



Notes with Answers for Woody Ornamentals Module

Woody plant structure and function

Explain the function of each of the following structures in the vascular system of woody plants.

Bark	<i>Protects the vascular system from damage.</i>
Phloem	<i>Plant vascular tissue that transports the sugars which are produced through photosynthesis from the leaves to other parts of the plant.</i>
Cambium	<i>Layer of quickly dividing cells between the wood and bark in trees, where new growth appears.</i>
Xylem	<i>Conducts water and nutrients from the roots up to the top of the plant.</i>
Pith	<i>The center of a stem; consists of old xylem cells that lend strength and structure.</i>

Planting woody ornamentals

Describe the specific recommendations when digging a planting hole for a woody ornamental plant.

The hole should be wide enough so all the roots point outward, but only as deep as necessary so that the roots sit on undisturbed soil to reduce future settling.



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Identify the steps in planting a tree once the planting hole has been dug.

1. *Remove the container or burlap.*
2. *Set the tree so the start of the root flare is above the final soil level.*
3. *Position the roots to grow outward and gently backfill with native, original soil, watering well to settle the soil around the roots.*
4. *Use two to three opposing stakes driven in outside the rootball to stabilize the tree for the first growing season. Be sure to use soft ties that won't damage the tree's bark, and remove the stakes after one year.*
5. *Apply wood mulch 4-5 inches deep to reduce weeds and retain moisture. Keep mulch away from the plant's trunk or stem to avoid rotting or other damage.*

Caring for established trees and shrubs

How much water do established woody plants need per week?

Established woody plants need an inch of water each week. A thorough weekly watering is more effective than frequent light watering.

How thick should coarse mulches be applied around woody plants?

3-4 inches

How thick should fine mulches be applied around woody plants?

2-3 inches



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How often should established trees and shrubs be fertilized?

Routine fertilization of trees and shrubs is not recommended. If recommended by soil test results, fertilize trees and shrubs in late April to early May, or in late fall after plants are dormant.

Pruning

List four reasons why it is important to prune woody plants.

- 1. Helps create strong structure and shapes plants into desirable form.*
- 2. Promotes the growth of new wood. Can promote flowers and fruit on certain species.*
- 3. Removes diseased plant parts. This can help prevent spread of disease to the rest of the plant.*
- 4. Removing dead or dying branches improves the plant's appearance and helps prevent hazards from the limbs should they fall.*

When should you prune deciduous woody plants?

Late dormant season- February through early April.

Each year, woody plants put on a new ring of lateral growth that we call growth rings. How does this lateral growth affect wounds to the plant?

The lateral growth seals external wounds over time. When done properly, pruning wounds will be sealed naturally by the plant.



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Successful pruning of lateral branches removes the branch without damaging trunk tissues. Describe the three steps to perform a 3-point cut, the technique for removing lateral branches.

1. *The first cut is 12-18 inches from the limb's point of attachment. Make an undercut halfway through the branch.*
2. *Starting from the top of the limb, make the second cut on the outside of the first cut. Cut all the way through, removing the weight of the branch.*
3. *Make the final cut next to the tree's trunk outside of the branch collar. Cut from the top down and all the way through the remaining branch stub. The branch collar should remain intact.*

When should you use the technique called the heading-back cut?

Heading-back cuts should be used to shorten the branch or stem to reduce its overall length or height.

How do improper cuts affect tree health?

Improper cuts can slow the sealing of the wound and may increase decay in the tree.

When should you use wound dressings and pruning paints on woody plants?

The only time the use of wound dressings and pruning paints is recommended is if you must prune an oak or elm during the growing season.