

News & Views

for New Hampshire's Green Industry

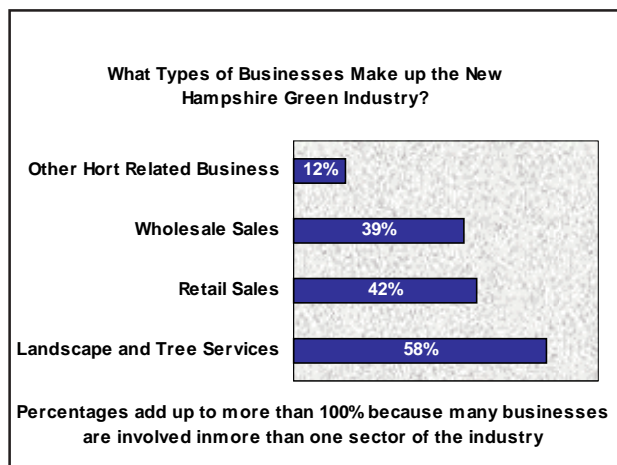
January-March, 2003

\$438 Million and Growing in New Hampshire

The results of the New England survey of the environmental horticulture industry were revealed at New England Grows last week. As expected, the industry continues to grow in value and numbers of firms throughout much of New England and generates over \$4 billion in sales annually. In New Hampshire, horticultural firms are a major sector of agriculture, with over 900 firms involved in plant production, retail sales, and/or landscape services. The estimated value in New Hampshire is \$438 million, up by 15% from \$381 million in 1998. Providing jobs for over 12,000 people, the green industry also keeps 21,000 acres in agriculture and pays more than \$16 million in taxes. 81% of the sales and services are sold within state, strengthening the local economy many times over.

For more details on the survey and results, visit the web site:

<http://pss.uvm.edu/ppp/nesurvey/index.htm>



What Will Winter Weather Wreak on Woodies?

There's a tongue twister for you (try saying it five times quickly). Haven't you wondered what effect the weather conditions this winter will have on woody landscape plants? Probably not a very positive one. The extreme cold temperatures combined with high winds provide ideal conditions for excessive winter burn and desiccation on exposed plants. Add to that the fact that many of our plants have been under drought stress for the last two years, making them even more susceptible to winter injury. We can expect to see typical winter desiccation on evergreens, such as rhododendrons. The bronzing from the leaf margins is brought about when the soil moisture freezes and is unavailable to the roots. Similar symptoms of winter burn are likely to appear on needled evergreens such as



Cathy Neal

yew, spruce and hemlock. Exposure to salt spray exaggerates the symptoms on nontolerant species such as pine.

If snow cover remains into late March and April we could see injury levels similar to those we saw in 2001, particularly on rhododendrons. As the days become longer, with the sun higher in the sky, light is reflected off the snow onto the leaves. Warmer air temperatures and the intense reflected light cause the stomata in the leaves to open, allowing for the rapid loss of water from the tissues. With the soil moisture still frozen, roots are unable to extract water to replace that lost from the leaves and desiccation results.

Plant parts differ in their hardiness, with the roots actually being most sensitive to subfreezing temperature injury. Makes sense, since roots are normally well insulated by soil, right? But nursery plants growing in containers must be over-wintered in structures or piles covered with an insulating material for protection of the root balls. Well-constructed piles, with additional insulation provided by good snow cover, should fare well this year. But any plants stored in unheated poly houses or tunnels could well have experienced lethal root zone temperatures.

Exposed flower buds of many forsythia cultivars have no doubt been killed and we will see the snow line well-defined during bloom. Bigleaf hydrangeas (*Hydrangea macrophylla*) shouldn't be expected to bloom this year, since they have probably been killed back to the ground and most cultivars flower only on second year wood. Some other zone 5 or 6 plants which have crept a little further north during the past few years will probably be killed outright or show dieback and decline – flowering dogwood, flowering cherries, Japanese snowbells, and buddleia are some I'm doubtful about. It's a good year to observe which cultivars of species such as azaleas, red maple and *Chamaecyparis* fare well and which ones don't.

