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FEBRUARY / MARCH 1999



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February

18-21 SIXTH ANNUAL RHODE ISLAND SPRING FLOWER AND GARDEN SHOW ("Gardens of the Future"), Rhode Island Convention Center, Providence; Nancy Syme at 1-800-766-1670

18-21 EIGHTEENTH ANNUAL CONNECTICUT FLOWER AND GARDEN SHOW ("A Garden to Celebrate"), Connecticut Expo Center, Hartford; 860-529-2123

26 FIFTH ANNUAL ECOLOGICAL LANDSCAPING ASSOCIATION WINTER CONFERENCE ("Ecology and the Managed Landscape"), Holiday Inn, Boxborough, MA; Nancy Askin at 978-897-7490

March

2-4 SECOND ANNUAL NEW ENGLAND REGIONAL TURFGRASS CONFERENCE AND SHOW (NERTCS), Rhode Island Convention Center, Providence; 401-848-0004

4 THOMPSON SCHOOL HORTICULTURE CURRICULUM GREEN JOB FAIR, Strafford Room, Memorial Union Building, UNH, Durham, NH; Rene Gingras at 603-862-1097

5-7 VERMONT FLOWER SHOW ("The Wizard of Oz"), Sheraton Hotel and Conference Center, Burlington; 802-244-5327

10-14 PORTLAND FLOWER SHOW, Portland Company Complex, Portland, ME; 207-225-3998

11 COMMUNITY TREE CONFERENCE ("Storms over the Urban Forest"), UMass, Amherst; Dennis Ryan at 413-545-6626

13-21 NEW ENGLAND FLOWER SHOW ("Artistry in the Garden"), Bayside Exposition Center, Boston, MA; 617-536-9280

17 PERENNIAL PLANT CONFERENCE, Bishop Center, University of Connecticut, Storrs; Mark Brand at 860-486-2930

17 MASSACHUSETTS ARBORISTS ASSO-

CIATION SEMINAR with Dr. Alex Shigo, Rolling Green Inn and Conference Center, Andover, MA; 508-653-3320

17 NEW HAMPSHIRE LANDSCAPE ASSOCIATION SPRING CONFERENCE, Barton Hall, University of New Hampshire, Durham; 1-800-639-5601

18 ADVANCED GREEN SCHOOL WORKSHOP, "Developing a Turf and Landscape IPM Plan," Bridgewater, MA; 413-545-0895

18-21 EIGHTH ANNUAL NEW HAMPSHIRE ORCHID SOCIETY SHOW ("Spring into Orchids"), Nashua National Guard Armory, Daniel Webster Highway, Nashua, NH; Joanna Eckstrom at 603-654-5070

25 PRUNING FRUIT TREES WORKSHOP, Belchertown, MA; 413-545-0895

26-27 29TH ANNUAL UNIVERSITY OF NEW HAMPSHIRE GREENHOUSE OPEN HOUSE, Plant Biology and Thompson School Greenhouses, UNH, Durham; Alan Eaton at 603-862-1734

26-28 SEACOAST FLOWER, HOME, AND GARDEN SHOW ("Classic Country Gardens"), Whittemore Center, UNH, Durham; 603-356-7750

26-29 FIFTH ANNUAL BREATH OF SPRING FLOWER SHOW ("Flowers Over the Rainbow"), Cheshire Fairgrounds Arena, Keene, NH; Steve Curtin at 603-355-6335, ext. 161

27 LITTLE ROYAL LIVESTOCK SHOW, University of New Hampshire, Durham; Laurie Chapman-Bosco at 603-862-1019

April

8-11 BANGOR FLOWER SHOW, Bangor Auditorium, Bangor, ME; 207-947-5555

8-11 NEW HAMPSHIRE FFA STATE CONVENTION, Waterville Valley; Dave Howell at 603-862-1760

16 UNH-FFA INTERSCHOLASTICS CAREER DEVELOPMENT EVENTS, Thompson School, UNH, Durham; 603-862-1760

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Credits: Cover photograph detail: Bob Parker; page 7: quilt, "Robbing Peter to Pay Paul," ca. 1850; page 13: floral design from Christies, 1929; back cover: quilt, "Robbing Peter to Pay Paul," ca. 1880.

