

February 2<sup>nd</sup>, 2026

## In this Issue:

- Growing Mushrooms
- Fruit Tree Pruning
- Pruning Brambles
- Tapping Trees for Syrup
- Garden Calendar

## Address:

Kansas State Research and Extension  
Butler County  
206 N Griffith St., Ste A  
El Dorado, KS 67042

## Phone Number:

316-321-9660

## Email:

[callae@ksu.edu](mailto:callae@ksu.edu)

## Office Hours:

Monday- Thursday  
7:30 am- 5:00 PM

Friday  
7:30 am- 11:30 am



# The Grapevine

## Growing Mushrooms

I love mushrooms (I might be alone in this with the rest of my family), but I think they are an excellent addition to salads and many other dishes. While it might seem intimidating, it is actually relatively easy to grow several different types of mushrooms at home. It might surprise you, but the part of the mushroom we actually eat is the fruiting or reproductive bodies of the fungi. Unlike many plants, mushrooms do not photosynthesize and rely on the substrate or material on which the mushrooms grow for their food. As the substrate decomposes, the mushroom can take up the nutrients. Mushrooms can be grown on logs, straw, or other sources, and the substrate needed will depend on the type of mushroom you grow.

Some of the most common mushrooms to grow at home are the Oyster mushroom and the shiitake mushroom. Oyster mushrooms are delicate with a mild flavor and are rarely seen in grocery stores because they are hard to ship. Their color ranges from tan to pink to white to yellow, and they are grown on a straw tower. The mushrooms will typically start to form on the outside of the tower in approximately a month. Shiitake mushrooms have a smoky flavor and can be found in the store, but they are inexpensive to grow. Shiitake mushrooms are grown on hardwood logs, and one log can produce mushrooms for 3 to 5 years. There are several kits available for sale to help you get started with this endeavor, or you could attend a class to make your own. Happy Growing!



# Guide to Pruning Fruit Trees

There is nothing better than eating a peach or cherry picked straight from the tree in the summer. Growing up, my family had a small orchard of apple, peach, plum, and cherry trees that we would pick from to freeze so we could enjoy that fresh summer taste all year round. While growing fruit on trees sounds easy, there are important steps and care we have to take every year to prevent diseases and keep our trees as healthy as possible. Early February through March is the time to do some maintenance pruning on our fruit trees.

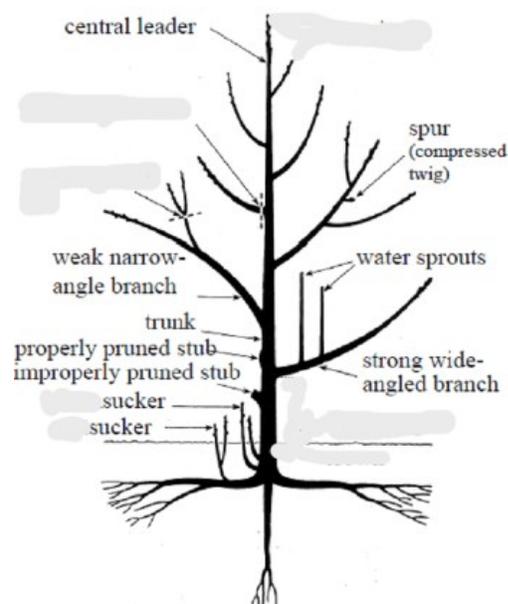


One of the most essential tips for keeping your fruit trees healthy and productive is to prune them annually. Some of our fruit trees, such as pears and plums, need little pruning each year, while others, such as peaches, require regular pruning to maintain the strong structure necessary to support fruit. When pruning, it is important to remember what your goals are:

1. The first goal is to develop a strong branch structure to support the fruit. Trees with weak structure are likely to break under heavy fruit loads or during ice storms.
2. The second goal is to allow light and airflow into the tree canopy. Sunlight is needed to set fruiting buds for next year, while airflow through the canopy helps reduce the risk of disease.
3. The third goal is to control the tree size. Smaller trees are easier to prune, pick fruit from, and spray for diseases and bugs. Many fruit trees you can purchase now are dwarf varieties, but it's still important to keep fruit trees the size you want and can maintain.
4. The final goal is to remove diseased, dead, or broken branches. High winds, ice storms, diseases, heavy fruit loads, insects, and wind storms can all damage the trees. Removing those broken branches can help speed up the healing process and prevent future problems.

