The word landscape is a term that may bring to mind a picture of a perfectly tailored yard with flowers blooming any time it is viewed and plants correctly proportioned to whatever is located nearby or it might conjure and view of natural vistas showing forests, prairies or countryside.

When a landscape is created for man to enjoy, it often includes objects that are not living. Benches, walls, patios, fountains, gazebos, fences, walkways, etc. Each of these represents what is called a hardscape.

Hardscapes are appropriately named, not just because the materials used are often hard and unforgiving but also because they involve hard, physical work to add to the landscape. There are many companies devoted solely to installing hardscapes within the landscape, who never deal with plants at all and likely don’t even understand how plants grow.

Hardscapes, while often made out of cold material, can truly contribute to the environment and comfort of an overall landscape. For example, walkways come in many shapes, colors and textures. You can have a simple concrete sidewalk, gray and smooth, that clearly marks the line to the front door or you can contribute variety to the landscape by adding a sidewalk that meanders, has texture and accents the color or style of the house. The front entries pictured have newly designed landscapes but the lower picture has a hardscape that contributes just a little more at a similar cost.

Hardscape styles can be used strictly to increase the value of a property, adding simple walks or patios to increase living space. Value can still be added when a hardscape is a real reflection of the person who incorporates them into the landscape.
inexpensive materials such as gravel in place of concrete. These do-it-yourself projects can be edged with different options to look more formal and still be less expensive. Concrete pavers are another money saving option for a do-it-yourself walkway. If the project is large and involves a change in topography, it may be worth the added expense to have a professional install it to guarantee it will stand up over time and not crumble. Projects like this may require more engineering than one realizes and will cost less over time if it is installed correctly the first time.

Any time you hire someone to complete a hardscape do your homework. Check out previous projects and prior clients, establish a timeline for completion in writing and make sure to get other competitive bids before committing to one company. A hardscape done properly should last as long as the material used so make certain it is done so that you are happy with it for as long as you will own that property.

Here are some simple guidelines to consider for hardscapes. Use quality materials designed for the outdoors. Do not use lumber unless it is treated and do not use rocks that will crumble in the intended project. If you are putting in a walkway make sure there is a barrier thick enough to eliminate weeds. If you install a water feature then use the proper barrier to hold the water and not one that will crack in sunlight or be too thin to withstand freeze. Think about safety. Concrete walks should have some type of texture so they do not become slick in rain. Do not use sharp rocks on walls or pavers that have protrusions on walkways where tripping may cause injury. Use materials that will last.
Ornamentals
- Prevent sunscald by wrapping trunks with light colored tree wrap or painting the south/southwest facing sides of the trunk with white latex outdoor paint.
- Take a walk through your garden as the fall season winds down. Take time to reflect on the successes and failures of your gardens this year. Make notes in your gardening notebook for new things to try and things to fix next spring.
- After several killing frosts have occurred this fall, cut back dormant perennials to about 3 inches above ground.
- Check moisture level in soil around evergreens before winter weather begins. Dry soils can lead to dieback or death of shrubs.
- Compost fallen leaves; they make great organic matter.

Vegetables
- Fall is a great time for soil testing. Have garden and landscape soils tested every three to five years.
- Fall tilling, except in erosion-prone areas, helps improve soil structure and usually leads to soils warming up and drying faster in the spring, thus allowing crops to be planted earlier. However, avoid over-tilling.
- Rhubarb plants that are 4 years old can be divided and transplanted. A site prepared by deep digging and incorporating compost will pay off with a good yield in upcoming years.
- If you use manure, apply it now and till under. Manure can be a source of weed seed. Composting before application can reduce the number of viable seeds.
- To prevent insects or diseases from over-wintering in the garden, remove and compost all plant debris. Remove anything insects might hide under.

Fruits
- Break crust on the surface of any mulch you have around fruits, shrubs, and perennials to improve the absorption of water from fall rains.
- Fallen, spoiled or mummified fruit should be cleaned up from the garden and destroyed by burying.
- Mulch strawberries for winter with straw. This should be done after several nights near 20 degrees, but before the temperatures drop into the teens. Apply straw loosely, but thick enough to hide plants from view.