The Plantsman is published in early February, April, June, August, October, and December with copy deadlines being the first of each prior month. While camera-ready ads are preferred, set-up assistance is available at a nominal fee. Free classified advertising is offered as a member service. We will carry a short message (no artwork or logos) for one or two issues of *The Plantsman*.

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For further information, please contact the editor: Robert Parker at the UNH Research Greenhouses, Durham, NH 03824, 603-862-2061; or PO Box 5, Newfields, NH 03856, 603-778-8353.

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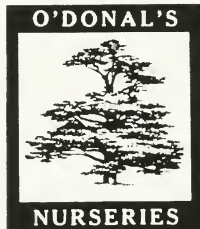
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GEORGE TIMM

All that is old is new”. How many times have heard that phrase? If you have been reading any recent trade magazine, you’ll know exactly what I’m getting to. As most of us are either small-to-mid-size growers or independent garden centers, one way that we compete with the “big box” stores is by studying the latest trends.

The hottest recent trend is nostalgia. Anything that baby-boomers can recall from their childhood memories that gives a “warm fuzzy feeling” is hot! Take for example some of the stars of the 1999 Auto Show: Ford T-Bird, Chevrolet Impala, Dodge Power Wagon, and Charger. Recognize any of these names? Lastly, who can say that they haven’t seen the new Volkswagen Beetle?

Baby boomers will flock to those images that bring back what they were used to when they were growing up. According to a 1996 survey of why customers shop garden centers, almost 30% said to purchase annuals and almost another 25% said to buy perennials. Let’s give ‘em what they want!

Hot perennial plants. With the revival of the 60s, any daisy or daisy-like flower is a sure bet. Hey, how about a promotion with a local Volkswagen dealer? Bring in a few “Beetles”, have employees dress in 60s attire with beads, bell bottoms, tie dye shirts, flowers in their hair, etc. Play some good classic 60s music and feature daisies or other Peter Max-type brightly colored flowers. You might even contact a local radio station to come in and do a remote broadcast for the event. Oh well, you never know what will work unless you try. Back to the

plants. Hollyhocks, very popular in the 30s. Anemone windflower, in pink white or lavender. Chrysanthemum, ‘Alaska’, ‘Snow Lady’, or the double form ‘Aglaya’. Also included here would be coneflowers and black-eyed susan. Other nostalgic perennials could include lavender, poppies, hosta, bee-balm, daylilies, delphiniums, and peonies.

Shrubs of yesterday. *Hydrangea paniculata* ‘Grandiflora’. I used to tell my customers that this is one of the ten plants that you just can’t kill in New Hampshire. Some of the new forms such as ‘Pink Diamond’ or the late-flowering ‘Tardiva’ would be good additions. *Hydrangea a.* ‘Annabelle’, with its large pure-white heads, is impressive. For those in warmer areas of the state or, if your customers have summer homes on the Cape, then *Hydrangea m.* ‘Nikko Blue’ is a good choice. *Kolkwitzia amabilis*, (beauty bush), often seen planted alongside the front entrance and largely unnoticed until it bursts into bloom in the spring. *Syringa vulgaris*, (common lilac)—it’s our state flower. Enough said. Roses, roses, roses! The shrub types such as *R. rugosa* and its hybrids like ‘Hansa’, ‘Magnifica’, or perhaps those of the Explorer series from Canada are much, much harder and more disease-resistant than those hybrid-teas.

Annuals. Aside from obvious choices such as petunias, impatiens, marigolds, and pansies, I don’t have much on old favorites. However, here is where some of the newest varieties are hot! First would be the Proven Winners series and Wave petunias. Also, I’ve heard that Profusion zinnias and Sundial portulacas are in.

Here are a few other plant notes and random thoughts in no particular order. Tough, hardy, ornamental grasses. Tibouchina, with large purple flowers and textured foliage, is something new and different than bougainvillea or mandevilla. Big! Plants! Some folks want instant gratification or to make that perfect statement and are willing to pay . . . some don’t even want to know how much: “Just make the area look nice”. Pest-free or, for some, deer-proof are highly sought after features. Herb-themed merchandise and plants are also popular, not so much for their culinary use as for medicinal value. Planters and mixed baskets. Fountains and water gardening. Gazing balls with decorative pedestals or bases. Wall pockets, popular in the 40s. And . . . how about a web site?

