

OSU Extension - Auglaize County Weekly Horticulture Newsletter – 3-6-20

Early Blight of Tomato and Potato



Early blight of tomato and potato is caused by the fungus *Alternaria solani*. But may also be caused by *Alternaria tomatophila*. The *Alternaria* species may cause a stem canker or collar rot of transplants, although this is not very common. The canker will have a concentric ring pattern. Symptoms on older leaves first appear as small, irregular, brown spots. The spots enlarge over time forming concentric rings or bull's-eye pattern in the center of the lesion. Lesions may be surrounded by a yellow halo. Symptoms can occur early in the season, but usually appears after fruit set or tuber initiation. The disease progresses up the plant with severe defoliation occurring during periods of high temperature and high humidity.

The disease may also attack the fruits and tubers. Lesions often appear on the stem-end of the fruit. The lesions appear dark, sunken, and leathery. Fruit lesions can attain considerable size having a concentric ring pattern. Infected fruits frequently drop. The fungus may also cause spotting of fruit stems and blossoms. Lesions on potatoes appear as sunken and irregular often surrounded by a raised purple border.

The fungi survive on infected plant debris. Other solanaceous crops such as eggplant and peppers and weeds such as eastern black nightshade, horsetail, and groundcherry are hosts to the disease. Splashing rain, running water, and moving machinery can transport the fungus to other parts of the field. Symptoms are usually visible about 10 days after infection. Infection progresses slowly unless plants have been wounded or weakened.

Cultural control methods include obtaining disease free seeds, potato tubers (that are certified) and transplants, rotating away from solanaceous weeds and crops every three to four years, destroy solanaceous weeds and volunteer solanaceous crops, widely space tomato plants and potato rows to allow good air flow, remove all plant tissues or deeply plow, do not apply water to leaf surfaces, and trim off and dispose of infected lower branches and leaves.

Some partial resistant tomato varieties exist. Resistant varieties include Mountain Fresh, Mountain Supreme, Plum Dandy, Mountain Magic, Plum Regal, Cabernet, Manalucie, Merlot, and Tommy Toe. Mountain Merit, Jasper, Iron Lady, Matt's Wild Cherry, Juliet, Defiant, Legend and Old Brooks have moderate resistance to early blight. Some resistant potato varieties include Castile, Elba, IdaRose, Red Cloud, and Sangre.

Mancozeb (very good) and chlorothalonil (very good), and copper (good) fungicides can be applied to manage early blight. These products must be applied at the initial onset of the disease or just prior to its development and every 7 to 10 days as they are protectant fungicides. A protectant fungicide is one that stops the disease from germinating, not killing what is already present.

Starting Vegetable Seeds Indoors



It is that time of the year to begin starting some vegetable seeds indoors for transplanting outdoors! Why would you want to consider planting seeds when you can purchase plants from a greenhouse? The three biggest reasons for starting your own plants are that you know how they were grown, can plant a specific variety that you want rather than what is available, and save money as seeds are cheaper than plants.

Choose good seeds. The best quality seeds are those that were produced last year. The younger the seed the faster a seedling will grow. Two-year old seed can work as well, if it was stored properly. Properly stored seeds should be placed in a sealed container to keep out moisture and placed in a refrigerator that is near freezing. Properly stored seeds older than two year may germinate, but not all species will germinate at the same percentage and plants will not start out as vigorously the older the seeds are.

When should I start vegetables? Some species need to be started now or should have been started! The plants that take the longest to get to a good transplanting stage are onion and celery, which take 10 to 12 weeks. Eggplant and peppers need 6 to 8 weeks before transplanting. Broccoli, cabbage, cauliflower, Brussel sprouts, head lettuce, and tomato need 5-7 weeks before transplanting. Place sweet potato roots in water 5 to 7 weeks before planting the slips. Okra needs 4 to 6 weeks. Cucumber, melons, and squash only need 3 to 4 weeks. These time periods are recommended, you can shorten them, but you will just have smaller plants and less of a jumpstart on the season. Start the plants based upon when the transplants can be placed in the garden. Broccoli, cabbage, cauliflower, Brussel sprouts, onions, celery, and head lettuce can be planted in mid-April. Everything else mentioned should not be transplanted until early May and preferably the middle of May, unless you want to cover the plants so they do not freeze.

The biggest problem with growing your own plants is light quality and quantity! If you do not have the correct amount and type of light the hypocotyl (part of the stem below the cotyledon (seed leaves)) will become too elongated and the seedling will lay over, especially when watering. You want to keep the hypocotyl as short as possible. The stem beyond the hypocotyl can also become too long if the light is not right.

