GROUNDED

A Quarterly publication of WSUE
Grant-Adams Master Gardeners

August 2025
Volume 14 Number 3

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

Keeping Yards Happy . . . *By Mark Amara*

Yards in the Columbia Basin are our home oases in the desert. And, yes, we do live in the desert where the average annual rainfall ranges from 6 to 9 inches throughout Grant and Adams Counties. It may seem like an oasis even with irrigation available but water cost and availability can be limiting whether you live in a city or out in the country.

Think about it . . . healthy happy and green yards can depend on knowing your soil type, weather, timing and length of watering, and irrigation system output. Summer is when our yards need more water than other times of the year.

Most of our Grant County soils have sandy loam and silt loam textures and do not need to be watered quite as often as soils that consist entirely of sand. To see what your soil texture is, check the Soil Survey of Grant County, Washington available through the USDA Natural Resources Conservation Service or the public library. Or, go to

- the Web soil survey at http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm,
- the Soil Web at http://casoilresource.lawr.ucdavis.edu/soilweb-apps/
- or contact the Grant-Adams Master Gardeners at ga.mgvolunteers@wsu.edu to request help to determine what the soils are on your property.

Keeping green lawns and green trees and shrubs depends on a number of factors. Tree and shrub location in the landscape is actually relatively important. For lawns, knowing just a little bit about the turfgrass type, rooting depth, structure and texture of the soil, slope, exposure and weather tracking can be helpful to determine how much and how often to water. Identifying trees and shrubs in the yard, their rooting depths, and age helps in managing their water needs. Consider these tips:

- For lawns, consider watering on alternate days or every third day unless it is hot for sustained periods. This is better for the lawn than watering every day for short periods. Watering every day can create unhealthy lawn conditions and reduce drought tolerant effectiveness. Light sprinkling encourages root development near the surface, which means lawns have to be watered more often. These conditions also favor the development of more weeds and diseases. A shallow root system is sometimes caused by compacted soil, thick thatch, or past watering practices. The ideal is to completely fill the soil in the lawn to the bottom of the root zone, which is typically about 12 inches deep.

INSIDE THIS ISSUE

- Watering less often for longer periods still keeps lawns green, conditions the roots, and can help keep fertilizer and pesticides from leaching out of the root zone and into water bodies or the aquifer. This method encourages deeper root growth, maximizes the lawn quality and watering efficiency.

- For trees and shrubs, water longer than for lawns since their roots are usually considerably deeper. And, since water takes longer to reach the roots, water for a longer period and more often than for lawns. Tree roots, especially on mature (tall trees), are much deeper than lawn roots so watering deeper and less frequently helps keep them as healthy as possible. Once a week watering should be adequate.

- If there is a choice, early morning (4-8 am) is the best time to water yards because wind and evaporation losses are typically low and application efficiency is the greatest. Midday watering is usually not very efficient because evaporation rates are often highest in the middle of the day. Early evening or night watering should be avoided because it leaves lawns wetter going into the night and creates a greater potential for diseases.
- Dividing the yard into areas that use a lot of water vs. less water can be effective especially where there are trees and shrubs present.
- Utilizing a designed irrigation system with separate circuits for lawns, trees, and planting beds may work better in watering according to plant needs. This is because the lawn has relative shallow roots while trees and shrubs have much deeper roots.
- To reduce water usage, reduce the amount of lawn by planting more perennial ground covers, native and drought tolerant plants that are adapted to the Columbia Basin. Since we live in a desert, consider replacing water-loving trees like maples, willows, cottonwoods, and birches with more drought tolerant and native species. Turf grasses generally require more frequent watering than established native or drought tolerant trees, shrubs, or groundcovers.
- Following good soil management practices like regularly aerating, dethatching, soil testing and applying fertilizer at recommended intervals, and mowing can help improve a lawn's drought tolerance. Follow pesticide and fertilizer labels. Mulching around trees and shrubs helps with moisture conservation and weed control.
- Adjust sprinklers to minimize runoff.
- Try not to water lawn and landscape trees at the same time. Trees and shrubs require different methods and length of watering than lawns.

