

## OSU Extension - Auglaize County Weekly Horticulture Newsletter – 1-17-20

### Crown of Thorns a Succulent House Plant



Succulent house plants are those with juicy leaves, stems, and/or roots. Succulent plants form a vast and diverse group of plants. They are beautiful planted alone or as a companion.

There is a huge amount of color variation with succulent plants from blue-green to red to nearly black to white to variegated and many more. Succulents have leaves that are spiky, ruffled, rounded, needlelike, and berrylike.

Most types of succulent plants are very easy to care for, but some have very specific care requirements. Most succulents need little water because they have evolved special water-storage tissues to survive in arid environments. Most succulents like the warm and low humidity home environment.

Crown of Thorns, *Euphorbia milii*, has thorny stems with long spoon-shaped leaves at the stem ends along with clusters of tiny flowers. Crown of thorn flowers are very small and surrounded by colorful bracts in red, salmon, and yellow. There are many cultivars varying in flower size and color. Crown of thorns is native to Madagascar.

In the 1970's breeding programs produced a wide range of plant forms and flower colors. California hybrids were developed for their stout stems and larger colorful flower bracts often referred to as "giant crown-of-thorns" series. German growers made selections of natural crosses producing thicker leaves and thinner stems with flower colors ranging from cream to various shades of pink and red. Short and Sweet™ is a compact dwarf cultivar with soft spines and small bright red bracts.

In the early 1990's new hybrids with larger flowers were developed in Thailand. These Thai Poysean hybrids were likely the result of a mutation and spurred the production of hundreds of cultivars. These new cultivars produced a huge range in flower colors and plant sizes. Bract (flower) colors include pastel shades and blends of different colors. Unfortunately many of these cultivars were lost in the Southeast Asian economic crash in the late 1990's and the lack of successful introductions into the U.S. There are some specialty nurseries in the U.S. that produce cultivars such as 'Jingle Bells' having soft pink bracts tinged in red and green to 'New Year' having buttery yellow bracts that change to cherry red as they age.

Crown of thorns is a very hardy plant tolerating a range of conditions. Crown of thorns prefers full, direct sunlight and average temperatures. They will grow in part shade, but flowering tends to be reduced. Crown of thorns do best when the soil is allowed to dry between deep waterings. Some hybrids prefer more frequent watering. Fertilize lightly in spring and summer with a balanced fertilizer. Over fertilizing will produce soft and vigorous vegetative growth with few flowers. Use fertilizers with little to no micronutrients as crown of thorns are sensitive to these nutrients. Some varieties like to be grown in small pots while others prefer large pots. Plant crown of thorns in rich (high organic matter) well drained planting medium. Plants can be pruned to keep their shape and size although most hybrids need little pruning. Cut stems back to axillary buds to increase branching. When stems are cut copious amounts of sticky, milky sap is exuded. This milky sap may cause dermatitis for some people, temporary blindness if enough gets in the eyes, and is poisonous if ingested.

Crown of thorns is easily propagated, but the cut end needs to be dipped in cold water or powdered horticulture charcoal to prevent the milky sap from running. Allow cuttings to dry for two to three days before placing stems in well-drained planting media. Water carefully as too little and too much will reduce successful rooting. Seeds will not be produced unless flowers are hand pollinated with different plants.

There are few serious pests of crown of thorns. Excessive watering is the most likely way to kill a plant.

## Local Observations

Good evening! I pray you are well. Oh how windy today.

It has rained 4 days this past week. Rainfall on Thursday January 9<sup>th</sup>, ranged from 0.4” near Uniopolis to 1.1” at about 1 mile northeast of Fryburg. Rainfall on Friday ranged from 0.3” at about 1 mile northeast of Fryburg and at about 5 miles east of New Hampshire to 1.3” near Uniopolis. Rainfall on Saturday ranged from 0.69” near Valley and Idle Roads. Rainfall on Wednesday ranged from a trace to 0.2” for most of the county. Rainfall for the week ranged from 1.9” at about 3 miles west of St. Marys to 2.73” at about 1 mile northeast of Fryburg. Total average rainfall for the week was 2.31”, up from the last two weeks.