“Truck Talk”.

This was taken directly from the 1/1/99 *American Nurseryman*. Driving Laws Amended for Teen Workers! The Teen Drive for Employment Act, which amends the child-labor laws of the Fair Labor Standards Act, was passed by Congress and went into effect Oct. 31, 1998.

According to a release from the US Department of Labor (DOL), the new law prohibits 16-year-olds from driving on public roads while working and increases on-the-job driving time for 17-year-olds, but with specific restrictions. Previously both 16- and 17-year-olds were allowed to do occasional on-the-job driving for such things as running errands and making deliveries.

Under the act, 17-year-old em-

ployees may drive no more than one-third of their work time in any workday and no more than 20% of their work time in any workweek. Driving is allowed only in cars and light trucks during daylight hours. The teen must have a valid license, have completed state-approved driver training, and have no record of any moving violations.

In addition, the driving performed by 17-year-old employees may not involve towing vehicles, route deliveries or sales, the transportation for hire of property, goods, or passengers, or urgent, time-sensitive deliveries. They are not allowed to transport more than three passengers or drive more than 30 miles away from the business. More than two trips away from the business in any single day to deliver goods to customers is prohibited, as well as more than two trips to transport passengers other than employees. All rules apply whether the employee is driving a personal or employee owned vehicle.

I spoke with Mr. Allen Rines of

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New Hampshire Licensing who was unaware of these new changes. He also told me that New Hampshire does not have any such regulations on the books so this law will stand as written. For more information, the DOL suggests calling the local Wage and Hour Di-

vision Office.

Have a good winter; stay warm; plan for the best (last) spring of the century!

George Timm, owner/operator of Davis Brook Farm, Hancock, can be reached at 603-525-4728.

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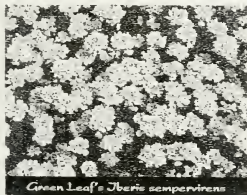


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Wrap-up

Henry Huntington

We had a wrap-up meeting on Tuesday, December 15, for 1998's New England Greenhouse Conference. While the final figures are not quite in, it was a very profitable conference and a rousing success. Because of the high profits, we are exploring some additional causes that we may want to fund above and beyond the usual grants that we have awarded in the past.

Because we were in a new facility, there were certainly a few unforeseen difficulties. Trade show hours will be adjusted to benefit the exhibitors; we are pushing for better food service and climate control (both issues will be taken care of as details for running the new facility are worked out) and are looking at possible one-day rates and trade-show-only passes.

Henry can be reached at 603-435-8361.

**Requesting Cooperation**

In late October, a letter and some fact sheets were mailed from the Department of Environmental Services. These read in part:

On January 1, 1998, the sale, distribution, importation, purchase, propagation, transportation, and introduction into the state of the following exotic aquatic plants was prohibited (RSA 487:16-a):

Butomus umbellatus (flowering rush)
Cabomba caroliniana (fanwort)
Egeria densa (Brazilian clodea)
Hydrilla verticillata
Hydrocharis morsus-ranae (frogbit)
Lythrum salicaria, *L. virgatum*, *L. alatum* (purple loosestrife)
Myriophyllum aquaticum (parrot feather)
Myriophyllum heterophyllum (variable milfoil)
Mycrophyllum spicatum (Eurasian milfoil)
Najas minor (European naiad)
Nymphaoides peltata (yellow floating heart)
Phragmites australis or *P. communis* (common reed)
Potamogeton crispus (curly leaf pondweed)
Trapa natans (water chestnut)

There are currently 33 bodies of water in the state with known exotic plant infestations. The law is designed as a tool to help prevent further infestation. It is hoped that, by preventing their transportation over land, the spread between lakes will be stopped.

If you sell any of these prohibited exotics, please destroy them immediately.

If you have questions regarding the legislation or are unsure if you carry one of the prohibited plants, please call Amy Smagula at 603-271-2248.

Thank you for your time and cooperation.

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The Green Spot, Ltd., a major supplier of biological pest control agents and integrated pest management paraphernalia, is pleased to announce the availability of its 1999 Green Methods catalog. Its forty pages is full of useful information and it's free for the asking.