References

Brun, Charles A. Brun. Drought Tolerant Landscaping for Washington State. College of Agricultural, Human, and Natural Resource Sciences. Washington State University. EM087E. June 2015.
https://pubs.extension.wsu.edu/product/drought-tolerant-landscaping-for-washington-state-home-garden-series/
FS362E

Guilland, Barbara. Becoming Waterwise: Good Lawn, but Less Lawn. Washington State University Master Gardener Program. Grant-Adams Counties. 2015.

Editor's Note: The following article first appeared in the August 2021 issue of Grounded. It is as appropriate now as it was then and the recommendations are quite timely.

Leave Lawns Longer in the Heat . . . *By Mark Amara*

Now that summer is in full swing and the days (and nights) are on the hot side, consider the following reminders to keep the lawn as healthy as possible.

We are in that part of the year at least now through September when lawns grow at a fast clip. Mowing has a significant impact on the life and quality of the turf. How high or low the lawn is cut usually

varies with different turfgrass species. So, knowing what is there can help determine cutting height. Many lawns are made up of a combination of Kentucky bluegrass, fine fescues or turf-type perennial ryegrass which do best when mowed at a height of 1.5 to 2.5 inches. Traditional lawn plantings often consist of 75% Kentucky bluegrass and 25% fine fescue or perennial ryegrass so knowing exactly what is there is the ideal. This type of lawn seems to be able to withstand heavy foot traffic and fills in well after being damaged. These grasses also require weekly, if not more frequent irrigation. Knowing whether your soil is sand, sandy loam or silt loam helps determine the optimum frequency of irrigation. Turf-type fescues require less frequent irrigations and may tolerate the heat better than ryegrass or bluegrass.

Weekly mowing works best to maintain good quality grass during the greater part of the year. Mowing less frequently than once per week may tend to produce lower quality turf. Regular mowing at the recommended height takes less time and effort than infrequent mowing and produces a healthier, dense and more vigorously growing turf that potentially is prone to fewer maintenance challenges.

In the heat of the summer, consider cutting the grass a little higher. What this means is that now through August leave the lawn longer each week. If it is cut (too) short, it will become stressed more quickly, which will weaken the grasses. Longer turf helps to shade the soil and keep it relatively cooler and it will need less water to stay green. And, keeping the grass a little taller, especially now, can help reduce weeds because the thicker canopy cover keeps seeds from germinating.

References

Goss, Roy L., Gwen K. Stahnke, and Eric D. Miltner. Saving Water: Lawns and Other Turf. Washington State University Extension. EB0684E. October 2006. https://pubs.extension.wsu.edu/saving-water-lawns-and-other-turf

Lawn Care Basics. Washington State University. Spokane County Extension. C067. C067-Lawn-Care-Basics-16.pdf (wsu.edu)

Identifying & Managing Heat Stress in Vegetable Plants . . . *By Mark Amara*

Identifying Heat Stress in Plants

Vegetables, lawns, and landscape plants survive and do best in temperatures between 56-86ºF. Our long growing season allows us to grow a wide range of plants especially if plants are provided with adequate soil, water and fertilizer nutrients for their needs. Here in the Columbia Basin, growing conditions are among the best in the nation. However, we are in the heat of the summer when daytime temperatures often exceed 90 degrees plus! Plants do not do as well in high heat and can show signs of stress.
We are in that part of the year when extreme air and soil temperatures combined with low humidity, drought and wind cause plants to slow down their activity, resulting in slow growth. Recognizing these changes and knowing what to do to minimize stressors can go a long way in helping to maintain and enhance plant growth.

Signs of plant stress are common but for review may include the following conditions:

- **Dry leaf edges** can cause the outer edges of leaves to dry up although may allow the remainder of the leaf to survive. This is a good indicator of insufficient water. It is common on plants like pumpkins or squash but also occurs on other plants.

- **Wilting** happens when there is a lack of water pressure in a plant. Plants often wilt in the heat of the day but can recover in the evening or early morning as temperatures moderate. The longer the wilt, the greater the potential for permanent damage. These conditions are **most common in** non-woody annuals and perennials.

