

OSU Extension - Auglaize County Weekly Horticulture Newsletter – 11-29-19

Using Fresh Cut Christmas Trees



It is the beginning of the Christmas season. Some people are starting to put up their Christmas tree. One way to make putting up a Christmas memorable is to go to a Christmas tree farm and cut your own tree and bring it home. There are many things to consider when purchasing and caring for a real Christmas tree.

Be sure to measure the location in the house where you plan to put the Christmas tree, so you can choose the proper size at the farm. Measure the height and width of your area you are planning to place the tree and take those measurements with you because when you are out in the open the tree will look smaller than it really is. The total height of the tree needs to take into account the height of the tree stand and the height of the angel so you do not get too tall of a tree. The width of the tree is important as well because some lower branches can get fairly long.

When selecting a tree in the field, mark the side of the tree that is most appealing when displaying it in the home. Once the tree is cut it will get “baled”. That means a netting will be put around the tree for easy transport and set up, making it impossible to know the best side unless marked. Before the tree is baled, shake the tree vigorously to remove any dead needles.

Purchasing a quality and sturdy tree stand is very important. There are three things to consider when purchasing a tree stand: 1. Stability (be sure the feet go out far enough to support the tree); 2. Adequate water capacity (should be large enough to hold one quart of water for each inch of stem diameter); and 3. Ease-of-set-up (traditional thumb screws can be difficult, especially if the tree trunk is curved).

A properly cared for, fresh-cut, real Christmas tree should last from just after Thanksgiving to shortly after Christmas. Within six to eight hours after a tree has been cut and the cut surface is exposed to air, the tree will no longer take up water. Therefore when you get the tree home cut off at least ½ inch of the base of the trunk to provide a fresh cut for water to enter the tree. If you can't set up the tree right away when you get it home, be sure to make the fresh cut and place it in a bucket of water that is placed in the shade and away from the wind. When watering the tree use cool water.

When placing the tree in the house, keep it away from direct sources of heat. These sources include warm-air floor vents, operating wood stoves, fireplaces, baseboard heating, hot lights, and other sources. The tree will dry out faster if placed near heat sources. Use lights and ornaments that give off little to no heat to reduce risk of fire.

The tree must be watered daily with one quart of water per inch diameter of the tree trunk. Products added to water have not been proven to extend the longevity of the tree. A seven-foot tree may easily use two quarts of water a day for the first week. After the second week the tree will use less water. If the water runs out you will need to make a new fresh cut to allow the tree to take up water. If you have pets they may want to drink this water so keep that in mind to be sure you have enough water for the tree.

Needles will fall off the tree over time so clean them up often to prevent foot injuries when not wearing shoes or slippers.

Tree disposal is something to be considered with a real tree. If you live in a city find out if they have a tree recycling program. If in the country find out if there is a recycling facility near you that you can take the tree. Other uses for old Christmas trees include weighing them down and sinking them into a pond or lake to provide protection for smaller baitfish. Check the regulations of a lake to make sure you can sink a Christmas tree. A tree could be used to help with stream bank or shore stabilization. Lastly you could leave the tree in the back yard to provide habitat for birds and small animals.

Hope you consider purchasing a real Christmas tree from a local Christmas tree farm. Local places to purchase a Christmas tree include: Solomon Tree Farm near Wapakoneta (419-738-7455), Ever Green Farm near St. Marys (419-394-8202), Brian and Melanie Musselman near Wapakoneta (419-738-5089), Sudhoff's

Tree Farm north of Fort Recovery (419-942-1039), Hoover Trees near West Liberty (937-210-9627), and Rush Creek Christmas Trees near Sidney (937-492-2215).

Local Observations

Good morning! I pray you are well! The rain returned!

It rained two days this past week. Rainfall on Saturday, November 23rd, ranged from 0.04" about 5 miles east of New Hampshire to 0.3" at about 3 miles west of St. Marys, at about 5 miles northwest of St. Marys, at about 1 mile north of St. Marys, and at about 1 mile northeast of Fryburg. Rainfall on Tuesday ranged from 0.15" near Bloody Bridge to 0.5" at about 1 mile northeast of Fryburg. Rainfall for the week ranged from 0.3" at about 5 miles east of New Hampshire to 0.8" at about 1 mile northeast of Fryburg. The average rainfall for the week was 0.54". Temperatures were mostly below normal for the week.

I went to check to see how much fondant was eaten, but I could not as there were all kinds of bees at the top of the hive, so there are at least some bees left in the hive. I sprayed my garden with glyphosate to control the field bindweed and the winter annuals that were in the garden. However this morning, I noticed a new flush of winter annual weeds, so there will be much in the garden by next spring.