The postal address is 93 Priest Road; telephone is 603-942-6204; fax, 603-942-8932; the e-mail address is GrnSpt@cwixMail.com.

New Representative

Barbara Anne Yaeger has joined Carolina Nurseries as a sales and service representative. She'll be responsible for customers in a multi-state area that includes New Hampshire. Barbara's previously

held management positions with the Conard-Pyle Company of West Grove, Pennsylvania, and Imperial Nurseries, Gandy, Connecticut. Carolina Nurseries, begun in 1984, is headquartered in Moncks Corner, South Carolina, and serves a 34-state area from Maine to the Midwest.

For information, contact Connie Thompson at 1-800-845-2065.

NHLA Certification Manual Released

New Hampshire Landscape Association Newsletter, November/December, 1998

The NHLA-sponsored *New Hampshire Landscape Professional Certification Program Manual* was released on November 4 at the NHLA dinner meeting. This manual is the result of several years' work by the

certification committee: David Alessandrini, Chris Beasley, Anne Colby Hines, Dana Sansom, and Chuck Simpson.

The first certification exam will be given in March. It will have two sections: plant identification (40 plants by both scientific and common names) and fifty questions on general information.

In addition to passing the exam, applicants must present evidence of employment, education, or experience in the field, complete an application form, and agree to comply with a code of ethics. The fee is \$50.00. Certification is good for one year and is renewable each year by earning five "maintenance credits" and paying ten dollars. The manual costs \$50.00.

For more information, contact Guy Hodgdon at 1-800-639-5601.

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Showtime '99

New Hampshire hasn't one single major show, but several smaller ones. All preview spring; all are accessible—pleasant, instructive—without overcrowding or lack of parking.

A MONTH EARLIER than is usual, 18-21 March, the New Hampshire Orchid Society holds its annual show—now in its eighth year—at the Nashua National Guard Armory on the Daniel Webster Highway. Judging and a gala reception are on Thursday; hours are: Friday, 9:30-8; Saturday, 9:30-6; Sunday, 9:30-4.

Although it's being held in the same time period as the big show in Boston, there's enough here to interest both enthusiasts and the general

public. Displays of live plant material and—a renewed emphasis—cut flower arrangements (with several large florist shops—Bert Ford, Chalifours—participating) are a major part of what's offered.

But vendors, demonstrations (flower arranging), and speakers are here as well. Leon Glicenstein is returning on Saturday to speak on orchids native to Maine; on Sunday, the students from Linwood High School in Lincoln, New Hampshire, will be discussing their work. With a grant from the University of California, Davis, and under the direction of Dr. Peter Faletra, head of the school's science department, the students are propagating lady slippers in their lab. They've visited Kew and made a presentation before the

Royal Horticultural Society. In this time of so much criticism of public education, it might be worthwhile to go simply to see that remarkable educational experiences can still be had there.

For information, contact Joanna Eckstrom at 603-654-5070.

NOW IN ITS 29TH YEAR, the Greenhouse Open House at the University of New Hampshire in Durham is the longest running of the local shows. A joint venture of the Plant Biology Department and the Thompson School Horticulture Curriculum, the format remains unchanged—displays of research, interior plantscapes, plants for sale, food, and—the strong point—practical information: a series of talks will be geared toward the home-



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owner and amateur gardener; lots of staff, extension, and faculty will be around to answer questions.

The dates are Friday and Saturday, March 26-27; times are 9-4; contact person is Alan Eaton at 603-862-1734.

This is held on the same weekend as two other events—the Little Royal Livestock Show (Saturday only) at the horse barns and riding arena just beyond the greenhouses and the Seacoast Flower, Home, and Garden Show (Friday through Sunday) at the Whittemore Center, also within walking distance. The latter promises to “bring together under one roof business owners from throughout the region demonstrating their home- and landscape-related services.” The shows are separate—there is an ad-

mission fee at the Whittemore event; the others are free. Dates and hours are different as well, but on Saturday, you could visit all three. A contact number for the Flower, Home and Garden Show is 603-356-7750; for Little Royal, 603-862-1019.