The average high temperature now is 33 degrees F. Temperatures were above normal for all days this past week. Actually broke the record on the 11<sup>th</sup> by 6 degrees F, which was 63 degrees F.

I did not check on the bees this week, so I’m unsure how they are.

## VegNet

No news this week

## BYGL

No news this week

## Other Articles

## Vine Maple Is a Bright-leaved Tree for Small Gardens

January 14, 2020 | [Meghan Shinn](#)

Source: <https://www.hortmag.com/plants/plants-we-love/vine-maple-is-a-bright-leaved-tree-for-small-gardens>



Vine maple's leaves turn red in fall, as seen in this photograph taken alongside Oregon's Molalla River in October 2018.

**Virtues:** Vine maple (*Acer circinatum*) is a small deciduous tree that lends winter interest to the garden with its elegant branching. During the growing season its large foliage is a nice green until it takes on blazing colors in fall. This native of western North America is fairly adaptable and happy in shade.

**Common name:** Vine maple

**Botanical name:** *Acer circinatum*

**Exposure:** Sun or shade

**Season:** Year-round presence, winter architecture, bright fall foliage. The selection 'Pacific Fire' has red bark.

**Foliage:** The large leaves are light green or golden green from spring to earliest autumn, when they transition to orange or red. The cultivar 'Sunglow' offers peachy spring foliage that turns lime for summer. 'Monroe' has deeply cut leaves that add a feathery texture.

**Habit:** Vine maple grows as a multi stemmed tree that typically reaches no taller than 20 feet. Its branches can spread to a similar width. Growing it in shade will give the branches more of a spreading, vine-like habit, while more sun will keep vine maple more upright and compact. 'Little Gem', 'Pacific Sprite' and 'Sunglow' are dwarf varieties.

**Origins:** Moist to wet coastal forests from Alaska to northern California.

**How to grow vine maple:** This tree naturally grows in the shade of large conifers, so it will easily handle shade or part shade in the garden. However it can also grow in the sun, which will prompt its best fall foliage. An adaptable species, it is not picky about soil type and it can withstand dry spells once it is established. Best left unpruned to develop natural character. USDA Zones 5–8.

## Wild tomatoes resist devastating bacterial canker

Source: <https://www.hortidaily.com/article/9181078/wild-tomatoes-resist-devastating-bacterial-canker/>

Many New York tomato growers are familiar with the scourge of bacterial canker – the wilted leaves and blistered fruit that can spoil an entire season’s planting. For those whose livelihoods depend on tomatoes, this pathogen – *Clavibacter michiganensis* – is economically devastating.



*Martha Sudermann, right, and Chris Peritore-Galve, graduate students in the lab of plant pathology and plant microbe biology professor Chris Smart, examine tomatoes growing in a greenhouse at Cornell AgriTech in Geneva. (Allison Usavage/Cornell University)*

In a new paper, Cornell researchers showed that wild tomato varieties are less affected by bacterial canker than traditionally cultivated varieties. The paper, “Characterizing Colonization Patterns of *Clavibacter michiganensis* During Infection of Tolerant Wild *Solanum* Species,” published online in November in the journal *Phytopathology*.

Co-authors were Christine Smart, professor of plant pathology and plant-microbe biology in the College of Agriculture and Life Sciences; F. Christopher Peritore-Galve, a doctoral student in the Smart Lab; and Christine Miller, a 2018 Smart Lab undergraduate summer intern from North Carolina State University.

“Bacterial canker is pretty bad in New York,” Peritore-Galve said, “but it’s distributed worldwide, everywhere tomatoes are grown.”

The pathogen causes wounding and is spread by wind-blown rain; if one tomato gets infected, it can spread from plant to plant.