Wilted cucumber leaves. Photo credit: Mark Amara

- **Leaf rolling and cupping** can occur in corn and tomatoes. Leaves roll and cup, allowing the leaf surfaces to close up, thereby helping to conserve moisture.
- **Blossom and fruit drop** happens with high temperatures and are ways plants respond to sustained heat. These kinds of plant responses are obvious in peppers, cucumbers and squash.
- **Bolting** occurs when it gets hot too quickly. Cool season crops like cilantro, cauliflower, lettuce and spinach should be harvested before the heat of the summer.
- **Sunscald** or sunburn on fruits is caused by exposure to the hot sun during high temperatures. It varies depending on the type of fruits it is on and can consist of watery areas, discolorations, blisters, dried out areas or sunken and hardened areas.
- **Blossom end rot** commonly occurs on tomatoes and is associated with a calcium deficiency and can get worse when influenced by sunscald. Consistent even watering helps minimize blossom end rot.

Sunscald on peppers. Photo credit: Mark Amara

Blossom end rot on tomatoes. Photo **credit: Barbara Guilland**

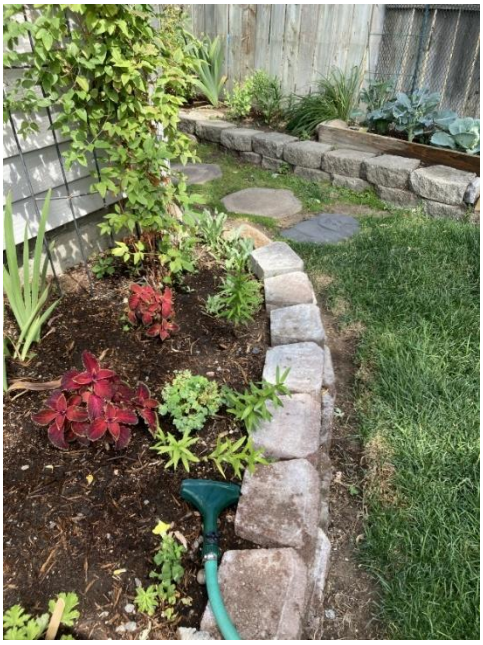
Strategies to reduce heat stress in plants

- **Watering** in the early part of the day is recommended. Otherwise, plants may be subjected to high evaporation, wind or high temperatures, or are more susceptible to diseases, especially if watering is done late in the day. Deeper watering is preferred over shallow watering. If wilting is present, it is best to water immediately to relieve the plant stress. Knowing rooting depths can help determine watering regimens. New plants or shallow rooted plants may dry more quickly than older more mature ones so plan accordingly. Hanging pots or plants in containers tends to dry out quickly and they may need to be watered twice a day. Test moisture using a screwdriver – if it goes in easily, the soil is moist. If it is hard, watering is definitely needed.

Marigolds, sweet potatoes, and zucchini mulched with straw. These plants are in Master Gardener Mary Love's garden in Moses Lake. Mary lightly mulches between plants with straw. Mulching pathways heavily keep boots clean. Photo credit: Mary Love.

Basil and beans (foreground) are mulched with untreated grass clippings while tomatoes are protected with fabric (background). Photo credit: Mark Amara

- **Mulch** helps conserve moisture, keeps plants cooler, can help control weeds and add organic matter as it decomposes. Types of mulch to consider are bark, wood chips, untreated grass clippings, straw, or compost. Applying 2-3 inches or more is ideal. Fabric is another alternative for shade and weed control.



Wood chips and bark are mulching options. Photo credits: Mary Love and Barbara Guilland

Providing shade for plants during the heat of the day can help prevent scorching. Different types of shade allows some exposure to sunlight. Consider moving containerized plants to shade for a part of the day.

Shade cloth and a shade frame cover tomatoes and perennials inside. Photo credit: Barbara Guilland

Additional tips: During high temperatures, do not plant or transplant, fertilize, or apply chemicals (always follow label instructions). Pruning is not recommended except to take cut off dead foliage or flowers, branches, or damaged leaves. Do not get discouraged by some plant damage.

