



# Hort Notes

An educational newsletter with research-based information for businesses and individuals involved in selling, planning, designing, servicing, and enjoying landscapes and gardens.

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## 2003 UMass Extension Garden Calendar: *It's a Jungle Out There*

Looking for a way to educate or thank your clients? Use UMass Extension informative 2003 Garden Calendar, *It's a Jungle Out There!*

**Orders of 25 or more to a single address qualify for the bulk rate of \$4.25/ea plus shipping.** For a price quote, including shipping, call the UMass Extension Bookstore at 413-545-2717. Orders will be shipped starting in October.

Next year's UMass Garden Calendar features many familiar landscape and garden plants and their key pest problems. Gardening continues to be one of the favored leisure time activities of Americans. Gardens enhance our immediate living environment, are a source of beauty, and supply some of our daily food selections. As the knowledge of gardeners increases and the range of gardening aids expand, gardens are more luxurious and productive than ever. The lushness of home landscapes and gardens often simulates that of complex ecosystems such as is epitomized by a dense tropical jungle.

As with a jungle, there are far more organisms in gardens than just plants. Our gardens are microcosms of lush vegetation inhabited by varied wildlife. Some of these organisms are considered pests and include insects, diseases and weeds. They often challenge or thwart our gardening efforts. Maintaining productive and attractive gardens requires that one accumulate some knowledge of the organisms that are apt to diminish the quality of our gardens. Recognizing key pests of garden plants is a start in the wise management of insects, diseases and weeds, and is at the core of Integrated Pest Management (IPM). IPM is a strategy which incorporates the use of all effective control measures and thereby minimizes the use of pesticides and their negative environmental impacts.

Our goal is to help the gardener to be able to: demystify the garden jungle, identify and develop a better understanding of pest and garden problems, and help reduce unnecessary pesticide usage. It is indeed a jungle out there, but one that we should not fear.

As always, the calendar offers beautiful color photos and information on garden pests and management strategies as well as daily gardening tips such as when to plant peas, how to manage grubs, sunrise/sunset times, and phases of the moon.

To order single copies, send \$8.50 payable to UMass (credit cards not taken for single orders) and send to: **UMass Extension Bookstore, Draper Hall, 40 Campus Center Way, Amherst, MA 01003-9244.**

For more information, order forms, and picture samples, go to [www.umassgardencalendar.org](http://www.umassgardencalendar.org)

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## **A Guide to Successful Pruning: Pruning Basics and Tools**

### **What is Pruning?**

**Pruning is a regular part of plant maintenance involving the selective removal of specific plant parts.** Although shoots and branches are the main targets for removal, roots, flower buds, fruits and seedpods may also be pruned. Pruning wounds plants, but plants respond differently to wounding than do animals. In plants damaged areas are covered by callous tissue to close wounds. Simply put: animal wounds heal, plant wounds seal.

Another response to pruning occurs inside plants around wounded areas - walling off or compartmentalizing wounds. Compartmentalization limits any decay that results from wounding or from the natural death of branches. Use pruning techniques that minimize plant wounding and speed wound closure.

**Current pruning recommendations** advise against pruning branches flush to the trunk. Flush cutting is harmful in several ways: it damages bark as pruning tools rub against the trunk, it removes the branch collar, and goes behind the branch bark ridge.

**The branch collar** is the swollen area of trunk tissue that forms around the base of a branch. If you prune away the branch collar, you remove not only the branch wood, but also trunk wood, opening the plant to more extensive decay. The branch bark ridge on trees is a line of rough bark running from the branch-trunk crotch into the trunk bark. It is less prominent on some trees than others. The best pruning cut is made outside the branch collar, at a 45 to 60 degree angle to the branch bark ridge.

### **What tools are needed?**

**Use hand pruners** to cut stems up to  $\frac{3}{4}$  inches in diameter. Two types of pruners are available: bypass and anvil. Bypass pruners have sharpened, curved, scissors-type blades that overlap. Anvil pruners have straight upper blades that cut against flat lower blades. Although anvil pruners are usually cheaper, they tend to crush the stems as they cut. Furthermore, the width of the anvil can prevent you from reaching in to get a close cut on narrow-angled stems. Due to these drawbacks, bypass pruners are generally recommended.

**Use lopping shears** to cut through branches that are up to  $1\frac{3}{4}$  inches in diameter. Loppers have long handles to give you extra reach and better cutting leverage. For heavy duty pruning jobs, select loppers with ratchet joints or those with gears. Also look for loppers with shock absorbing bumpers between the blades, to lessen arm fatigue. Again, bypass blades are preferable.

**Use pruning saws** to remove stems you cannot cut with hand pruners or lopping shears. Pruning saws come in many sizes, with either straight or curved blades, and teeth that are either fine or coarse. Use a finely toothed, curved pruning saw to remove branches up to 2½ inches in diameter. You can make a clean cut with this type of saw where access is difficult. Use a coarsely toothed saw for heavy branches 3 inches or more in diameter.

**Use pole pruners** to cut out-of-reach branches up to 2 inches in diameter. Pole pruners consist of blades attached to stationary hooks, which are mounted on long wooden or aluminum poles. A cord or chain is used to control the cutting action of the spring-loaded blade. Fully extended, you can use pole pruner to reach branches 12 feet or more in height. Pole pruners are especially valuable on jobs where ladders would be inconvenient, or would damage the tree. Use great care when pruning near utility lines.

**Use chain saws** to remove branches greater than 3 inches in diameter. Many types and sizes of chain saws are readily available, powered by gasoline or electricity. In selecting a chain saw, carefully consider the tasks for which it will be used. The size of the engine and the length of the blade determine the branch diameter through which you can cut. Chain saws should be used, only with appropriate safety gear, by people who fully understand their operation.