Place containers as close to a south facing window as possible. This is to help provide some natural light, but it will not be enough for the "best" quality of plants. Supplemental lighting is necessary. The minimum amount of light is to have 40-watt fluorescent lamps. The more lights and higher wattage, the better. A better quality of light would be to have a 50:50 combination of cool white and fluorescent lamps. Place the lights 2 inches from the top of the pots/trays or plants. Raise the lights as the plants grow, so that the plants do not get burned when touching the lights. A higher quality of light would be to use a metal halide lamp, but they are expensive, however they provide the best quality and quantity of light when using the 1000-watt bulbs. For these lights, you can place them about 4 feet from the pots/plants. Keep lights on for a 14 to 16 hour period during the day and be sure to turn them off at night. The easiest way to control day length is to use a timer.

Germinate seeds at 80 degrees Fahrenheit, except for celery and spinach which should not go beyond 70 degrees. The use of a heat pad will keep the soil temperature more consistent. The soil temperature can be 5 degrees Fahrenheit colder than the air temperature. Grow plants at 70 degrees Fahrenheit during the day and 63 degrees at night. Daytime temperatures can be higher for warmer-season crops like melons, but cooler for cool-season plants like broccoli.

Plant the seeds into a well-drained potting media. The potting media needs to stay moist at all times until the plants emerge, but not saturated. After the plants have emerged, water to saturation and let the media dry out on the surface before watering again. Do not keep pots saturated as this may allow root rots to occur and build up fungus gnat populations.

Planting containers come in many sizes. Use whatever size you desire, just remember when using small plug flats, the plants will need to be transplanted into a larger container when the plant is in the cotyledon stage of development.

If the potting media included a fertilizer, then there is no need to add additional fertilizer. If the potting media has no fertilizer, then apply a soluble form of a complete fertilizer when the plants are in the cotyledon stage of growth.

Before transplanting the plants be sure to “harden them off” by placing them outside a little bit at a time eventually leaving them outside, unless the temperature gets too low.

Enjoy this opportunity to start gardening early and the opportunity to grow the variety you desire most. Happy gardening, it’s just around the corner.

Local Observations

Good afternoon! I pray you are well. Sorry for not getting the newsletter out last week, but I was busy at the end of the week!

We received rainfall only 2 days this past week. Rainfall on Monday, March 2nd ranged from 0.16" near Bloody Bridge to 0.42" near Valley and Idle Roads. Rainfall on Tuesday ranged from 0.13" near near Lock 2 and Tri-Township roads to 0.5" near County Road 66A and St. Rt. 66. Total rainfall for the week ranged from 0.47" near Shelby-Fryburg and Santa Fe-New Knoxville Roads to .69" near Lowes. The average rainfall for the week was 0.59", 0.25" greater than last week. Total liquid equivalent precipitation for the month of February ranged from 2" near Mercer Line and St. Rt. 197 to 3.23" near County Road 66A and Dowty Roads. The average total liquid equivalent precipitation for the month of February was 2.8". The average historical rainfall (liquid precipitation equivalent) for the month of February is 2.23". Rainfall for the year so far is 6.65", 2.05" above the historical average! Here we go again, although it may start to dry out in March.

The average high temperature now is 43 degrees F, 2 degrees higher than last week. Temperatures were above normal for 4 days and below normal for 3 days. The average high temperature for the week was 40.4 which is still below normal. The average high temperature for February was 31.48 degrees F, which is 5.5 degrees F below normal.

My bees have died. I don't know why. Now comes the decision to repopulate. Thanks to spraying my garden last fall, it is nearly free of winter annual weeds!

VegNet

No news this week.

BYGL

No news this week.

Other Articles

White Forsythia Provides Early Bloom and Amazing Fragrance

MEGHAN SHINN

MAR 2, 2020

Source: <https://www.hortmag.com/plants/white-forsythia>

Virtues: White forsythia (*Abeliophyllum distichum*) has a short season of interest, but its unobtrusive size and shape help it ear a spot in the garden anyway. This small shrub produces a heavy flush of pretty, heavily fragrant white flowers in early spring, then gives over the spotlight to whatever companions you choose it site near it.

Common name: White forsythia, Korean abelialeaf

Botanical name: *Abeliophyllum distichum*



Exposure: Full sun to part shade

Season of interest: Early spring, for fragrant flowers

Flowers: The flowers line the shrub's stems in clusters, with a bell-like shape to each. They resemble the blossoms of true forsythia in shape, profusion and arrangement on the stems, giving rise to this plant's common name of white forsythia. The two species are not related, however, and white forsythia blooms just a bit earlier. White forsythia's flowers are very fragrant. Branches can be cut and forced into an early bloom indoors similar to true forsythia's.

Foliage: The leaves appear after the bloom, growing to about 3-inch ovals. They remain green for the summer and their fall color is not remarkable.