References

Pokorny, Kym and Heather Stoven. How to care for heat-damaged plants. Oregon State University. July 2021. https://extension.oregonstate.edu/news/how-care-heat-damaged-plants

Sanchez, Nicole. Heat Wave in the Garden: How to Identify and Prevent Heat Stress in Plants. Oregon State University. June 2021. https://extension.oregonstate.edu/gardening/flowers-shrubs-trees/heat-wave-garden-how-identify-prevent-heat-stress-plants

Honey Bee Swarm . . . *By Joyce Stauffenberg, Grant-Adams Master Gardener Trainee*

It was 6:15 pm on June 18, 2025, when the buzz is what I first noticed. Sitting on my patio under an umbrella I moved to look up and saw a large swarm of bees flying overhead. They were headed towards my neighbor's yard to the left of us, and I assumed they were approaching their selected new home. Scout bees typically lead the hive to a new location. The sun was going down so they were probably looking for overnight accommodations.

Buzzing honey bees

I ran out to check on my two hives to see if the swarm may have originated from my hives. When a hive swarms, the queen and half the bees leave with her and the rest of the bees stay with new queen eggs left behind So, there is no way to tell which hive the swarm came from, or if it even came from one of mine without opening the hives up. I did not know any of this at the time, not until I attended a beekeeping class 11 days later. Talk about poor timing!

As I circled back to our patio, the swarm had made a u-turn and started clinging to a tree in my yard. I remembered I had a couple of empty hive boxes with about 13 frames available to capture the swarm though I had no top or bottom board for the hive. I quickly took the boxes over to the tree where the bees were hanging and made a mad dash to North 40 Outfitters in Moses Lake, a store that sells bee supplies. I was able to buy a bottom board, but no top and they had no additional hives.

I hurried back to the house. It was near 7 pm and the light was fading. My husband had gotten my bee smoker out but since they were not protecting a hive, smoke was unnecessary and if it had been used it would have made them scatter.

I grabbed a garden cart on which to place the new hive as I needed to move the new colony and hive back to the bee yard. If I had not done this, the bees were going to get wet when my automated sprinklers came on in the morning. We found a piece of wood to use as a top board for the hive, even though the top is not as important as the bottom board. The bottom board is built so the bees have an entrance into the hive.

The swarm

My husband and I got ready to grab the swarm and put them into their new home. I put on my bee jacket and gloves to work with them and grabbed some clippers. The branch the bees were clinging to was pulled down to me using a rake but then the whole large branch broke though it still remained attached to the tree. This made it difficult to cut the branch where the swarm was located and not drop the whole large branch as well as the swarm onto the ground. I successfully cut

the portion of the branch the bees were clinging to and transferred them (branch and bees) to the hive box.

I covered them with the lid and left them for the night. Early the next morning I moved the hive over to my bee yard. I added another empty box on top of the hive box to give me room to feed the bees with some sugar water. This food helps the bees to start making wax so they can fill out the frames and create conditions conducive for the queen to start laying eggs.

Many bees were still clinging to the branch, so I left it in the hive. A couple of days later I was able to go into the hive to retrieve the branch. I ordered them a new hive and recently moved them over to it.

Bees are at home in their new hive boxes. All photographs by Joyce Stauffenberg

References

Debnam, Scott and Tamila Morgan. Beginning Beekeeping Camp. University of Montana, June 28-29, 2025

Jones, Richard A and Sharon Sweeney-Lynch. The Beekeepers Bible, Bees, Honey, Recipes and Other Home Uses. 2010.

Sanford, Malcolm T and Richard E Bonney. Storey's Guide to Keeping Honey Bees, 2nd Edition, 2018

A Method for Determining How Often to Water . . . *By Mark Amara*

Knowing when, how often, and how much to water during the summer to keep lawns green can seem like more art than science. The bottom line of saving water and money and having a healthy green lawn are actually doable with a little planning even in the heat of the summer.

For anyone who wants to know a little more about watering, consider trying this method to figure out how often to water:

- Start by measuring how much water is put on the lawn or other landscaping in an hour.
- Set straight-sided tin cans like (a few) soup, coffee or tuna cans or rain gauges at varying distances on the sprinklers' path.
- After running the sprinklers for 15 minutes, measure the depth of water collected in inches.
- Calculate the average, total these amounts and divide by the number of cans used. As a check, repeat for each station. When you finish, you should know the average amount of water delivered in 15 minutes. The average depth of water divided by the run time is the application rate.
- Multiply this average by 4 to give you the amount of water that is applied in 1 hour. Now by knowing how much water is applied within a set amount of time, you can figure out how to efficiently replace water being lost from the soil.