Indoor Plants
- Move houseplants closer to windows or to sunnier exposures, such as west and south facing windows, if plants are dropping many leaves.
- Continue dark treatment for poinsettias by keeping them in complete darkness from 5 p.m. to 8 a.m. until early December or until the color on the bracts start to show.

Great Trees for Autumn Color

Yellows
- Tulip Poplar
- Hickory
- Ginkgo
- Sawtooth Oak
- Redbud
- Black Oak
- Ironwood

Reds
- Black Gum
- Red Maple
- Dogwood
- Sumac
- Sassafras
- Scarlet Oak
- Pin Oak
- Japanese Maple

Orange
- Sugar Maple
- Bald Cypress

Multicolor
- Sweet Gum
- White Ash
- Serviceberry
It had to have happened late last summer when I refinished the back deck. After hours in the sun, cutting boards, hammering and staining, it was time for a break and a snack. As it is habit with us McMahon’s, more specifically the kids…we generally enjoy seeing how far one can get a watermelon seed to fly through the air after a juicy bite into the succulent fruit. This spring my wife and I noticed a strange sight erupting from under our deck. If you’ll take note of the center picture above, there it is, our self planted watermelon. Amazingly one of those airborne seeds from last year has provided us enjoyment and a sweet treat this summer. The concrete blocks are four feet by four feet. This picture is about a month old and our watermelon currently sports 3 succulent pods of genetic code waiting to be strew about; perhaps by children one day and covers over sixteen feet of concrete length wise.

The root from under the stairs is anchored in a one inch space of soil between the concrete blocks. The resiliency of this plant is amazing. We have not fertilized it and I’m sure the plant enjoys the thermal mass that keeps it warm well into the evening hours. I find it funny how I sometimes toil in life and the garden.

The bottom left picture of our garden is indicative of toil and work. The one on the bottom right is my garden plan for our property I drafted up. The lesson is this…Toil as you will, try as you may, sometimes creation knows best.

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**Time to Turn in Master Gardener Hours!**

*By Donna Aufdenberg, MU Extension Horticulture Specialist*

It is time to turn in your Master Gardener Volunteer Hours! If you have already completed your volunteer hours for the year, please get them reported online or send to your local Master Gardener Coordinator (addresses are located on the back of this newsletter).

- If you need a new copy of your hour record sheet, you can find it at [http://mg.missouri.edu/mgforms.htm](http://mg.missouri.edu/mgforms.htm) or contact your local coordinator and they will send you one.
- **We are really encouraging the online reporting system this year.** Check out: [http://report.missourimastergardener.com/](http://report.missourimastergardener.com/)
- Every year we update the Master Gardener Directory. If you have not turned in Master Gardener Hours for 3 years, you will be moved to the inactive list.
- If you have not turned in hours in previous years and want to be active again, contact us!
- If any of your information has changed (address, phone, or email), please let us know.

These hours are important to us! They help ensure the continuance of the program. **If you have problems reporting hours, let one of us know…we are here to help!**
What weeds do you have growing in your garden? Can you identify it? Do you know anything about it?

The first important key to controlling weeds organically is “Know Your Weeds!” Being able to identify what problematic weeds are occurring in your gardens will help you start to understand their lifecycles and know when and how to best control them. There are many books, University Extension guides on the internet and apps that can help identify and provide information about weeds.

Using aggressive crops that can outcompete weed growth is a method being used. Some refer to these as smother crops. These grow so competitively and thick, there is no chance for weeds to germinate and compete. Examples include buckwheat, cowpeas, and radishes.

Some gardeners are choosing easy to cultivate plants in weedier areas. Large cabbage or broccoli heads are easier to weed around than broadcasted lettuce seedlings.