Habit: White forsythia is a deciduous shrubs that grows quickly to a height of 3 to 5 feet. It has arching stems that give it a similar width.

Origin: Hillsides of central Korea

How to grow it: Site white forsythia in full sun for the heaviest bloom, though it can also take part shade and will still flower there. Planting it in front of a dark background—such as a row of evergreen shrubs or a dark fence—will highlight its white flowers when they open in early spring. Prune this shrub every few years to shape it by removing the oldest stems. The entire shrub can be cut to the ground to rejuvenate it and restore its compact, arching habit. Any pruning should be done immediately after it blooms. White forsythia will not withstand drought and should be provided supplemental water in dry spells. USDA Zones 5–8.

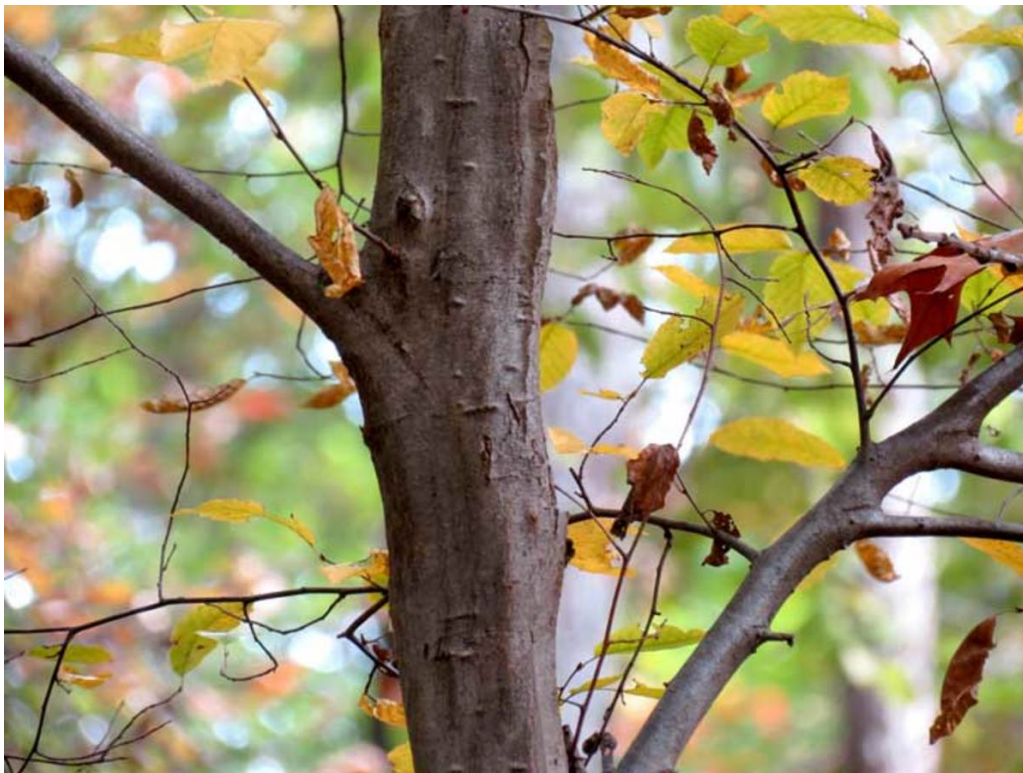
American Hornbeam Fits into Small Shade Gardens

MEGHAN SHINN

FEB 26, 2020

SOURCE: <https://www.hortmag.com/plants/american-hornbeam>

Virtues: American hornbeam is a 20- to 35-foot tree that grows in nature as an understory tree of eastern North America. It offers unique visual appeal through its smooth gray bark, fluted branches and trunk. It provides bright fall foliage and prime nesting sites for songbirds, which also enjoy its nutlets.



The fluted, sinewy trunk of American hornbeam inspires a secondary common name of musclewood.

Common name: American hornbeam, musclewood

Botanical name: *Carpinus caroliniana*

Exposure: Sun or shade

Flowers: The flowers are inconspicuous but they give way to decorative down-hanging nutlets that ripen in the fall and persist into winter.

Foliage: The toothed oval leaves emerge purple in spring, darken to green for the summer and then turn fiery shades in the fall. American hornbeam is deciduous. Its leaves provide food for the larvae of eastern tiger swallowtail butterflies and red-potted purple butterflies.

Habit: This deciduous tree grows between 20 and 35 feet tall, with a 20 to 30 feet crown width. It may grow with multiple trunks or be pruned to just one trunk. The bark is smooth and gray. Mature trees develop prominent fluting on their trunks and branches, which gives rise to the alternate common name of musclewood.