When pruning fruit trees, there are some general recommendations to help you achieve the goals that we laid out above. Remember, never remove more than 30% of the living tree at one time. If you do, you will likely end up with many water sprouts that won't produce fruit.

- Remove branches that have narrow attachment angles to the tree (See photo). Those are likely to break from the weight of fruit or ice. Cherry trees are notorious for having brittle branches and narrow crotch angles, so it's important to prune those trees when they are young to develop a strong structure.
- Remove water sprouts, the branches that grow straight up inside the middle of the tree, and suckers, which grow from the base of the tree. These branches won't produce fruit and clutter up the tree.
- If two branches rub together, remove one of them. Those wounds open the tree up to disease and insect issues. Be sure to prune all the way back to the collar of the branch so you don't leave a stub. The stubs will eventually fall off, but you have lengthened the healing time needed for that plant.
- Remove branches growing back into the tree. These could rub against other branches and clog the tree's canopy, reducing airflow.
- Remove a maximum of 30% of the tree's canopy a year. Pruning back too severely can lead to more water sprouts and reduce the amount of fruit you get. If you have a very overgrown tree, it's best to trim it back over several years rather than all at once.



There are some differences in how to prune the different types of fruit trees. See these recommendations from Ward Upham below:

- Peach and Nectarine: Peach and nectarine require more pruning than any other fruit trees because they bear fruit on growth from the previous year. Not pruning regularly results in fruit borne farther and farther from the center of the tree, allowing a heavy fruit crop to break major branches under the extra weight. Prune long branches back to a shorter side branch to prevent the branches from getting too long.
- Apple: Apples tend to become overgrown if not pruned regularly. Trees that are not pruned often become biennial bearers, producing a huge crop one year and none the next. Too many fruits on the tree cause biennial bearing. Though pruning helps, fruit often needs thinning as well. The goal is an apple about every 6 inches. Spacing can vary as long as the average is about every 6 inches.
- Cherry, Pear, Plum: Light pruning is usually all that is needed. Remove branches that are causing or will cause problems, in accordance with the general recommendations above. You can use “spreaders” on young branches to improve the crotch angle for a stronger tree.

Pruning fruit trees can be intimidating if you have never done it, but the benefits to your orchard and fruit trees in terms of fruit production and reduction in disease or insect issues will be noticeable. K-STATE has several publications that can offer guidance on pruning. Click on the name of each publication to read it. The first publication is on [Apples and Pears](#), and the second is on [Peaches, Plums, Cherries, and other Stone Fruit](#).



## Pruning Brambles

Unlike other perennial fruiting plants, raspberries and blackberries are unique and require special pruning to be productive. While the plants themselves are perennials, the canes they produce are typically biennials, meaning they grow one year, produce fruit the next, and then die. Because of this, they are unique in their pruning requirements. To make things even more complicated, it's important to know the variety you have because some berries are everbearing and need to be pruned differently. Let's take a look at each option.

### **Black or purple raspberries and thornless blackberries.**

These fruiting bushes tend to grow in a clump, and it's best to remove all but five to seven of the largest and healthiest canes in the clump for the best harvest. Prune out any dead canes at this time as well. Remove any winter damage from the remaining canes. For black raspberries, you should also prune the canes back so only 8-10 buds per cane are left, while purple raspberries and thornless blackberries are more vigorous growers, and you should leave more buds per cane for the best harvest. Thornless black berries might produce some suckers a short distance from the central clump that can be dug up to increase the size of the planting.

### **Red raspberries and thorny blackberries**

These bushes tend to sucker badly and will fill the row with new plants. For these plants, remove any dead canes, prune the small canes back so you leave the largest canes spaced approximately 4-6" apart, then prune those canes back to five feet. Keep the aisles between rows clean by mowing any new suckers that sprout off or cutting them back to the ground.