Mechanical injury from heavy snow loads is another problem that will become more and more apparent when (or if?) the snow melts this year. Arborvitae, upright junipers, and other evergreens may need some major corrective pruning and staking to recover. Even worse off are those poor parking lot plants subject to the forces of evil snowplows shoving and piling all around them, breaking branches and gouging tree trunks.

The extent of the winter damage will not be fully apparent until mid-summer. The spring growth flush depends on reserves the plant has stored over the winter and should be largely unaffected by



The skirt of bloom on this forsythia resulted from the insulating effect of snow cover. Exposed buds above the snow line were killed by cold temperatures.

winter weather conditions. However, when temperatures rise and water demand on the plant increases in mid-summer, the ability of the root system to keep up with water and nutrient demand will be taxed if significant root or lower stem injury occurred from cold temperatures. Then we will see signs of wilting, leaf scorch, and branch dieback as a result of impairments further down in the plant. The combination of drought and winter injury also predisposes trees and shrubs to twig blights and cankers. The fungi that cause these diseases are opportunistic, attacking plants that have been injured or under stress. We can expect to see more Diplodia (*Sphaeropsis*) and Phomopsis twig blights, Cytospora and Phomopsis cankers and Botryosphaeria dieback.

The most important thing in the spring is not to 'jump the gun' and immediately prune off anything that appears dead. Wait until all the damage is apparent, and check for healthy green cambial tissue before pruning. Make sure to make proper pruning cuts, cut back to a live bud or branch, and use sharp tools to avoid tearing and further injury.

Well, that's the bad news. Look on the bright side – there should be plenty of work for landscapers this spring and nurseries should benefit from the demand for replacement plants. Use this as an opportunity to try new plants and improved cultivars – yews that are less susceptible to winter burn, forsythias selected for bud hardiness, new cold hardy azalea cultivars, and so on. And doesn't 'Endless Summer' reblooming hydrangea sound enticing – maybe warmer weather will return...er, return.

**Cheryl Smith
and Cathy Neal**

Q: What impact has this winter's snow had on the survival of turfgrasses?

A: The snow has helped protect the turf from direct low temperature kill. Basically, snow (especially the dry-powder type) acts like a mulch and reduces the degree of temperature change at the soil surface. Perennial ryegrasses are the most susceptible lawn grasses injured by low temperatures.

John Roberts

The Return of Cut Poinsettias



More than 30 years after cut poinsettia became non-existent, a new cultivar from Gloeckner has opened new opportunities for high quality poinsettias as cutflowers. 'Renaissance Red' is an exciting cultivar with a new look, excellent quality and long vase life.

The new Renaissance poinsettia series will contribute significantly to the growth of the specialty cutflower industry and provide North American cutflower growers with an alternative fall crop. The most important cultivar in this series is Renaissance Red, formerly known as 'Winter Rose Crimson'. It has large curled red bracts carried on long stems (18-30 inches), and lasts in the vase for 14-21 days. This makes it a perfect cutflower.

Paul Fisher, John Dole and Geoffrey Njue set up trials at the University of New Hampshire and North Carolina State University to evaluate the feasibility of producing high quality cut stems, maximizing stem length while minimizing crop time and increasing profitability. Fred C. Gloeckner Foundation provided support for the research while Paul Ecke Ranch provided the poinsettia cuttings.

The trials showed that it is possible to produce high quality cut flower stems from Renaissance Red. Weekly sprays with ProGibb (Gibberelin) when applied before the start of short days increased the stem length. The general crop time for Renaissance Red Cut poinsettia was 18-20 weeks.

Post Harvest Life

Cut stems were harvested when one or two cyathia had anthers visible (at anthesis). However, harvest maturity had no effect on vase life. There was no decrease in vase life when cut stems were harvested up to 4 weeks after anthesis. Post harvest life was excellent in deionized water with vase life average of 14-21 days.