“Avoid making weed problems worse.” The simple act of hoeing or tilling weeds with rhizomes like Bermuda grass, quackgrass, or johnsongrass can lead to every broken segment becoming a new plant. Another plant to avoid cultivating is purslane—it may not have rhizomes but chopped up pieces can lead to new plants.

Seed heads are another way to easily make problems worse. Get rid of those seed heads! Get rid of those weeds before they have a chance to develop a seed head! One lambsquarter left in the garden produces about 72,000 seeds. One purslane plant left to reseed in the garden can produce 170,000 seeds. A pigweed can produce up to 1.5 million seeds on a SINGLE PLANT! Can you see how vital it is to control that one weed which was left in the garden? One left will hurt for years!

An interesting concept for weed control is to reduce seeds in the soil by practicing a fallow period where repeated tilling triggers seeds to germinate. A tilled fallow period can be between 2 weeks and several months. The key is to destroy weeds each time they germinate before they ever have time to mature. This repetition over time exhausts the seed bank that is laying in the garden soil. The disadvantage is it takes a planting area out of production during the growing season. You would need to find an alternate garden site or do without for one (or part) season.

One key preventative measure that many of us do not think about is cleaning tools and equipment. Weed seeds can hitch a ride on many things including our clothes, gardening tools, equipment and even our pets. Regular cleaning, especially if you are moving from one garden site to another, can help prevent the transfer of weeds to new sites. Don’t be afraid to wash things down, just be prepared to oil them.

It is important to know your source(s) for any inputs that you are considering putting into the garden—compost, manure, seeds or straw. Find out what are the possible contaminants. Many times we unknowingly add weed seeds and we don’t find out until it is too late. I commonly hear “We strawed (or manured) our garden. Ever since, we have had a weed battle on our hands.” Unknowingly bringing in any new weed varieties into the garden can lead to a big headache. Unfortunately, most of us can attest to that!
Aster yellows is a plant disease that affects plant species in the aster family (Asteraceae). These plants include asters, marigolds, coreopsis, cosmos, daisy, marigold, purple coneflower, carrots, onions and potatoes. Weeds such as dandelions, plantain and thistle are also susceptible to the disease. Aster yellows occurs throughout North America.

The cause of aster yellows is a microscopic organism called a Phytoplasma that lives in the food-conducting tissue of plants. It is passed from plant to plant mainly through leafhoppers. Symptoms vary from plant to plant. At lower temperatures, symptoms may be absent but as temperatures rise, symptoms become more severe and appear quicker. Symptoms of infected plants are typically stunting and twisting, foliage that is yellow or red and flowers that fail to develop color, remain green and distorted.

Many people notice aster yellows in purple coneflower where secondary flower heads (often in a cluster) may emerge from the primary flower head. In marigolds, flowers are often leafy and a muddy green-orange color. Infected carrots have red leaves and form taproots with tufts of small, white “hairy” roots.

Aster yellows is rarely lethal, so infected perennials can serve as a source of disease for many years. There is no known cure for aster yellows. Plants suspected of having aster yellows should be removed immediately to keep leafhoppers from spreading the disease.

In both pictures, flower distortions caused by Aster Yellows. Pictures courtesy of Missouri Botanical Garden.

Hort Definitions: Sustainable Agriculture

By Katie Kammler, MU Extension Horticulture Specialist

According to the law made in the 1990 “Farm Act,” the term sustainable agriculture means an integrated system of plant and animal production practices having a site-specific application over the long term: satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole.

A simplified definition would be the production of food, fiber, or other plant or animal products using farming techniques that protect the environment, public health, human communities, and animal welfare. Some things to consider when using the term sustainable agriculture…

- Is it economically viable? If it is not profitable, it is not sustainable.
- Is it socially supportive? The quality of life of farmers, farm families and farm communities is important.
- Is it ecologically sound? We must preserve the resource base that sustains us all and for future generations.

Other terms that you find within sustainable agriculture include Integrated Pest Management, Soil Conservation, Water Quality, Cover Crops, Diversity, Nutrient Management, and Agroforestry.

