



Hort Notes

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

Volume 13, Number 2
March 18, 2002

UMass Extension's

LANDSCAPE MESSAGE

1-413-545-6550 or at www.UMassGreenInfo.org

Current landscape and lawn pest outbreaks and their management strategies are just a phone call or mouse click away.

*For the LANDSCAPE MESSAGE check anytime, 24 hours a day, 7 days a week.
The message will be updated bi-weekly in March.*

The Landscape Messages are individualized for three different regions of Massachusetts:

- **Cape Cod**
- **Eastern** (Middlesex, Essex, Norfolk, Suffolk, Plymouth, Bristol, and eastern Worcester counties)
- **Western** (Pioneer Valley, Berkshire and western Worcester counties)

To subscribe to the faxed or e-mail version of the Landscape Message (\$30/year), call (413) 545-0895.

Business Opportunities with the Commonwealth of Massachusetts

The Commonwealth of Massachusetts has established and maintains a list of pre-qualified *Groundskeeping/Landscaping and Snow Removal Services Contractors* from which departments and other eligible entities can select contractors to perform various commercial, industrial, institutional and/or residential maintenance and services. Such services may include athletic fields/turf services, grounds-keeping/landscaping, snow removal, and other services.

The duration of this contract is one year with two possible extensions of up to 24 months each option. The contract is currently in its first year and until November 19, 2002 is an open enrollment contract, which means that new bidders may submit responses for review at any time until that date.

If you are interested in providing landscaping/groundskeeping and/or snow removal services to Commonwealth agencies, please refer to the *Request for Response (RFR) for Groundskeeping/Landscaping and Snow Removal Services (FAC23A)* at the Commonwealth procurement web site www.comm-pass.com. To access the document, select "Search" in the main site menu and type in the Bid Reference Number "FAC23A" in the "Document Number Search" form at the bottom of the search page.

For more access information, call Comm-PASS help Desk at 1-888-MA-STATE (888-627-8283).

Managing Crabgrass Without Herbicides: What Changes in Management and Budget Need to be Considered? - Part II

Managing crabgrass without the use of herbicides can be relatively easy at sites where populations are low. Where existing populations are moderate to very high, this can be very difficult if not impossible. As mentioned in the last issue of *Hort Notes*, the failure of new seeding and non-herbicidal control programs is often due to large existing crabgrass populations at the site.

One option would be to use a preemergence control program for a few years in order to decrease populations. Use untreated locations (different each year) at the site to monitor population decreases. Once populations have been reduced, a non-herbicidal control program can be initiated. Another option that may solve this problem would be the use of Basamid™, a soil fumigant containing the active ingredient dazomet, before turf establishment. Basamid™ will greatly reduce existing crabgrass populations and increase both the rate of success of turf establishment and subsequent non-herbicidal management programs implemented at the site. Follow label directions to maximize results.

Several products containing corn gluten are commercially available for crabgrass control. Corn gluten meal is a by-product of the wet milling process of corn. Corn gluten products are marketed for use as a preemergence herbicide, and contain 10% nitrogen by weight. Compounds in the protein fraction of corn gluten have been reported to inhibit root growth of germinating seeds. Application rates range from 10 to 80 lbs per 1000 sq. ft. annually and vary among products.

Some studies report crabgrass control ranging from 50 to 60% the first year and as much as 90% control after three consecutive years of use. It is often disputed as to whether the control achieved with corn gluten is associated with the compound's inhibitory characteristics or simply the competitive nature of a well fertilized turf. If corn gluten products are used, adjustments in the fertility program may be needed in order to avoid over fertilization. The nitrogen supplied by corn gluten is in a slow-release form and available throughout the growing season. Therefore, adjustments in turf and pest management may be needed.

Since corn gluten interferes with root growth at germination, it should not be applied where seeding or re-seeding is planned. These products should not be used in areas where Canada geese and other waterfowl are considered unwanted inhabitants. Corn gluten products are much more expensive than traditional preemergence herbicides and, in most cases, the treatment of large areas is cost prohibitive.

Before a decision is made to manage crabgrass without the use of herbicides, several aspects related to the site and overall management need to be considered. First, what is the existing crabgrass population at the site? A site at which sufficient crabgrass control has been difficult to achieve with herbicides would not be a good candidate for a non-herbicidal program until measures were taken to reduce the existing population. Second, what is the level of crabgrass control that is considered to be acceptable at that site? One should understand that non-herbicidal programs seldom result in comparable crabgrass control to those which use herbicides. This is especially true in the first few years after adoption and if crabgrass populations are moderate to very high. Depending on existing populations, it may take several years to reach a level that is considered acceptable to both client and turf manager. And third, what are the available resources allocated to manage the site? Resources such as materials and labor need to be considered. Some elements of a non-herbicidal weed control program, such as an increase in mowing height, may be easily achieved with no additional resources needed. However, other management practices could result in a significant change in the management budget. Additional expenses would be incurred for labor and material such as seed, fertilizer, equipment, and irrigation.

If any of these considerations are of concern, then perhaps an annual crabgrass control program that does not use herbicides is not appropriate at this time. One should then focus on developing an IPM program that integrates all effective control strategies.

Part I of this article appeared in the previous issue of Hort Notes. Originally printed in Turf Notes, Vol. 10, #2 Winter 2001-2002.

Disclaimer: Where trade names (™) are used for identification, no product endorsement is implied nor is discrimination intended against similar materials. The authors have assembled the most reliable information available at time of printing. Due to constantly changing laws and regulations, UMass Extension can assume no liability for recommendations.

