



# Great Places

## Green Spaces

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Key topics: Pruning | Flood damage to trees

By Lokesh Bhattarai

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### Pruning Trees in Fall

Fall is the time of year when the leaves change colors and the weather starts to cool down. Trees change colors as the chlorophyll breaks down, showing vibrant reds, oranges, and yellows. The vibrant colors create a beautiful display. The trees prepare for the winter ahead by shedding their leaves and entering a period of dormancy. This edition of the Great Places, Green Spaces newsletter will delve into the topic of pruning trees during the fall season.

Pruning a tree is important for its health, aesthetics, and your safety. Safety pruning can prevent branches from falling and causing injury or damage. Pruning for health can increase airflow to avoid pest problems and diseases. Pruning for aesthetics is carried out in order to shape the tree and enhance its appearance.

Pruning trees during the dormant season is important for maintaining health and promoting new growth in the spring. Late fall provides an opportunity to remove the rotting or broken branches that might be a hazard after the winter storms. Removing dead and diseased branches in the dormant season can prevent the spread of pathogens to other parts of the tree.

The best time to prune is late fall through winter (when the tree is dormant). A growth response may be triggered by pruning before the tree shuts down for the winter, so be sure to wait until the leaves fall.

Pruning also depends on the species of the trees. Trees like maple and birch can be pruned at any time, while other trees might be more susceptible to diseases if not pruned at the correct time. While conifers can be pruned at any time of the year, they are often pruned during the dormant season to minimize the flow of sap and resin from the cut wound. Hardwoods are pruned in the dormant season because pruning during the dormant season can help you see the tree's structure more clearly, enhance wound closure during the growing season, lower the risk of spreading disease, and stop excessive sap flow from wounds.



*"In every walk with nature one receives far more than he seeks" - John Muir*

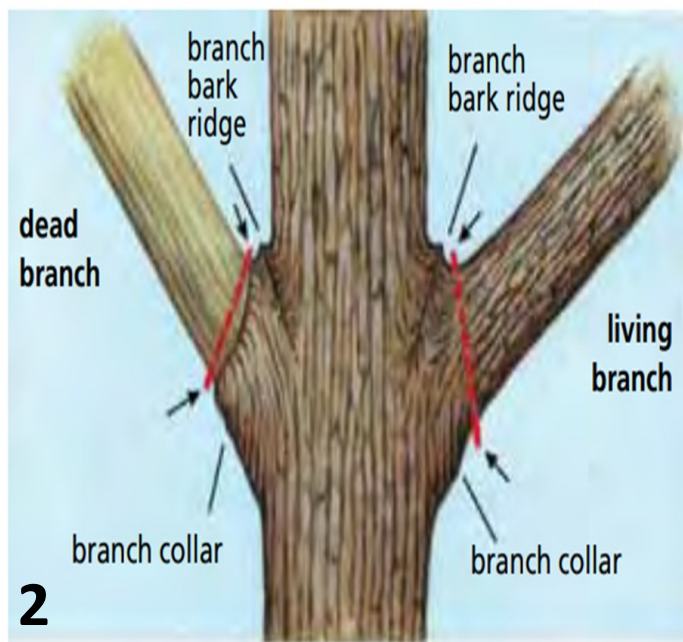


# Best Pruning Practices

## Pruning basics

Pruning cuts should not damage the stem tissues. Small branches can be pruned with hand pruners, whereas big branches might need a three-step pruning cut as depicted in figure one. The three-step pruning cut involves making an undercut first, then cutting outside the first cut to remove the branch, leaving the stub. The final cut is made to stub through the branch just outside the branch collar. This helps to promote proper healing and prevent damage to the tree.

The proper section to make a cut in a branch is above the branch collar, as shown in the figure two. The general rule of thumb for pruning is that no more than 25 percent of the live foliage should be pruned at one time.



## Pruning season for a few common tree species in South Dakota

- Arborvitae, junipers, and yews—All year.
- Ash — Fall to early spring.
- Bur oaks — When dormant.
- Chokecherry, plum, cherry, and other early blooming trees — Immediately after blooming.
- Elm trees — When dormant to prevent the spread of Dutch elm disease.
- European mountain ash — When dormant.
- Hackberry — When growth resumes in early spring. Late fall or winter pruning may lead to canker formation.
- Hawthorns — Late winter to avoid drying and die-back.
- Honeylocust — Fall, but make sure it is not going to rain when the cut is fresh. Nectria canker might infect honeylocust if the fresh pruned cut is exposed to rainfall.
- Linden — Mid winter. Sap bleeding if pruned in spring, late fall, or late winter.
- Maples — Winter to avoid sap bleeding.
- Oak trees — Late winter to early spring, when the tree is dormant, to reduce the risk of oak wilt disease.
- Pines — Mid-June to early July before the new needles mature.
- Rosaceae family trees like snowy mountain ash, crabapple, and apple varieties that are susceptible to fire blight — When dormant.
- Spruces and firs — All year.

*"I firmly believe that nature brings solace in all troubles" - Anne Frank*



# Trees after Flooding

## Do's and don't of pruning

- Sanitizing the tools between pruning cuts is important to avoid the cross infection.
- If you have a large tree you might not be able to prune yourself. Contact certified arborists to prune such trees.
- Avoid bad practices like topping, tipping, bark ripping, flush cutting and stub cutting (figure 3).



Topping



Tipping



Bark ripping



Flush cutting



Stub cutting

3

## Planting tree in fall

Fall is an ideal time for planting trees and shrubs, especially between early September and the end of October. The mild temperatures and moist soil conditions in the fall are ideal for allowing newly planted trees to establish their root systems before winter. Before the hot, dry conditions of the next summer arrive, these autumn roots help in the plant's establishment. Once you have planted the trees, be sure to water them regularly until the ground freezes.

## Trees after flooding

Floods can weaken trees, leaving them more prone to pest and disease damage. Damage from insects and diseases varies on flood severity and tree health. Trees are most vulnerable to flood damage in late spring compared to winter floodings. Flooding raises the pH of acidic soils and lowers the pH of alkaline soil. The chemicals contained in the flooding waters may be harmful for the tree when absorbed.

This June, southeastern South Dakota had witnessed a historic flooding event. Flooding can harm trees by altering soil conditions, disrupting oxygen and carbon dioxide exchange, causing sedimentation, and causing physical damage. You might see some impacts on the floodwater impacted trees within one to six months, like

1. the wilting and disappearance of leaves.
2. Smaller leaves.
3. Early autumn color and leaf drop.
4. Watersprouts coming from the main stem.
5. Crown dieback
6. Heavy seed production or no seed production.





### Trees most tolerant to flooding

1. Silver Maple
2. Green Ash
3. Honeylocust
4. Cottonwood
5. Black willow

### Trees moderately tolerant to flooding

1. Red mulberry
2. Hackberry
3. Hawthorn
4. Boxelder
5. Elm

### Trees intolerant to flooding

1. American Linden
2. Eastern red cedar
3. Black walnut
4. Sugar maple

### Sources

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### Contact Us:

**John Hartland**

**Staff Forester**

**South Dakota Department of Agriculture and Natural Resources**

**Resource Conservation & Forestry Division**

**4305 S Louise Avenue**

**Suite 107**

**Sioux Falls, SD 57106**

**Direct: 605.362.2830 | Cell: 605.933.9650**

*"Nature is something entirely different from what comes to mind when we invoke it's name"*

*- Friedrich Nietzsche*