THE MANY TYPES OF TOMATOES

There are approximately 7,500 tomato varieties grown around the world for various purposes. Tomatoes are native to Central and South America. At first tomatoes were thought to be poisonous, after all they are in the nightshade family. There are many types of tomatoes worldwide. Some of the common types grown in our country include commercial varieties, standard garden hybrids and heirloom. They can be further broken down into groups like slicing, roma, cherry and grape.

Tomatoes are also commonly classified as determinate or indeterminate. Determinate, or bush types, bear a full crop all at once and top off (or stop growing) at a specific height. They are often good choices for container growing. Determinate types are preferred by commercial growers who wish to harvest a whole field at one time, or home gardeners interested in canning. Indeterminate varieties develop into vines that continue growing (never top off) and continue producing until killed by frost. They are preferred by home gardeners and local farmers’ market producers who want ripe fruit throughout the season. The majority of heirloom tomatoes are indeterminate, although some determinate heirlooms exist.

Commercial tomatoes are hybrids grown for their ability to ship well. They can be shipped across the country or exported to other countries and withstand handling and transportation. They have thicker skins that do not bruise as easily as heirloom varieties. They do not have a lot of flavor. If you eat a tomato that is beautiful in its color, size and form, is blemish-free, but has no flavor, chances are it is a commercial variety. Some common ones grown around here include Mountain Spring and Mountain Fresh.

Some of the standard garden hybrids include Celebrity, Early Girl and Better Boy. These have been around for years. They have better flavor than the commercial varieties and withstand diseases better than the heirlooms. Some of the newer hybrid cherry tomatoes I really like are Sun Sugar and Sun Gold.

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COLUMBIA, Mo. – If you have the sniffles or a bad infection, a visit to your doctor can usually put things right. Plants can get sick too and the University of Missouri Plant Diagnostic Clinic is where you can turn for help. “Homeowners can put a lot of time, energy and care into choosing plants for their yard and garden. So if those plants get sick, the clinic is a good place to come to learn what’s going on and to learn how to control or manage the problem,” said clinic director Patti Wallace. Before you can treat, control or manage a disease or pest problem, you need to correctly identify what’s wrong. “People should not just dump chemicals on their plants without first knowing what they are trying to treat,” Wallace said.

Mark LaTorre, an agricultural crop consultant who dropped off samples of ailing corn at the clinic, says using the wrong treatment on a plant is a bad idea. “The chemicals that you can use are typically disease-specific, so you wouldn’t want to use a product that treats a disease if you have a nutritional problem,” LaTorre said. “It can get expensive if you’re buying and using the wrong chemical.”

The process starts when you send a sample of the troubled plant to the clinic. Wallace says it’s best if the sample includes both normal and diseased parts of the plant. Don’t send in dead plants. “A dead plant will attract fungi and bacteria that feed on dead tissue, which can mask the original problem,” she said.

There is a nominal fee for each sample. “For homeowners, it’s $15 for a general diagnosis, which includes looking at the sample with a microscope or doing a humidity-chamber incubation for 24-48 hours,” Wallace said. The $15 fee helps cover the cost of testing materials. Wallace says it is a small investment that can save a homeowner a lot of time and money. Test results are typically available within one to two days. Specialized testing can take longer to get results, Wallace said. There are several ways to submit a sample to the MU Plant Diagnostic Clinic. You can drop off the sample at the clinic between 9 a.m. and 4 p.m. on weekdays, take the sample to your local MU Extension office, or mail the sample to MU Plant Diagnostic Clinic, 28 Mumford Hall, Columbia MO 65211.

For more information, including instructions and forms for submitting samples, go to http://plantclinic.missouri.edu. The Plant Diagnostic Clinic is affiliated with the Division of Plant Sciences at the MU College of Agriculture, Food and Natural Resources, the MU Integrated Pest Management program, and MU Extension’s Master Gardener program.