To determine how often to water, assume a lawn is watered well enough if soil is moist to a depth of 8 to 12 inches. However, this means that initially you will have to check the moisture of the soil and if possible, see if you can get/find information on the evaporation rate each day. When the accumulative amount of pan evaporation reaches one inch, it's time to apply ¾ to 1 inch of irrigation water to replace the water lost from the yard. You'll know how long to run your system based on the little test and math exercises you did earlier. However, since the amount of stored water in the soil depends on the depth, structure and soil texture, frequency of watering will depend on how sandy or clayey it is. A sandy soil and/or one with a lot of rock in the soil profile (i.e., gravelly soils) won't store as much or as long as a clayey soil but since all our soils in Grant County consist of sand, sandy loam or silt loam, that won't be an issue.

It is easy to see how deep water penetrates by letting the soil dry out until you see visible water stress. After watering for a full irrigation time, test the depth of water penetration using a shovel or fork. If the water does not wet the soil to the desired depth, increase the run time. If it is wet through and below the rooting zone, cut back on the run time and save water! As described earlier, watering every day is not good for the lawn and wastes water. It is better to water longer and deeper at less frequent intervals.

For gardening questions contact the WSU Extension Grant-Adams Master Gardeners at the WSU Grant-Adams Extension office at 754-2011 ext 4301. Our online reference services are available at http://ext100.wsu.edu/grant-adams/gardening/. From there, go to ga.mgvolunteers@wsu.edu to contact one of the many Master Gardeners on call 24/7 year-round to answer gardening questions.

References

Neibling, Howard, Michael Colt, Susan Bell, and JoAnn Robbins. Watering Home Lawns and Landscapes. University of Idaho College of Agricultural and Life Sciences. CIS 1098. 2003.

Peters, Troy. Watering Lawns in Washington to save water, save money and have a healthy green lawn. Irrigated Agriculture Research and Extension Center. Washington State University. FS362E. September 2021.

Washington State Magazine Staff. Landscaping for drought and hot weather. Washington State Magazine. Washington State University. Summer 2024. https://magazine.wsu.edu/web-extra/landscaping-for-drought-and-hot-weather/

Improvements at the MG Demo Garden in Moses Lake . . . *By Mark Amara*

The MG drought tolerant/native plant garden at the ML public library continues to thrive even with numerous challenges thrust upon it. Over 100 plant plugs were added to the native plant side of the garden last fall and labeled with carefully placed marker flagging.

Unfortunately, all the markers were removed by vandals later in the fall and some of the native plants did not survive the winter. Foresight reigned and the Master Gardeners made maps/diagrams of the locations of plants put in the ground. Those that did survive the winter are a hardy bunch and are looking really good. The Master Gardeners have found that direct seeding plant plugs whenever they are obtained does not produce as good a result as when they are propagated in a greenhouse or outside until they are larger to ensure a greater chance of survival. Larger plants seem to do better than smaller ones.
Flagging has been replaced throughout the garden with strategically placed metal stakes with new labels.

After researching label options, it was determined that inexpensive labels are better than expensive labels since vandalism is a consideration. Even so, professional-looking labels were made by printing them and adhering them on metal stakes and then sprayed with UV protectant to prevent fading, thanks to the support of MG Bobbie Bodenman. Her efforts have paid off, and this method might be an option to use to label plants at other MG demonstration gardens or yards.

Plant label making is a process to purchase stakes, printing labels, securing them to the stakes, and spraying them with a protective seal.

A core group of dedicated Master Gardeners have kept the garden looking fantastic this summer. That group has included Joyce Stauffenberg, Mary Love, Bobbie Bodenman and Mark Amara. It takes quite a lot of time to maintain the garden. Activities have ranged from extensive weeding (a seemingly never-ending challenge to remove them before they go to seed), deadheading, pruning, removing dead plants, cleaning up garbage, raking gravel or bark, removing non-native plants or invasive, and hand watering sensitive or young plants that need supplemental irrigation to help with establishment.

