



## CAPE COD COOPERATIVE EXTENSION

### FALL MAINTENANCE PRACTICES FOR LANDSCAPES

In the fall, the focus of landscape maintenance shifts somewhat from the routines of summer. Much of the work now is directed toward getting landscapes cleaned up and ready for winter.

#### Clean Up

In a years s when rainfall is abundant during leaf emergence and expansion and humidity is persistently high, foliar diseases are prevalent. Diseases such as anthracnose can, over the course of the year, reduce the photosynthetic capacity of plants. With repeated occurrences of such diseases, the vigor of woody plants will steadily decline. Hence, it is important to reduce the potential for severe infections in subsequent years.

The key is sanitation. Many of these diseases overwinter on leaves and stems of plants. These plant parts serve as a reservoir of inoculum for future infections. If conditions are favorable next spring, fungal or bacterial spores (inoculum) can re-infect trees, shrubs, and herbaceous plants. Therefore, as an important component of Integrated Pest Management and Plant Health Care programs, it is essential that infected plant materials be removed and destroyed this fall. This means raking up leaves, cutting down infected stems of perennial plants and pruning out disease-infected branches and stems of trees and shrubs.

Insect activity is usually diminished in fall but weakened trees and shrubs should be examined for presence of borers. In some cases, infested branches should be removed.

#### Pruning

Fall offers an excellent opportunity to do corrective pruning. Corrective pruning involves removal of dead, damaged, or diseased branches and the elimination of limbs that may be causing structural problems. Examples of structural problems include branches that may be rubbing, those that are growing back to the center of the tree, and those with abnormally narrow crotch angles.

Normally, pruning is a growth-stimulating event. Since trees and shrubs are for the most part dormant now, this should not pose a problem. In addition, the selective and targeted type of pruning involved is less likely to stimulate growth than is a general shearing type of pruning.

As leaves drop from deciduous woody plants, it is easy to survey and detect defects in trees and shrubs. Canker formations, rubbing branches, splits or cracks in wood are apparent when not obscured by foliage.

#### Nutrient and Water Management

Research in recent years has shown that the nutrients that support spring growth in woody plants are those that were taken up in the previous year and stored over winter. A conclusion of that research is that late summer and early fall are the best times to apply fertilizer to woody plants in the landscape. This particularly applies to nitrogen application.



It is widely assumed that fall applications of fertilizer stimulate late season growth that is then prone to winter injury. This is not true. At normal rates of application, fall applied fertilizers do not cause growth and in fact may help increase winter hardiness of trees and shrubs.

If fertilizer applications are needed, this is a good time to make them. Plant roots continue to take up nutrients when soil temperatures are above 40 degrees F.

The need for fertilizer should always be evaluated before making any applications. Examining the general vigor of plants and data from soil and foliar analyses is the best way to assess need.

If organic fertilizers are used as a primary source of nitrogen, the earlier the applications are made the better, since rate of uptake is related to soil temperature. The usual amount of nitrogen applied to woody plants varies from one to three pounds actual nitrogen per thousand square feet. The amount applied will depend upon plant vigor and soil texture considerations. On sandy sites, lower amounts of nitrogen are applied to reduce the likelihood of leaching. Using slow-release fertilizers is also recommended on sites where leaching is a potential problem. Amounts of phosphorous and potassium to be applied should only be determined by soil testing. The latter nutrients can be applied at any time of the year since they are more static in the soil than is nitrogen.

Fall soil tests should also be used to determine any corrections to soil pH. If limestone is needed to raise soil pH, this is an excellent time to make such applications. The combination of precipitation, melting snow, and freezing/thawing events facilitate the movement of limestone into the soil.

Winter survival of woody plants depends to a large degree on ample soil moisture levels in early fall. Though soil moisture has not been an issue this year, water needs to be applied in some years to insure that woody plants have taken up sufficient amounts of moisture to prevent stress related to desiccation, that is, plant water loss in winter. When soils are dry in late summer and early fall, water should be applied once per week or so, depending upon soil moisture levels, through October.

### Mulching

Fall is a good time to apply mulches or to renew mulches around trees and shrubs in the landscape. Organic mulches such as bark nuggets, pine needles, or composted wood chips are preferred.

Organic mulches help to establish a soil profile similar to that of the natural habitat of woody plants. The existence of this profile with a significant organic layer on the surface of soil accomplishes several things. For one, it buffers soil from extremes in temperature and moisture levels. It also diminishes competition from other plants by retarding their growth or preventing their establishment in the vicinity of the tree or shrubs.

Organic mulches over time decompose to humus. In the process, nutrients are slowly released to soil and are available for uptake by plants. Where mulches are routinely maintained, the need for additional plant nutrients may not be necessary.

Organic mulches also serve as nutrient sources for a diverse community of microorganisms. These microbes benefit the health of trees and shrubs in a variety of ways. They help make available phosphorous and other mineral nutrients, antagonize disease-causing fungi and bacteria, and maintain soil fertility.

A layer of mulch that is no more than three inches deep is best for landscapes.

### Conclusion

Fall is a critical time in landscape maintenance. Cultural practices employed now will ensure a healthier landscape next spring.