AND ON THIS SAME weekend—the weekend before Easter, the “Breath of Spring” Flower Show will be at the Cheshire Fairground Arena on Route 12 South, just outside of Keene. In its fifth year, it has continued to grow and presumably will be bigger and better this year as well. The theme is “Flowers over the Rainbow” and will inspire “colorful events from *The Wizard of Oz* and other landscapes of the imagination. The

12,000-square foot central display will include 10,000 flowers, water features, a forest garden, life-size characters, and blossoming trees and shrubs of all varieties.” This could really hit the spot on a raw March day.

Along with all this, there are vendor and information displays, food, and free workshops presented by the UNH Cooperative Extension’s Master Gardener Program. The show opens Friday at noon, Saturday and Monday at nine, and Sunday at ten. It closes all days at five.

The show benefits Home Health-care, Hospice, and Community Services for hospice care for the terminally ill and prenatal care to prevent birth defects. For information, call 603-355-6335.



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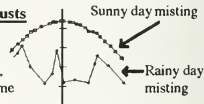
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Another Country Heard From

One thinks of Russia as a land of rough winters and economic turmoil. There may be some substance to this, but these are certainly not the whole picture. Small businesses are starting up. In October, a new seed-exporting firm in Moscow wrote asking for a NHPGA membership list.

Intrigued, an e-mail correspondence was initiated. To be honest, communication is spotty—periods of busy e-mail activity surrounded by long silences. (Right now, we're into silence.)

Still, there is a long list of available seed. It's varied; not all of it is uniquely Russian—*Acer rubrum* is there, but *A. manshuricum* and *A. palmatum* as well. Some of the birches seem unusual—and cold-hardy; the source for both *B. ermanii* and *B. manshurica* is Vladivostok; several cold-hardy clematis (also from Vladivostok) also seem worth looking into. The campanulas (native to Russia) could be unfamiliar varieties.

English is spoken; prices are listed in US dollars per kilo; you can buy small amounts ("minimum quantity, transport, terms of payment are to be discussed separately with every customer"); import licenses are apparently in order.

E-mail works best. (Air mail, promised, has yet to arrive.) The contact person's name is Alexey Chernetsky. His company is Agbina, PO Box 7, 105023 Moscow, Russia. His e-mail address is <Alex@agbina.msk.ru>. If you have an interest—and are adventurous—try it.

In Other States

The annual meeting of the New England Nursery Certification Council (NENCC) was held on Wednesday, December 19, 1998. Updates of state programs were given.



ALCM (Association of Landscape Contractors of Massachusetts) reported that 40 people passed exams in 1998, making a total of 220 MCLPs in the state. The first recertification cycle yielded a 90% retention rate. A fall review course was well received.

CNA (Connecticut Nursery-men's Association) reports 350 certified professionals in the state, 54 of these being people passing the exam in 1998. A "Living Laboratory" has been set up at Prides Corner in Lebanon, where candidates can try out their identification skills. The issue of adding a recertification element to the program will be discussed in 1999.

MAA (Massachusetts Arborists Association) reported that the Massachusetts Certified Arborist (MCA) program was begun in 1957 and that there are presently 850 certified arborists in the state. They've recently decided to add a recertification element to their program, with the possible requirement of a passing grade for each section.

MeLNA (Maine Landscape and Nursery Association) now has a total of 113 professionals in the state. A four-color brochure has helped to keep interest high. Recertification has also been successful with a requirement of five credits per year and the offering of a one-day recertification day in which these credits

can be earned.

MNLA (Massachusetts Nursery and Landscape Association) reported that they held two exams in 1998 and that there are now 248 certified professionals in the state. Recertification is at 90%, with the help of a phone call effort by the certification committee. A manual revision should be completed by February, 2000.

RINLA (Rhode Island Nursery and Landscape Association) reported 120 certified professionals. Their emphasis in 1999 will now be on building the professionalism and increasing the marketability of the certified professional.

VAPH (Vermont Association of Horticultural Professionals) reported 150 certified professionals. VAPH recently moved to an annual recertification system at a cost of \$25.00 a year that is proving successful.

These are highlights. There does seem to be a trend toward national certification programs and the probability of a New England unified effort. For more, contact Virginia Wood at 508-653-4112.

Events—Lots of Them

WITH THE CURRENT EMPHASIS on sustainability and environmental horticulture, attending the 1999 Ecological Landscaping Association Winter Conference at the Boxborough Holiday Inn on February 26 could be time well spent.