AILING PLANTS—THE MU PLANT DIAGNOSTIC CLINIC CAN HELP

Author: Debbie Johnson, writer, University of Missouri Extension. Source: Patricia Wallace, 573-882-3019

Heirloom tomatoes are becoming increasingly popular, particularly among home gardeners and organic producers, since they tend to produce more interesting and flavorful crops at the cost of disease resistance and productivity. There are hundreds of varieties of heirloom tomatoes grown around the world. They come in various shapes and colors and each seems to have a wonderful flavor. ‘Black Cherry’ is one of my favorites. I also like ‘Green Zebra’ for its pretty color pattern. ‘Burgess Stuffing’ is one that looks like a bell pepper and can be stuffed with something like tuna or chicken salad. Heirloom tomatoes get disease more frequently than hybrids. Hybrids have been bred to resist or withstand disease better, sacrificing flavor in the process.

Tomatoes are one of the most healthy and beneficial foods in our daily diets. They are low in calories, rich in vitamins A and C, beta-carotene and potassium, as well as a great source of fundamental antioxidants, such as lycopene. The concentration of lycopene in tomatoes increases when sauces are cooked or tomatoes are processed in any way. Recent studies have shown that high intake of lycopene-containing vegetables reduces the incidence of certain types of cancer. Watermelon is another fruit high in lycopene and readily available this time of the year.

I like to grow a mix of heirloom and hybrid tomatoes, and I grow all types—grape, roma, slicing and cherry. Whatever you grow, enjoy them fresh while you can, and preserve some for this winter, because in just a couple of months they will be gone until next summer.
It has been a productive growing season. I can hardly keep up with harvesting all of the cucumbers and squash. Tomatoes have been slow to ripen because of cool temperatures. I still have not canned any tomatoes (salsa, pasta sauce, etc.). Zinnias and other flowers have been beautiful this summer. They like the cooler temperatures we have had. Cooler temperatures, rainfall and heavy dew also mean we have prime conditions for disease. There have been tomato and pepper diseases, and now powdery mildew on cucurbit crops and some ornamental plants. When garden plants such as squash get big, they often crowd each other and there is less air flow through the garden, creating build-up of disease like powdery mildew. By now most people are tired of squash and ready to pull out the plants.

Septoria Leaf Spot and Early Blight appeared on tomatoes, along with Bacterial Spot. If you have brown, scab-like spots on your tomato fruits, you have bacterial spot. It also made its appearance on pepper foliage. Moisture and lack of good air flow, spread it. Even though plants are mulched with straw, they still get disease in a year like this one.

In July I attended the National Association of County Agriculture Agents Conference in Mobile, Alabama. My husband and children went with me. The first day of the conference I attended a session presented by P. Allen Smith, the most well-known gardener in America. I got there early and got a front row seat. It is amazing what he and his crew do at their farm near Little Rock, Arkansas. If you are on Facebook, you can follow P. Allen daily and see what he is growing and raising on his farm. He tries to raise things naturally and be a good steward of the land. That evening we were entertained by Randy Owen of the country music group Alabama.

During the conference I also attended sessions by Bonnie Plants and Bayer Advanced. Bonnie Plants is a supplier of plants for many retail outlets in the United States and have been growing plants since 1918. What you might not know is that they are very generous in their donations. They donate millions of dollars a year to organizations to help start community gardens and teach young people about growing their own food.

Another thing you might find interesting is the work that Bayer Advanced is doing in bee health. Bayer Advanced is a company that makes gardening products, mainly pesticides. They are doing a lot of work to protect bees and have established a bee care program dedicated to improving the understanding and health of pollinators. Bayer continues to develop, fund and support promising research projects specifically targeted at promoting bee health. Some of Bayer’s current research initiatives include Varroa management, small hive beetle and ant control trials and a healthy bees program. I will include more information on bee health in upcoming issues of this newsletter.

While in Alabama, we took a couple of side trips. It was the first time for Justin and Jason to see the Gulf of Mexico. We went to Gulf Shores one afternoon and enjoyed playing in the gulf and on the beach. We went to an alligator farm and saw alligators of all sizes. While there we ate at some really good seafood restaurants. The boys and David also went on the USS Alabama while I was in conference sessions.