VegNet

No news this week

BYGL

No news this week.

Other Articles

"Outbreaks like these are another confirmation that the future of the industry will be indoors"

Source: <https://www.hortidaily.com/article/9168621/outbreaks-like-these-are-another-confirmation-that-the-future-of-the-industry-will-be-indoors/>

The FDA has not yet linked any specific romaine lettuce grower, supplier, distributor, or brand to the E.coli outbreak in Salinas, California. This week the outbreak has spread further with 67 people reported sick in 19 states. Just like last year around Thanksgiving, the advice is not to eat Romaine lettuce. Other than last year, the FDA declared a specific growing region (Salinas) and says indoor grown lettuce is safe. "Outbreaks like these are another confirmation that the future of the industry will be indoors", says Bram Vanthoor with Hortiplan.



Indoor safety

"All of our lettuces and herbs are grown, harvested and packed daily in controlled indoor hydroponic greenhouses in New York, Chicago and Providence, R.I. Hydroponically- and greenhouse-grown romaine, which is voluntarily labeled as "indoor grown," from any region is not related to the current outbreak." It's the message Gotham Greens shared on social media this week. "As always, Revol Greens lettuce is safe to eat", Revol Greens also shares. "Look for our Grown in Minnesota logo and eat safe!"

It might look like a repetition from last year, when greenhouse growers had to deal with an all-including Romaine lettuce recall and had to get the word out there that greenhouse or indoor grown lettuce was safe to consume. This year it's different: they're supported by the FDA who announced indoor grown lettuce to be safe to eat. "It's important to get the story out there", Bram Vanthoor with Hortiplan agrees.

Why indoor lettuce is safe

The company supplies Mobile Gully System for growing lettuce and herbs indoors and they also help growers with the water system, including the disinfection. "Thanks systems like these we know indoor food is grown safe: all water used in the crop is being controlled", Bram explains. "Lettuce grown in the open field needs a bigger surface and a more broad water supply system, making it also more vulnerable for contamination." Combined with the traceability in products like lettuce, that's very high in the indoor industry and very low in the open field production, it's easy to confirm the indoor farms are not the source of the outbreak.

Food safety

It's partly because of situations like these that food safety in general has become the driving force behind the development of hydroponic lettuce in both Europe and America. "There are many opportunities in the indoor industry. Retailers want to avoid situations like these, where people get sick and they have to recall product. They want a continuous supply of traceable, packed produce that's guaranteed safely grown and that has a story they can share with their consumers. The quality of the indoor grown lettuce, the freshness and the sustainable way of growing offer additional opportunities in this."

It's shown on the indoor grown lettuce in the US: other than in Europe, the product is easy recognisable by the words 'indoor grown' or 'greenhouse grown' on the packaging. It's a quality label, and not only when there's a food crisis.

Opportunities in indoor industry

"When you have your production in order and your concept for indoor growing is working, there are big opportunities in this industry - that's what's shown by this outbreak", Bram summarizes. "Although of course you do have to share this information with your consumers. Because all in all, outbreaks like these are another confirmation that the future of the industry will be indoors."

The search for tastier grocery store tomatoes is closing in

Source: <https://www.hortidaily.com/article/9167066/the-search-for-tastier-grocery-store-tomatoes-is-closing-in/>

"After World War II, breeders really intensively focused on improving varieties, increasing yield, getting disease resistance. Flavor has been neglected and it's deteriorated dramatically," in the words of Harry Klee, professor of horticultural sciences at the University of Florida. But that's changing.

It's not that tomato breeders didn't care about flavor, it's that it was hard to track. Unlike disease, which can be controlled by one or two genes and move visibly and discretely from one generation to the next, flavor is controlled by at least thirty genes. If one or two didn't get passed on to the next generation, it was hard to tell.

The specific genes responsible for flavor were not known, and even if they were, without modern affordable genome sequencing technology it was difficult and expensive to test whether they were being passed down.

“If you’re ignoring certain traits, there’s a potential you can lose those traits,” said David Wolff, a breeder at Sakata Seeds.

One by one, over generations of tomatoes, flavor-related genes slipped out of the DNA of a lot of tomato varieties as other qualities — pest resistance, disease resistance, shippability, shelf life, thicker skins — were bred in.

[Read the full article at Marketplace \(Sabri Ben-Achour\)](#)

US: Research award will focus on helping organic tomato growers better manage diseases

Source: <https://www.hortidaily.com/article/9166204/us-research-award-will-focus-on-helping-organic-tomato-growers-better-manage-diseases/>

Purdue University, University of Wisconsin-Madison, North Carolina State University, North Carolina A&T University, Oregon State University, and Organic Seed Alliance (OSA) are pleased to be among the recipients of the U.S. Department of Agriculture’s (USDA) National Institute of Food and Agriculture (NIFA) awards announced last month. The grant was awarded through NIFA’s Organic Research and Extension Initiative (OREI).