### **Everbearing red raspberries and blackberries**

These plants are the exception in that they will fruit on first-year canes. For these varieties, cut all the canes to the ground in winter for the best results. Since these varieties fruit best on first-year canes, you will still get a vigorous yield of berries.



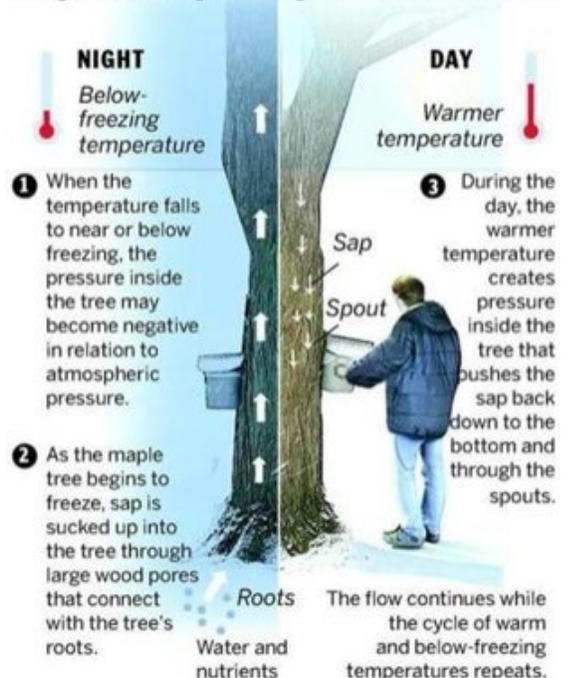
# Tapping Trees for Homemade Syrup

People have made syrup and sugar from maple sap since before recorded history. This sweet activity occurs across the native habitats of sugar and red maple trees in the Upper Midwest, the Northeastern U.S., and Eastern Canada. Many Native American communities relied on maple sap-based products as an essential part of their culture long before European colonists arrived on the continent. While we traditionally tap maple trees to make syrup, they are not the only tree species in our area that produce abundant amounts of sap. Let's explore how the process works inside a tree, what species we can use, how to tap a tree, and how to make syrup from the sap.

Tapping trees today largely follows the same process used long ago. 1) Create a hole in the tree in late winter, 2) collect the sap, and then 3) remove the water to concentrate it to a sweet and delicious end product. Of course, there have been significant advancements in our understanding of tree health, increasing sap yields, food safety, and more efficient evaporation. The yield of sap varies significantly with the tapping method, the size of the tree, and year-to-year seasonal differences. Sap yield is usually discussed in terms of the number of tapholes, rather than the number of trees. The average full-season yield from a taphole is 5 to 15 gallons of sap. However, under favorable conditions, a single taphole can produce as much as 40 to 60 gallons of sap in a single year. Understanding how sap is formed requires some knowledge about tree physiology. In the late summer and fall, many trees virtually stop growing and begin storing excess starches throughout the sapwood, especially in cells called ray cells. This excess starch remains in storage as long as the wood remains colder than about 40°F. Whenever wood temperatures reach around 40°F, enzymes in the ray cells convert starches to sugars, primarily sucrose. This sugar then passes into the tree sap. Rising temperature creates pressure inside trees, causing sap to flow. When a hole is bored into a tree, the water (sap)- carrying wood fibers are severed, so sap drips out of the tree. The freeze and thaw cycle is the primary driver for sap movement in the tree and, therefore, sap collection during the season. Tapping trees doesn't require much equipment. You need something to collect the sap in, such as a bucket, a drill and a bit to drill the holes, and a spile to put into the tree to drain the sap out of. All of this equipment can be purchased online, or you can make your own from items found at the local hardware store. You will need a large pan to boil the sap down to make syrup. On average, it takes over 40 gallons of sap to make a gallon of syrup (more on that later).

