes were cancelled. The online classes went well and have been completed. Amy is looking into other options at the Metra for classes beginning in February 2021. She is also going to reach out to the Breakfast Exchange Club since they were also using the same area. They may be able to suggest options as well.
- **Association Member Drive update:** we had 58 members last year. Brian is sending out a personal email to the member list to encourage participation.
- Amy stated Larry Field is going to help with the **Education Garden Greenhouse**. There was also discussion regarding the need for a shade cloth on the greenhouse. Amy enlisted the help of Tom and Corry Mordeaux to brainstorm regarding this and get back with her. She also mentioned spraying lime on the plastic may be an option as it would turn the plastic white and may be less expensive. Shelly Gayvert may be a resource as well. The greenhouse dimensions are 30ft x 33ft.
- The **Metra Square Foot Garden and Rockery** was discussed. Joann and Corey Glasser got the block for the benches. Planning on having a work crew after July 4th. Also, looking for native plants for the rock area.
- At this time, the **2020 Fair** is on with limits yet to be worked out. 4H and FFA will present, but to family only, not general public.
- Corry provided Brian with a **packet of information (history) on the Yellowstone County Master Gardeners**. He would like to see an Association Board Member become a historian. The information will reside in Amy's office. Brian mentioned he would also like to see pictures from each garden as well. Tracey King suggested using Shutterfly as an option for an album. The albums could be sold.
- There is **one opening on the Association Board**. Steve Restad is a possible candidate.
- **'Master Gardeners On The Town'** was put on hold due to COVID-19.
- **BBQ** is contingent on COVID-19 Phase 3.
- **Seed packets** are still available in Amy's office. May ask for donations for the seeds.
- Brian is working with Mike at Evergreen Ace Hardware regarding a **discount for Master Gardeners**. Mike would still like to see Master Gardeners do a booth at Ace for **educational items possibly** on Wednesday nights. Also, discussed the **possibility of classes on Saturday mornings** much like what has taken place at Gainan's in the past. The classes could be held at the Metra or Evergreen Ace Hardware. The Ace location would be indoors. Again, due to COVID-19 and the distancing requirements, the classes may need to be put on hold until 2021.
- **Next meeting** will be held on September 9th at 5:30 pm at Amy's office.

Useful Online Links



MASTER GARDENER

Yard and Garden MontGuides <https://store.msueextension.org/Departments/MontGuides-by-Category/AG/Yard-and-Garden.aspx>

Submission of Samples http://diagnostics.montana.edu/physical_sample_submission.html

Montana State Master Gardener Facebook <http://www.facebook.com/MTMastergardener>

Yellowstone Master Gardener Newsletter Blog

www.yellowstonemastergardenernewsletter.wordpress.com

Ask An Expert <https://www.msueextension.org/>

Yellowstone MG Newsletter Submissions ymastergardener@gmail.com

YELLOWSTONE COUNTY MASTER GARDENER ASSOCIATION

Facebook <https://www.facebook.com/ycmga>

Website <http://www.ycmgamt.com/>

For information on the Association, Master Gardener projects and volunteer activities, calendar of upcoming events, minutes of past Board meetings, etc.

Amazon purchases: *By using the portal below, and then typing in Yellowstone County Master Gardener Association, 0.5% of purchases made through this portal will be donated to the Association. You can even have an app link to connect you instantly to the sign-in page. Please use this link when making Amazon purchases!* <https://smile.amazon.com/>