The project, titled Tomato Organic Management and Improvement Project (TOMI): Part II, allows researchers to build on a previous OREI grant awarded in 2014. Through the first award, researchers were successful in advancing germplasm of new disease-resistant tomatoes and identifying microbial inoculants (i.e., biopesticides) that can reduce foliar diseases on organic farms.

“TOMI has also helped our research team discover that tomato plants have lost their ability to host beneficial microbes that help fight diseases over the course of domestication, and our current breeding practices could be making this worse,” says Lori Hoagland, a soil microbial ecologist at Purdue

University and lead researcher on the project. “We also determined that biological control products vary in their potential to control diseases among regions and farms, which currently prevents organic farmers from being able to rely on these products.”

This new grant through OREI will help researchers continue to address these challenges while further supporting the development of a holistic, systems-based approach to managing diseases on organic farms. This will include furthering new disease-resistant tomato varieties that have been adapted to organic farming systems and exhibit eating qualities that consumers desire.

“Tomatoes are a popular organic crop, especially in local fresh markets,” says Micaela Colley, program director for OSA. “This project will result in varieties that provide superior flavor and nutritional qualities with the production traits farmers need, especially resistance to diseases that can cripple tomato production in areas with intense disease pressure.”

“Tomato growers will be involved in all aspects of the project and gain practical hands-on experience with soil health, disease management, and participatory breeding,” Colley adds.

Participatory plant breeding combines the practical experience of farmers with the technical expertise of formal plant breeders, resulting in more high-quality organic seed and more farmers with skills to improve their own varieties.



“By combining traditional plant breeding techniques with research aimed at identifying factors that control the composition and activity of soil and plant microbiomes, the research team hopes to develop new varieties that are better able to support beneficial microbes that help tomato plants fight diseases,” Hoagland explains. “We will do this by determining how local environments and soil management practices on organic farms alter populations of soil microbes with biocontrol activity. Then, we will determine how breeding varieties in these distinct environments affects the potential for tomato plants to support these microbes and control diseases.”

Researchers will also collaborate with farmers to improve the health and disease suppressive activity of soils on their farms, and determine why inoculants work in one place and not another. This data will help inform organic farming decisions and make disease management strategies more dependable.

The overarching goals of TOMI II include:

- Helping organic farmers control diseases while promoting soil and environmental health, and delivering tomatoes with great flavor to local consumers;
- Identifying existing, and breeding new, varieties that perform well under organic conditions and ensuring farmers have access to both the performance data as well as improved varieties;
- Collaborating with organic farmers to improve the health and disease suppressive activity of their soil, and identifying biopesticides that further support disease control in areas with intense disease pressure;
- Advancing an interdisciplinary research and outreach approach (soil microbiology, pathology, and breeding) to tackle the challenge of managing diseases on organic vegetable farms by researching plant-soil-microbial interactions; and
- Furthering the science and practice of on-farm research and participatory plant breeding methods to manage diseases, which require a close collaboration between farmers, plant breeders, pathologists, and soil scientists to ensure project outcomes are relevant and useful.

TOMI II is an example of collaborative research in the public sector that is responding to the needs of organic farmers both regionally and nationally. Multiple partners leverage each other’s expertise in addition to the environmental conditions and climates in their respective regions.

For example, some of TOMI’s breeding trials are conducted in North Carolina where disease pressure is generally high. Farmers in other regions then benefit from these selections after other breeders involved in the project take that improved germplasm and further adapt it to very different climates, such as those in the Pacific Northwest.

In this way, TOMI is working toward releasing varieties that are better adapted to changing climates, resource availability, and environmental conditions to help mitigate these risks for farmers and the food supplies they serve. Adaptation is key to achieving resilience in our food and agricultural system. This resiliency is longer lasting when more organic farmers have the skills to further adapt and improve plant genetics through seed saving and on-farm breeding, and improve the disease suppressive activity of their soils. This is why TOMI also emphasizes farmer education as a project goal.

“We can’t overstate the importance of this second round of funding for the TOMI project,” says Colley. “Programs like OREI are essential to the success of organic research and delivering improved varieties to organic growers since public cultivar development takes time and generally lacks long-term funding.”

Consecutive funding for plant breeding is critical to getting finished varieties into the hands of farmers, since it takes several years to breed new varieties. It is also critical for the development of holistic, systems-based approaches to tackling important challenges like disease management on organic farms.

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