To start the tapping process, you first must identify the trees you want to use. In our area, you can tap pecan, walnut, and sycamore trees to produce sap. Each tree species has a slightly different flavor. Pecan and Sycamore trees can be treated like Maple trees for tapping, while walnut trees can have a slightly longer tapping season. Sycamore sap does not have the best taste, and many consider it a "syrup of last resort" due to its almost scorched flavor. It can be blended with other saps and adds a bit of butterscotch flavor when mixed with maple or other syrups.

Sap flow from sugar maples is an entirely temperature dependent process. How it works:





Walnut trees have a syrup that is darker than maple syrup with a more earthy, nutty flavor. Before tapping, a tree should be at least 10 inches in diameter, measured at 4 1/2 feet above the ground. Trees between 10 and 18 inches in diameter should have no more than one tap per tree. A second tap may be added to trees with diameters between 18 and 25 inches. Only very healthy trees with a diameter of 25 inches or more can sustain three taps, and no tree should ever have more than three taps. The shape and size of the crown are also important. Trees with large crowns extending down towards the ground are usually the best producers of sap. Here are the steps to tap a tree for sap:

- **Step 1. Drill the Holes:** When the forecast predicts sap flow conditions, drill the hole using a clean and sharp drill bit with a diameter of 5/16 inch, at a convenient height, and 1.5 to 2 inches deep.
- **Step 2. Install the Spout:** Tap the spout into the freshly drilled hole, pressing it lightly so it is tight and cannot be pulled out by hand. Be sure to select a spout type that aligns with your sap collection system (maple bucket, sap bag, or tubing). DO NOT drive the spout so hard that you split the tree. Tap on warm days when the temperature is above freezing to minimize the risk of splitting the tree. If sap is leaking around the spout after tapping, check whether it is loose. If loose, tap it in to be solid. If it is not, leave it be.
- **Step 3. Attach the Sap Collection Vessels:** Hang your bucket or container from the spout's hook. Alternatively, a tubing spout can be used, and enough food-grade maple tubing can be attached to reach a food-grade 5-gallon bucket at the base of the tree. Be sure to cover any bucket used to keep out rain, snow, and foreign material.
- **Step 4. Handle Sap Carefully:** Do not allow sap to accumulate in the collection buckets, especially in warm weather. Sap is like milk. It will sour if left in the sun. Keep the sap in cold storage. Boil it as soon as you can.
- **Step 5. Prepare the Evaporator:** To boil sap, use a hobby-sized evaporator, an outdoor gas range, or an outdoor fireplace. Prepare to boil the sap by ensuring your selected fuel is ready in ample supply and by having a large pan or a series of pans ready for the sap. Evaporator systems with more surface area are most efficient (think multiple catering pans over a cinder block fireplace). NOTE: Do not plan to cook the syrup indoors on the stove without a stove vent fan or a dehumidifier. Boiling sap creates a lot of steam.
- **Step 6. Boil Down the Sap:** Once the sap has started to run and you have collected enough to fill your pan(s) for boiling, you are ready for the fire. Do not fill your pan to the top, as this reduces efficiency and increases the risk of boiling over. As the sap boils down, keep adding more sap. Keep the sap at least 1 1/2 inches deep in the pan, or it may burn.
- **Step 7. Identify When the Syrup is Finished:** Sap becomes finished maple syrup when it reaches 66-69 percent sugar content. When that sugar concentration is reached, the syrup will be 7.1°F above the boiling point of water. Concentrations below 66 percent sugar content can ferment, or mold can grow over time. If the syrup is boiled above 68.9 percent sugar, sugar crystals can form at the bottom of storage containers.
- **Step 8. Filter Finished Syrup:** When the syrup has reached the correct density and temperature, filter it to remove "sugar sand" before hot-packing it into containers. Filter the syrup while it is still hot through clean filter material such as wool or Orlon™, available from maple equipment dealers. For walnut trees, try cheesecloth or a clean, thin cotton dish towel because the syrup is thicker and harder to filter.