“Bacterial canker certainly can cause the complete loss of a field of tomatoes, and we see outbreaks of the disease every year,” Smart said. “Growers use disease management strategies, including spraying plants with copper-based products; however, once there is an outbreak it’s difficult to control bacterial canker.”

To combat diseases, plant pathologists and breeders often look for varieties that are resistant, but among tomatoes traditionally grown for market, there are none with genetic resistance to bacterial canker. So Peritore-Galve, Miller and Smart went back to the beginning.

Tomatoes are native to the Andes Mountains region of South America, where wild species have been free to evolve for thousands of years. Recently, plant breeders have identified wild tomatoes that seem to be less susceptible to bacterial canker and are resistant to other pathogens.

The team wanted to understand how bacteria spread and colonize in wild tomatoes versus cultivated ones. They zeroed in on the plants’ vascular systems – specifically their xylem vessels.



*A cultivated tomato infected by bacterial cankers. (Chris Peritore-Galve/Provided)*

Like individual veins in a human, xylem vessels transport water and nutrients from soil throughout the plant. The team found that in cultivated species, bacterial canker spreads everywhere, while in wild species the bacteria remain confined to certain xylem vessels without moving much into surrounding tissues.

“The wild tomatoes, for some reason, impede the ability of the bacteria to move up and down through the plants, which reduces symptoms – in this case, leaf wilt,” Peritore-Galve said.

This is the first study ever confirming that wild tomatoes are susceptible to bacterial canker, though the infection is less severe than in cultivated varieties. But while a severe infection causes fewer symptoms in the wild plant, it can still cause lesions on the fruit.

Even so, a tomato variety with resistance to the bacteria could still be very helpful for tomato growers, said Chuck Bornt, vegetable specialist with Cornell Cooperative Extension’s Eastern New York Commercial Horticulture program. Bornt works extensively with New York tomato growers.

“Many times, it’s not the fruit symptoms that cause the issue,” Bornt said, “it’s the wilting of the plants or the plugging of the xylem cells that cause the plant to lose foliage, which then exposes the fruit to sun

scald and other issues. ... [I]nfected fruit are also an issue, but in my opinion it's these other issues that have more impact."

This work was supported by funding from the USDA National Institute of Food and Agriculture.

Source: [Cornell University \(Krisy Gashler\)](#)

## **26 European business organisations ask the EU to submit a study on the status of novel genomic techniques**

Source: <https://www.hortidaily.com/article/9179776/26-european-business-organisations-ask-the-eu-to-submit-a-study-on-the-status-of-novel-genomic-techniques/>

On 9 January, 26 European business organisations jointly signed [a letter](#) calling upon the European Commission and Member States to re-emphasize that products obtained by novel genomic techniques should not be subject to Directive 2001/18 requirements and related regulations if they could also have been obtained through conventional methods or result from spontaneous processes in nature. The organizations support the Council Decision (EU) 2019/1904 requesting the Commission to submit a study on the status of novel genomic techniques and welcome the potential for a Commission proposal, which they hope will deliver more enabling rules for products resulting from the latest breeding methods, while keeping high standards of EU food production.





Moreover, the organizations call upon the Commission to address this topic from a global perspective, taking into account the trade aspect in relation to the policy developments around the world and their implications for competitiveness of the EU Agri-Food value chain as well as the enforceability of the ECJ ruling on mutagenesis.

The undersigned stakeholders are convinced that targeted mutagenesis breeding (including with genome editing) can contribute to various goals of the European Green Deal by saving land resources, reducing crop protection products, antibiotics and emissions while stabilizing and increasing crop yields and improving animal health and welfare to ensure food security.

Given that discussions on the status of novel genomic techniques have been going on for more than 10 years, the above mentioned organisations ask the Commission to ensure that the Council decision is part of the European Green Deal and its respective Farm to Fork Strategy, and will be implemented in due time.

[Letter to Commission and Member States – January 2020](#)

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