In mid-August I went with my friend Teri to pick elderberries on the side of a road in Adair County. That’s was a fun experience. We are hoping to get enough to make some elderberry pie and jam. We’ve both decided we need to plant our own plants so we can have a reliable supply and not have to go driving around the county looking for the berries.

I picked Concord grapes on August 19. Most grape varieties are starting to ripen, but it will still be a few weeks before some are ready for harvest. The six inches of rain we received in Adair County caused grapes to burst and split open. I’ve noticed that it won’t be long before some apple varieties are ready for harvest, and plums are getting close too.

Follow my horticulture happenings on our Adair County Facebook page. I am posting pictures several times a week of crops I am harvesting and of diseases affecting crops now. Just hit “like” on the MU Extension Adair County Facebook page.
GARDENING TIPS FOR SEPTEMBER

ORNAMENTALS
❖ Plant evergreens now.
❖ Take cuttings of annuals to have vigorous plants for over-wintering.
❖ Plant spring bulbs except for tulips as soon as they are available.
   Keep tulips in a cool, dark place and plant in late October.
❖ Divide perennials, especially spring bloomers. Enrich the soil with peat moss or compost before replanting.
❖ Divide peonies now. Replant in a sunny site and avoid planting deep-ly.
❖ Lift gladiolus when their leaves yellow. Cure in an airy place until dry before husking.
❖ Begin forcing poinsettias to bloom at the end of the month. Place plants in a cool, dark room or closet from 5 p.m. until 8 a.m. for about 8 weeks or until top leaves turn red.

VEGETABLES
❖ Sowing seeds of radish, lettuce, spinach, and other greens in a cold frame will prolong fall harvests.
❖ Pinch out the top of Brussel sprout plants to plump out the developing sprouts.
❖ Keep broccoli picked regularly to encourage additional production of side shoots.

FRUIT
❖ Pick pears before they are fully mature. Store in a cool, dark base-ment to ripen.
❖ Discard any spoiled or fallen fruits.
❖ Paw paws ripen in the woods now.
❖ Check along peach tree trunks to just below the soil line for gummy masses caused by borers. Probe holes with thin wire to puncture borers.

TURFGRASS
❖ Begin fall seeding or sodding of cool season grasses. Seedbeds should be raked, de-thatched, core-aerified, fertilized, and seeded. Keep newly planted lawn areas moist, but do not wet.
❖ If soils become dry, established lawns should be watered thoroughly to a depth of 4-6 inches.
❖ Cool season lawns are best fertilized in fall. Make up to 3 applica-tions between now and December. Do not exceed rates recom-mended by fertilizer manufacturer.
❖ It is not uncommon to see puff balls in lawn areas at this time.
❖ Newly seeded lawns should not be cut until they are at least 2-3 inches tall.

MISCELLANEOUS
❖ Fall is a good time to add manure, compost, or leaf mold to garden soils for increasing organic matter content.
❖ Monitor plants for spider mite activity. Reduce their numbers by hos-ing off with a forceful spray of water.
❖ Seasonal loss of inner needles on conifers is normal at this time. It may be especially noticeable on pines.

- Missouri Botanical Garden -

UPCOMING EVENTS

September 2: Salt River Master Gardeners meeting and trip to Claymalnay Winery, 6 pm. For information contact Sue at 573-795-2334.

September 4: Tomato Festival, 4-7 pm, Bradford Extension and Research Farm, Columbia.

September 4-November 13: Master Gardener Training in Mexico. Thursday evenings, 6-9 p.m. at the Audrain 4-H Center south of Mexico on Route D. For information or to register contact Max Glover at the Shelby County Extension Center, 573-633-2640.


September 16- November 25: Master Gardener Training in Palmyra. Tuesday evenings, 6:30 p.m. to 9:30 p.m., Sesquicenten-nial Building, 621 Johnston Ave. For more information or to regis-ter contact Max Glover at the Shelby County Extension Center at 573-633-2640.

December 5-6: Missouri Livestock Symposium, Kirksville.

February 2015: Master Gardener training in Kirksville, Thursdays, 1:30-4:30 p.m. with garden tours.