**Use hedge clippers or pruning shears** to trim thin-stemmed hedges. Manual hedge clippers, and ones powered by gasoline or electricity, are available. All types shear off growth in a straight line, regardless of branch ridge or branch collar location. If you have a long hedge, you may have to use hedge clippers when hand pruning is impractical. With repeated shearing, hedges develop a profusion of outer twigs, die back in the center, and often show an increase in pest problems.

**Select quality tools.** They will last longer and make pruning more pleasurable. For maximum effectiveness, sharpen blades regularly and dry and oil them after each use. Use a file or whetstone for sharpening hand tools and have an experienced professional sharpen chain saws and power hedge clippers. Listerine™ must be used full-strength to be effective against many diseases. Use rubbing alcohol of 70%, 91%, or 99% concentration. Don't use Pine Sol™ or household bleach to disinfect your tools. Tests show they are highly corrosive to metal. Remember that no disinfectant can provide complete protection against disease.

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# MONITORING & MANAGEMENT CHECKLIST FOR THE DORMANT SEASON

PROBLEM TYPE - Leaf spots and blotches

## EXAMPLES

**Apple scab** (*Venturia inaequalis*) p. 96 CD

**Hawthorn leaf spot** (*Entomosporium mespili*) p. 64 CD

**Black spot on rose** (*Diplocarpon rosae*) p. 66 CD

**Tar spot on maple** (*Rhytisma sp.*) p. 54 CD

**Leaf blotch on horsechestnut** and

**Ohio buckeye** (*Guignardia spp.*) p. 80 CD

**Black spot on elm** (*Stegophora ulmea*) p. 108

## WHAT TO LOOK FOR

Discolored, dead areas on foliage, and early leaf loss. These leaf diseases (except tar spot) have repeating infection cycles. New spores produced throughout the growing season infect leaves repeatedly and spotting gets worse. On the other hand, tar spot on maple infects leaves only in the spring, and does not have repeating cycles of infection during season. The fungus grows within the leaves and conspicuous symptoms gradually become more evident.

## WHAT TO DO

When replacement is an option, consider planting resistant varieties. Rake up and destroy fallen leaves to reduce initial infections next spring. Make note of heavily affected newly transplanted and specimen plants this year. If next spring wet, apply an initial protective fungicide spray as buds break. Plan follow-up sprays to protect leaves from fungi that have repeating cycles.

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PROBLEM TYPE - Anthracnose

## EXAMPLES

**Dogwood anthracnose** (*Discula destructiva*) pp. 122-124 CD

**Sycamore anthracnose** (*Discula platani*) p. 112 CD

**Oak anthracnose** (*Discula quercina*) p. 110 CD

**Maple anthracnose** (*Discula* and *Kabatella* spp.) p. 104 CD

**Walnut anthracnose** (*Gnomonia leptostyla*) p. 118

## WHAT TO LOOK FOR

Spots and blotches on leaves. Branch and twig die back, often with foliage still attached, zigzag branching patterns, and sucker growth are common. All these fungi have repeating cycles of infection during the season. Dogwood, walnut, sycamore and oak anthracnose infect both shoots and leaves and overwinter in buds, twigs and fallen leaves. Other anthracnose fungi, of which maple anthracnose is a likely example, primarily infect leaves and occasionally twigs.

## WHAT TO DO

When replacement is an option, consider planting resistant varieties. Rake up and destroy infected leaves. Prune out infected branches during the dormant season or when conditions are dry. Make note of heavily infected plants this year. Specimens, small newly transplanted trees, and nursery stock may benefit from protective fungicide sprays next spring. Apply 2 to 4 sprays at 7-14 day intervals from bud break to full leaf expansion if conditions are favorable for disease development.

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PROBLEM TYPE - Scales (Soft)

EXAMPLES

**Cottony Taxus Scale** (p. 344)

**European Elm Scale** (p. 368)

**Fletcher Scale** (p. 364)

WHAT TO LOOK FOR

Black sooty mold on needles, twigs or branches. Most soft scales overwinter as translucent nymphs on twigs.

WHAT TO DO

Dormant oil particularly effective against soft scales; however some deciduous species sensitive to oil. Avoid broad spectrum cover sprays if possible to conserve natural enemies.

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PROBLEM TYPE - Scales (Hard)

EXAMPLES

**Euonymus Scale** (p. 388)

**Oystershell Scale** (p. 370)

**White Prunicola Scale** (p. 392)

WHAT TO LOOK FOR

Hard, gray scale covers on twigs, branches and trunks.

WHAT TO DO

Dormant oil helpful but not as effective on hard scales. Schedule treatments for crawler stage(s).

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PROBLEM TYPE - Mites

EXAMPLES

**Two-Spotted Spider Mite** (p. 476)

**Oak Spider Mite** (p. 472)

**Spruce Mite** (p. 98)

WHAT TO LOOK FOR

Clear or reddish-orange bubble shaped eggs on leaves, needles and twigs.

WHAT TO DO

Dormant oil very effective. Mites of deciduous plants also overwinter on fallen leaves. Thorough clean-up and removal is needed as eggs may survive shredding.

*CD = More detailed information on this insect can be found on UMass Extension's Tree Bytes CD-ROM. The page numbers in the second column, after the pest, refer to the texts Insects That Feed on Trees and Shrubs, 2nd ed., Johnson and Lyon, and Diseases of Trees and Shrubs, Sinclair, Lyon and Johnson, Cornell University Press.*

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