Pretreatments such as alcohol dips, heated floral solution or sucrose pulses had no effect on vase life and therefore would not be recommended. Cut poinsettia was damaged by storage temperatures below 50° F, and vase life was longest when cut stems were stored wet. Commercial floral preservatives such as Floralife or Chrysal had no effect on vase life.

Marketing

Cut stems were delivered to four retail florists in New Hampshire who sold and tracked their retail sales. Three wholesale poinsettia growers grew and marketed the flowers through brokers. In North Carolina stems were sold wholesale to two upscale supermarkets and one florist. The average retail price per stem was \$ 3.00 - \$8.50. The longer stems sold at higher prices than shorter stems. The minimum stem length required by customers was 16 inches.

The wholesale growers sold the flowers in pots. The average wholesale price per stem was \$ 2.50 regardless of the stem length. With the average cost of production at around \$2.00 per stem the cut poinsettias would provide an alternative profitable fall crop for growers. Because cut poinsettias do not perform well when boxed and shipped, they would work better for retail growers than for wholesale growers.

Because of its unusual bracts the Renaissance Red was not readily identifiable as a poinsettia. Other colors of cut poinsettias in development such as rose, pink, white, cream or bicolors will provide choices for cut poinsettia customers. We observed that cut poinsettias would sell best when customers are able to personally see the product, and would work best when sold to florists and specialty supermarkets but not to mass markets. Promotion is needed to establish the market for cut poinsettias and education is needed to help customers use the product.

Geoffrey Njue

Spring Events

- Feb 25** Tri-County Vegetable & Cut Flower Seminar. Wolfeboro Public Library. 8:30 a.m. - 3 p.m. UNH Coop. Extension, Carroll County, 539-3331. (5 pesticide credits)
- Feb 28-Mar 1** Winter Conference & Eco-Marketplace. Boxborough Holiday Inn, Boxborough MA. Contact Ecological Landscaping Association at 617-436-5838 or UMass Extension at 413-545-0895.
- March 12** Roundtable Discussion on Alternatives for Invasive Plants. Merrimack County Extension Office, Boscawen. 1-3:30 p.m. To register, 862-3200.
- March 13** Preservation of New England's Vintage Trees. Univ. of Massachusetts, Amherst. 8 a.m. - 4 p.m. UMass Extension, 413-545-0895.
- March 18** Perennial Plant Conference. Univ. of Connecticut, Storrs CT. Dr. Mark Brand, 860-486-2930 or www.hort.uconn.edu/ppc/.
- March 18-19** NE Regional Turfgrass Conference and Show. RI Convention Center, Providence. 401-848-0004 or www.NERTE.org.
- March 19** NHLA Spring Conference. Audubon Center, Auburn. Contact NH Landscape Association, 800-639-5601.
- March 21-22** Integrated Design/Integrated Development, Conference on Environmentally Responsible Design and Development. 603-357-2863 or www.aianh.org/Pages/idid.html.
- March 25** NH Arborists Association Spring Meeting. The Sugar Shack, Barrington, NH. Mary Reynolds, 271-2214 x 307.
- March 29** The Great American Lawn - Alternatives and Cost Benefits. Arnold Arboretum Hunnewell Building, Jamaica Plain, MA. Contact Ecological Landscaping Association, 617-436-5838.
- April 4-5** UNH Greenhouse Open House. Durham NH. Info at 603-862-3200.
- April 4-6** Seacoast Home & Garden Show. Whittemore Center, Durham NH. Info at 1-800-359-2033.

This newsletter is a cooperative effort of the Ornamentals Extension Educators and Specialists at the University of New Hampshire. It is published quarterly. Its purpose is to inform and update industry members on issues and research relevant to the production, use and maintenance of ornamentals and turf in New Hampshire. Contributors for this issue:

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