The theme is "Ecology and the Managed Landscape: Working toward Better Solutions." Talks include "Nuts and Bolts of Installing an Ecological Garden (Michael Nadeau, Plantscapes, Inc. Fairfield, CT), "Site Analysis: Designing with the Microclimate" (Dennis Carboni, Bonnie Ulin, Inc., Needham, MA); and "Natural Areas Within Managed Spaces" (Francis Clark, Carex Associates, Lincoln, MA). Twelve topics are offered in three concurrent sessions. Choosing could be difficult.

The conference is co-sponsored by The Ecological Landscaping Association, UMass Extension, and New England Wild Flower Society. Preregistration deadline is February 19; registration at the door is \$130.00. For more information, contact Kathleen Carroll at 413-545-0895.

NEARLY THREE WEEKS LATER, on March 17, the 1999 Perennial Plant Conference will be held at the Bishop Center at the University of Connecticut in Storrs. Again, it promises to be a very full and interesting day. Fourteen topics are offered in two concurrent sessions ("Production" and "Landscape/Retail").

Both Peter and Leslie van Berkum are speaking ("Perennial Production the New Hampshire Way" and "Color Designing with

Perennials," respectively); other topics include "Production and Trends in Siberian and Japanese Iris" (Phil Boucher, Tranquil Lake Nursery, Rehoboth, MA), "Clematis for Northern Gardens" (Richard Hawke, Chicago Botanical Garden, Glencoe, IL), and "Use and Care of Disease-resistant Antique Roses" (William Welch, Texas A&M University, College Station, TX).

Pesticide recertification credit is available pending state approval.

Seating will be limited and early registration is advised. The registration deadline is March 10. For information, contact Mark Brand at 860-486-2930.

AND IN PROVIDENCE, the 1999 New England Turfgrass Conference at the Rhode Island Convention Center on March 2-4 offers a trade show of over 325 turf-

related booths, pesticide applicator recertification credits, and educational sessions on turf management and machinery maintenance.

The industry's focus is less on home grounds than on the surfaces required in the big sports and recreation industries—on golf courses and playing fields, in stadiums . . . so I suppose it's no surprise that the keynote speaker is Doug Flutie, quarterback for the Buffalo Bills. No topic's been announced, but his perspective as a player could be fun and even interesting.

For information, call 401-848-0004.

(As a footnote showing possible directions of the turf industry, Invention Submission Corporation announced on December 11 that one of its clients, Mr. J. DiBenedetto, of Brookville, New York, has invented "The Moveable Grass Playing Field System," to roll in a grass playing

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field for sporting events and then easily roll it back out for concerts and other events. This invention is patented."

This system "would consist of a grid-like steel superstructure base that would support a trussed metal floor panel and grid-like side panels. Made of rock, gravel, and soil, it would make the job of preparing a field less time-consuming and less labor intensive; "The Moveable Grass Playing Field System would turn a domed stadium into a multi-use facility."

For details, contact Kelly Walmsley at 412-288-2136, ext 157.)

Flowers of the Year

New groups announce their "Flower of the Year." This could become tedious, but hasn't yet, with plenty of flowers to go around.

On October 30, 1998, the As-

sociation of Specialty Cut Flower Growers (ASCFG) announced the "1999 Fresh and Dried Cut Flowers of the Year" at its national conference in Raleigh, North Carolina. Candidates were nominated by the membership, then chosen by the ASCFG board. Both winners had been trialed in the National Cut Flower Trials and had received high marks.

The "1999 Fresh Cut Flower of the Year" is Zinnia 'Benary's Giant' series from Benary Seed. Zinnias in this series come in twelve separate colors and a mix.

Unlike many zinnia cultivars, 'Benary's Giant' is productive the entire season in most areas of the country. (Growers in southern states may want to make a second planting in July for fall harvest.) Plants are vigorous and more mildew-tolerant than most other zin-

nias. Stems average 16-30 inches; the first flower or two may be short and should be removed. Flowers have long vase life and retain their colors well.