Bobbie Bodenman, Mary Love, and Joyce Stauffenberg enjoy a snack after completing a work session at the ML Demo Garden. Photo provided by Bobbie Bodenman

Though the drought-tolerant plant side of the garden is programmed to be irrigated a couple of times per week during the heat of the summer, a break in the main line caused some unintended water losses necessitating additional hand watering. The City of Moses Lake, who provides water, hardware repairs, and spraying of persistent weed spraying, has been contacted and is taking care of business.

Master Gardener Retires

Master Gardener Marta Tredway. Photo Credit: D. Escure

The WSU Extension Grant-Adams Master Gardeners extend a fond farewell to Marta Tredway, one of our long-serving Master Gardeners. Marta joined the MG Program in 2004 and since then has provided countless volunteer hours in support of the program's community outreach and education, always happy to answer gardening questions.

Her many activities over the years have included organizing plant sale raffles, growing hundreds of plants in her yard each year for the MG annual plant sales, answering in-person plant clinic questions, setting up a garden plot at George Elementary school and educating the school children on how to grow plants there.

In recent years, Marta volunteered many hours at the MG Quincy greenhouse, planting, watering, and making labels for the annual plant sales. She was honored as Master Gardener of the Year in 2007 and has served several terms as Vice President of the Master Gardener Foundation.

Training to Become a Master Gardener

Training community members as certified Master Gardeners is one of WSU's most important contributions to the community and environmental health. Certified Master Gardeners are dedicated and committed to becoming volunteer educators for WSU Extension in Grant and Adams Counties. Primary responsibilities include teaching and serving as resource persons on horticulture and gardening topics, staffing exhibits or the annual gardening symposium, holding plant clinics, and working in demonstration gardens.

The next scheduled training for anyone interested in becoming a WSU Extension Grant-Adams Master Gardener volunteer will begin in September 2026. Those interested in learning more about the MG program may visit the WSU Master Gardener Grant-Adams website:

https://extension.wsu.edu/grant/gardening/master_gardeners/

Requirements for Master Gardener candidates:

- Have a strong volunteer ethic
- Commit to become a volunteer educator for WSU Extension
- Pass federal background screening
- Complete on-line WSU education classes that begin in October 2025 and end in February 2026
- Abide by WSU Master Gardener regulations
- Be willing to take additional required training annually and participate in volunteer activities.

Washington Green School

Over the past 50+ years, Washington State University Extension has provided guidance and instruction to the gardening public along with training to those who have been certified as Master Gardeners. Starting in October 2025, WSU has developed new options for anyone who wants to learn gardening principles through the Master Gardener program or for anyone who wants to take gardening classes.

Training may apply to those who want to learn more about gardening in Washington but may not want to serve as Master Gardener volunteers. Some gardening professionals may be only seeking a gardening endorsement for their resumes but might not want to be obligated to volunteer annually, which is a requirement for all Master Gardeners. The new program is called Washington Green School and it offers lots of options to explore. The attached website link explains the program, options, schedules, and fees and is quite comprehensive: It is https://greenschool.extension.wsu.edu.

Sign-ups for these classes will take place August 15 to September 30, 2025 (of every year). If a student is interested in training for the Grant-Adams Master Gardener program, being accepted into the program and finishing the online course work is an integral part of that training. However, since classroom training/labs are only offered every other year in Grant-Adams Counties, those who finish the Green School training will wait to participate in the next round of formal Master Gardener training that will begin in September 2026. Go to the Grant-Adams Master Gardener website for details, to download a leaflet and application.

https://extension.wsu.edu/grant/gardening/master_gardeners/

Mark Your Calendar

- Master Gardeners Plant Clinic at the Grant County Fair, Agricultural Building, Grant County Fairgrounds, Tuesday-Saturday, August 12-16, 2025, 12-4 pm.
- Moses Lake Farmers Market Plant Clinics, McCosh Park, Third Saturday, May – October, 8 – 1 pm
- Quincy Farmers Market Plant Clinic, 1st and 3rd Saturdays, Lauzier Park. 9-1 pm
- Master Gardeners Plant Clinic at the Othello Fair,. September 10-13, 2025. Othello Fairgrounds. 1-6 pm
- WSU Master Gardener Advanced Education Conference, September 26-27, 2025 Spokane County Extension Bldg, Zoom and In Person.
- Ask Grant-Adams Master Gardeners questions 24/7 on line. Go to ga.mgvolunteers@wsu.edu