## Upcoming Events

---

### Garden Hour Webinars:

February 4<sup>th</sup>- Honey Bee Colony Management and Key Floral Resources

March 4<sup>th</sup>- Naturalistic Landscape Design Style

April 1<sup>st</sup>- April Showers, Rain Garden Flowers

## Upcoming Events:

February 11<sup>th</sup> at 12:15 pm  
Myths and Misconceptions in the Garden at the Andover Public Library

February 16<sup>th</sup> at 12:15 pm  
Growing Cut Flowers at Lori's EmporiYum

March 28<sup>th</sup> at 9:30 am- Rain Barrel Clinic at the Whitewater Public Library

## February Garden Calendar

### Vegetables and Fruits

- Order seeds for spring planting
- Select varieties and order new fruit trees
- Take a soil test if one has not been done in the last five years
- Start broccoli, cauliflower, and cabbage transplants
- Prune:
  - Fruit trees like apples, pears, and cherries
  - Peaches and nectarines just before bloom time
  - Grapes, raspberries, and blackberries
- Incorporate manure or compost into the garden
- Avoid working the soil when it is wet

### Flowers

- Start seeds for transplanting in the spring
- Check fall-planted perennials and water if needed
- Watch for frost heaving of tender perennials and cover if needed
- Replenish winter mulch around roses and other plants
- Check bulbs in storage and discard if rotted

### Lawns

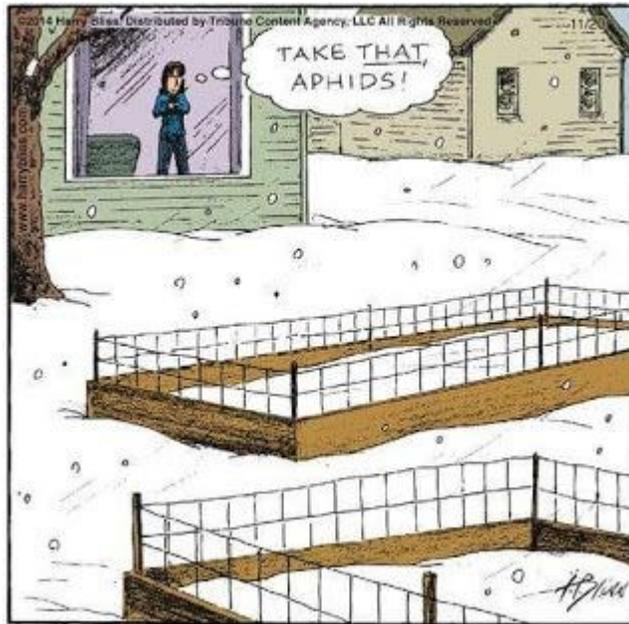
- To prevent lawn suffocation, rake fallen leaves
- Review lawn service contracts and make changes
- Tune up and repair the mower to get a jump on the season
- Avoid injury to the lawn when the soil is frozen by keeping foot traffic to a minimum

### Trees and Shrubs

- Check for rabbit damage on young trees and shrubs
- Water fall planted trees, shrubs, and evergreens if the soil is dry and not frozen
- Apply dormant oil for control of scale and mites
- Prune:
  - Begin spring pruning. Do not prune spring-flowering trees and shrubs until after bloom
  - Cut twigs and branches of spring shrubs to bring indoors and force for a splash of spring color
- Carefully remove snow from limbs with a broom
- On warm days, prepare garden soil for early planting

### Miscellaneous

- Check plants for insects, mites, or other problems and treat as needed
- Withhold fertilization until spring arrives
- Remove dust build-up on plants by placing them in the shower and washing them off, or using a soft cloth to wipe off the leaves
- Water as needed, avoid letting roots sit in water
- Keep plants out of hot or cold drafts



**Free** Gardening Classes  
**Benton Community Center**  
With Calla Edwards  
K-State Research & Extension Horticulture Agent

**Classes:**

- Seed Starting** on February 11th
  - Companion Planting** on March 11th
  - Myths and Misconceptions** on April 8th
  - Container Veggies** on May 13th
  - Landscape Design** on June 10th
  - Composting** on July 15<sup>th</sup>
- \*\*\*5:30 PM\*\*\***