Origin: *Carpinus caroliniana* is native to woods, streambanks and flood plains throughout eastern North America

How to grow it: American hornbeam prefers a shady position, but it can tolerate full sun if it receives consistent moisture. It is somewhat tolerant of drought in the shade, but it prefers moist soil. It can tolerate poor drainage. It is best purchased as a balled and-

burlapped specimen and planted in spring to give it ample time to establish its spreading root system. USDA Zones 3–9.

Starting Begonia Tubers for Pots and Gardens

MEGHAN SHINN

FEB 17, 2020

SOURCE: <https://www.hortmag.com/smart-gardening/starting-begonia-tubers-for-pots-and-gardens>

Tuberous begonias bring luscious color to the garden, whether they're grown in hanging baskets, window boxes, mixed containers or garden beds. Their large, often ruffly flowers are available in a wide range of colors, and their appealing foliage provides the perfect backdrop.



Tuberous begonias can be purchased as blooming plants in later spring, but you can save some money by purchasing them as dormant tubers in late winter. You may not feel keen to start seeds indoors because of the time, space and materials (such as artificial lighting) that they require. Starting begonia tubers is a nice alternative. It offers the same rewards but with less effort.

To get your begonias growing and ready to bloom in time for spring, start the tubers indoors in late winter. About 10 weeks before your typical last frost date, set the bare, dry tubers in a warm, bright spot. Within about two weeks, reddish buds will sprout from the tops of the tubers, followed by the beginnings of stems. (The top is the side that's cupped.)

At this point you can transfer the tubers to pots. Plant them about an inch deep with the sprouts facing up. Use small pots—four inches at the most. This helps prevent rot. Use evenly moist potting mix when planting the tubers. To increase humidity, you can cover the pot with a plastic bag or other clear cover. While the tubers are rooting, water only if the soil dries out. Once leaves emerge, remove the covering and start to water more regularly, but avoid creating soggy soil. Keep the plants in bright light.

When two or three leaves have developed, transplant to a pot a couple of inches larger and continue to grow the plant on toward spring. After all danger of frost has passed and nighttime temperatures remain above 50 degrees (F), you can transition the begonias to their place in the outdoors.

How to Tell if a Branch is Dead or Dormant

MEGHAN SHINN

FEB 26, 2020

SOURCE: <https://www.hortmag.com/smart-gardening/how-to-tell-if-a-branch-is-dead-or-dormant>

As a Chicago-based technical advisor for [The Davey Institute](#), Chelsi Abbott often fields questions from Great Lakes and Ontario residents regarding late frosts and leaf out. They wonder if the tree or shrub may have suffered winter damage—or is it just late to wake up? Chelsi encourages worried woody-plant lovers to perform a simple “scratch test” to set their minds at ease.



A scratch test is easy to do. You can use a fingernail or clean, sharp tool to gently scrape away at a branch's bark. If this reveals green and spongy fibers, all is well. If the scratch test shows brown and brittle wood, the branch is dead and it should be pruned.

Growing Cucumbers to Maximize Their Harvest

MEGHAN SHINN

FEB 24, 2020

SOURCE: <https://www.hortmag.com/edible-gardening/growing-cucumbers-to-maximize-their-harvest>



The cucumber is a heat-loving vegetable that is seeded or transplanted after the last spring frost. For many gardeners, that's their only planting of cucumbers. In my garden, I plant cucumbers two to three times for the longest season of high-quality fruits.

The growth and production of most cucumber plants slows a few weeks after the harvest begins. Succession planting stretches the harvest by at least month. When seeding or transplanting a second crop, keep an eye on soil moisture. Warmer summer weather means the soil dries out more quickly, and that can make it more difficult to establish the second planting. I've had success with the following varieties in succession planting:

The Asian variety 'Suyo Long' has long, slender fruits with a sweet flavor and crisp texture. Expect the bumpy fruits to grow up to 15 inches long, but you can harvest them at any size. If the vines grow on the ground the fruits tend to curl. Trellis them for straighter cucumbers.

The Armenian cucumber is technically a muskmelon, but it's generally sold and grown as a cucumber. The skin is thin and never bitter; the fruits are very crisp and mild. While they can grow 24 inches long, we harvest most at a length of 12 to 15 inches.

I'm a big fan of white- and yellow-skinned cucumbers, and among these the miniature 'Salt and Pepper' has a lot of outstanding characteristics. It's resistant to several diseases including powdery mildew and it produces a very heavy crop of three- to five-inch-long, pale white fruits.

'Lemon' is a popular heirloom variety with unique rounded fruits that mature from pale green to bright yellow. They should be harvested when they're green to light yellow. Once they turn lemon yellow, they're overripe.

Prepared by Jeff Stachler
Ohio State University
Agriculture and Natural Resources Extension Educator, Auglaize County