Randall G. Probstak
UMass Extension Educator - Landscape, Nursery & Urban Forestry

Questions from You

Q. Is root pruning advisable prior to digging and transplanting trees in the landscape?

A. Root pruning can have some positive effect on the success of transplanting of a tree, although the benefits may be minimal if the tree is properly cared for and adequately irrigated from the time of transplanting until it is established. Keep in mind that the time for a tree to become established could take several years, depending upon the size of the tree. Providing good care over that time may not be feasible.

The purpose of root pruning is to promote a high density of fine roots within the root ball of the transplant. When roots are severed, as in root pruning, the cut ends regenerate numerous fine roots.

Root pruning can be accomplished simply by pushing a tree spade about 12 inches or so into the ground

and in a circle around the tree. The diameter of the circle should be a little less than the final root ball, that is, the size of the root ball at transplant time. (Size of the root ball is 10 to 12 times each inch of stem caliper. Stem caliper is measured at 6 inches above the ground for trees less than 4 inches caliper and at 12 inches for larger trees.) Root pruning can also be done by digging a narrow trench around the root ball and then backfilling the trench with a mix of sand and organic matter. Another technique, often used with larger trees, is to dig the trees with a mechanical tree spade. The tree is actually lifted from the ground and then reset. I have seen this technique used commonly in tree nurseries in Europe. More typically, nurseries employ a U-shaped blade to root prune young trees in the field.

Root pruning should be accomplished prior to the time of normal root initiation. Root growth for most tree species occurs just after bud break in spring and then again in fall. If root pruning is to have a positive effect on transplant success, it should be done some time before transplanting. Fall-dug trees should be root pruned in March. Spring-dug trees should be root pruned in October after leaf fall. Unless irrigation is available, root pruning should not be undertaken during periods of drought. Nor should it be done during periods of rapid shoot growth. Trees should be watered right after root pruning.

Q. Which tree species are prone to “bleeding” of sap following late winter pruning? Is the bleeding harmful to the plants?

A. Trees most likely to bleed when pruned in late winter/early spring include: maple, birch, beech, walnut, yellow wood, hop hornbeam, and elm. According to Harris (*Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines*, 2nd edition, 1992, Regents/Prentice Hall, p. 375), “Bleeding is usually not harmful to plants, but if it is heavy and persistent it can cause bark injury below the pruning cut and can retard callusing in the lower portion of the wound.” If bleeding is a concern, these trees can be pruned after they have leafed out, or in fall or early winter.

Ron Kujawski

UMass Extension Educator - Landscape, Nursery & Urban Forestry

Invasive Species: Nursery Industry Voluntary Code of Conduct

The nursery industry could soon have a voluntary code of conduct for dealing with invasive species. Codes are being drafted by members of the nursery industry as a result of a December 1-4, 2001 workshop in St. Louis. The event was attended by representatives from the American Nursery and Landscape Association, arboreta, universities, governmental agencies, and environmental groups. “The first draft of the code could be finished in early 2002,” said Kate Fay, owner of K.C. Fay & Assoc. in Boulder, Colorado. In addition to codes of conduct for the nursery industry, other codes are being developed for arboreta and botanical gardens, governmental agencies, and the landscape industry.

Katefay@compuserve.com

Biocontrol for Invasives

Several fungi species have shown potential as biocontrols for some of the most invasive weeds, including purple loosestrife, morning glory, kudzu, and ragweed. USDA researchers are studying the effectiveness of *Harnesia lythrii* for use on purple loosestrife and *Myrothecium verrucaria*, sicklepod fungus, on kudzu. “The release of natural weed enemies could be a cost-effective alternative to chemically controlling these plant pests,” said David Farr, curator of the U.S. National Fungus Collections in Beltsville, MC; dave@nt.ars-grin.gov

Excerpted from Weekly NMPRO, Terri Smith

Upcoming Events

from UMass Extension’s Landscape, Nursery and Urban Forestry Program

Ecological Management Strategies for Weeds, Insects, and Diseases in the Landscape

Marlborough, MA

March 26 - Learn about Integrated Pest Management concepts and optimizing the control of insects, diseases and weeds in the landscape using key cultural management strategies, less toxic chemical materials, and an understanding of the biology and stages of key pests. **Cost is \$75.** *Three pesticide contact hours for categories 29, 36 & comm. applicator license; two contact hours for cat. 37 offered.*

Invasive Plants: It’s Our Problem

Marlborough, MA

April 10 - The issue of invasive plants has become a major topic of discussion. This program will help green industry professionals better understand the issue, addressing the problems caused by invasive plants, the traits of such plants, the species under evaluation for their invasive habits, and the current responses of the Green Industries in New England to the issue of invasives. **Cost is \$45.**

Pruning Workshops

Belchertown, MA

April 2 - Pruning Fruit Trees: Practice the techniques of pruning and training apple, peach, pear, cherry and plum trees, focusing on the practices that enhance fruit production and quality. **Cost is \$40.**

April 16 - Pruning Neglected Apple Trees: Learn how to evaluate the tree’s condition, remove weak

wood, properly lower tree height, and procedures to follow year after year. **Cost is \$40.**

To get registration forms:

Call (413) 545-0895; **Fax** (413) 577-1620; or **Online** www.umassgreeninfo.org

HORT NOTES is a horticultural newsletter published bi-weekly from March through October by UMASS Extension. Subscriptions by mail are \$20.00 (16 issues) per year. Make check or money order payable to *University of Massachusetts*, and mail it to *HORT NOTES*, French Hall, 230 Stockbridge Rd., UMass, Amherst, MA 01003-9316. When writing to request a change of address or to renew a subscription, please include the mailing label.

Kathleen M. Carroll, UMass Extension Educator
Landscape, Nursery and Urban Forestry Program Coordinator