For more information, check out www.sare.org or http://nifa.usda.gov/program/sustainable-agriculture-program
Upcoming Events

The following Master Gardener meetings are held each month. All are welcome to attend. Please contact the local extension office to confirm location if you did not attend the previous meeting.

Parkland MGs - 1st Monday at 6:30pm, Horticulture Classroom at Mineral Area College, Farmington, MO
Poplar Bluff MGs - 1st Tuesday at 6:00pm at Holy Cross Episcopal Church in Poplar Bluff, MO (Do not meet in January)
Ste. Genevieve MGs - 2nd Thursday, at 6:30pm, Ste. Genevieve County Extension Center
Cape Girardeau MGs - 3rd Thursday at 7:00pm, Cape County Extension Center
Perry MGs - 4th Monday at 6:30pm, Perry County Extension Center
Jackson Beekeepers - 4th Tuesday @ 7:00pm, First Presbyterian Church, 206 E Washington, Jackson, MO
SEMO Honey Producers - 2nd Thursday @ 6:30pm, Church of Christ, Poplar Bluff, MO (Do not meet in December or January)
Parkland Beekeepers - 3rd Tuesday @7:00pm, North College Center, Mineral Area College, Park Hills, MO
South Central MO Beekeepers - 1st Friday, Howell Electric Coop, West Plains, MO

Thursdays, August 20 to November 19 - Master Gardener Core Training; Webster University, 1103 Kingshighway in Rolla, MO 6-9pm. Call 573-458-6260 to register.

Mondays, August 24 to November 11 - Master Gardener Core Training; North College Center at Mineral Area College, Park Hills, MO 6-9pm. Call 573-883-3548 to register.

Thursday, November 12 Growing for Market. Growing tips for vegetable and fruit production as well as season extension techniques. Learn about a web based tool for identifying alternative agriculture opportunities. 6:00 - 9:00 pm at the Iron County Health Department, 606 W. Russel St. in Ironton, MO. Cost $10. To register call Iron County Extension Center 573-546-7515

Friday, February 19, 2016 - Fruit Tree Pruning Workshop. Rural Route 1, Box 1409B, Thayer, MO. Call the extension center at 417-778-7490 to register. Cost $10.00

If you have a horticultural related event for the calendar call 573-686-8064 or email it to Denklers@missouri.edu.

Hot Topic: Scurf on Sweet Potatoes

By Katie Kammler, MU Extension Horticulture Specialist

I’ve had quite a few calls and people coming in with sweet potatoes that have really dark skin. This is damage from a disease called scurf (*Monilochaetes infuscans*). It is primarily cosmetic where dark brown to black spots develop on the roots and then enlarge and coalesce to cover the entire potato. The lesions continue to enlarge in storage. The majority of infections come from infected propagating material and it will also survive in the soil for one to two years. Disease severity is greater in fine-textured clay soils and when soil organic matter is high. Using animal manures may also increase the incidence of scurf. So if you have this problem, do not use potatoes with scurf to start slips in the spring and rotate sweet potatoes with other crops in your garden on a 3 to 4 year rotation. Remove all plant debris after harvest.

Interested in beekeeping. Follow the Missouri State Beekeepers Association at scientificbeeckeeping.com or on Facebook to connect with knowledgeable groups.
The Garden Spade is published monthly by University of Missouri Extension staff for individuals and families living in Southeast and East Central Missouri. This newsletter is provided by your local extension council.

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We welcome and encourage Master Gardener groups and individuals to submit items to the newsletter. We encourage the submission of any news such as upcoming volunteer opportunities, community events related to gardening, warm wishes or congratulations to fellow gardeners. We also encourage Master Gardeners sharing experiences and writing articles on timely topics.

All entries into the group news sections must be received by 4:30 on the 15th of each month for the following month’s news.

Email news to: kammlerk@missouri.edu, denklers@missouri.edu, or aufdenbergd@missouri.edu

Disclaimer: No special endorsement of mentioned products is intended, nor is criticism implied of similar products not mentioned.