The "1999 Dried Cut Flower of the Year" is Gomphrena 'Qis Carmine' from Kieft Seeds Holland. 'Qis Carmine' is a new color for the species *Gomphrena haageana*, complementing 'Qis Red' and 'Qis Orange.' It's seen as exceptionally productive, with dark leaves, long stems (10-18 inches), and large flower heads. Gomphrena is heat-tolerant and should be planted after soil has warmed.

For information on seed sources, contact Dennis Reynolds (Benary) at 630-790-2378 or Jeff McGrew (Kieft) at 360-445-2031. For information on the ASCFG, contact Judy Laushman at 440-774-2887 or use its new web site: www.ascfg.org.



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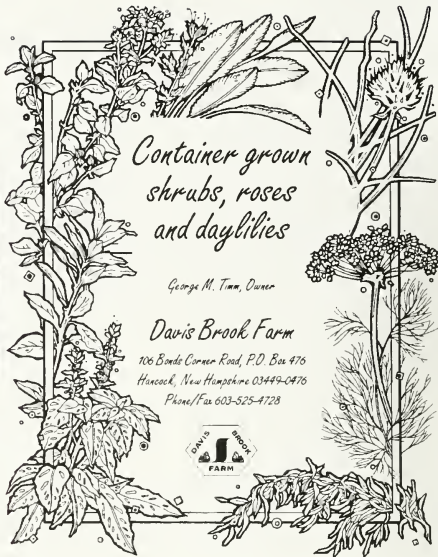


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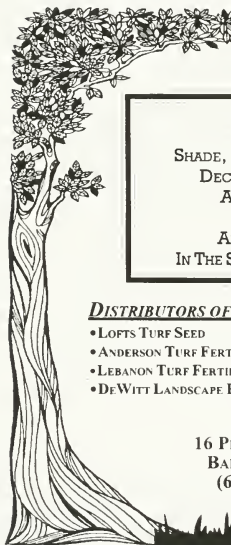
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Things to Consider

If you're about to set up a biocontrol program, you should know many things and be prepared with a full IPM arsenal. Scouting is a necessary requirement—so start doing it now. Moreover, take the following steps into consideration:

1. Stop using chemicals with long-term residual effects. Products such as Marathon, a popular systemic, last a long time in the soil and, thus, in the plant's tissue. Some of these systemic chemicals don't bother beneficials directly, but they do poison their food—the pests. Other chemicals can last a long time on surfaces (plants, benches, floor, etc.). Orthene is an example. This product can last up to 84 days in the greenhouse. It doesn't typically provide pest mortality for such a period (due to resistance, perhaps), but it does affect the more sensitive beneficials. Switch to short-term killers such as soap, oil, *Beauveria bassiana* (BotaniGard, Naturalis-O, etc.), or IGRs (insect growth regulators) such as Azatin XL and Enstar II. These products will fill the gap between using the long-term products and the use of beneficials.

2. Know your space. Your biocontrol supplier will want (and need) to know the specs of your growing area: square footage, actual growing portion thereof, and density of plants—including height. Common sense dictates that a 3000-square foot greenhouse used for single layer plug production does not have the same amount of treatment area as a 3000-square foot greenhouse used for tomatoes with twelve-foot stems.

3. Be familiar with your problems. Pest knowledge can help your supplier make a proper recommendation. Pest species and density are both necessary to know for proper evaluation of the problem at hand. If your supplier doesn't address these factors or feels they're not necessary information, you may be using the wrong supplier. Case in point: one United States company suggests using one teaspoon of carrier—containing mites—for every mite infested plant in an indoor site. Remember—it's important to know what pest mites you have, their density, and the size of the infested plants.

4. Don't be afraid. We wouldn't ride bicycles, learn to swim, or flirt with the opposite sex in junior high school if we let fear of the unknown stop us from doing stuff. Try it. You may like it.

Mike Cherim, president of The Green Spot, Ltd., Department of Bio-Ingenuity, 93 Priest Road, Nottingham, NH 03290-6204, can be reached by phone at 603-942-8925.

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TSAs students work on the East-West Park at the Memorial Union Building, UNH, Durham. September, 1998.

Building a Sustainable UNH Campus

JOHN HART

In a model that has succeeded for some years at UNH's Thompson School, students in the horticultural technology program, with the support of the Department of Grounds and Roads, this fall completed most of Phase 1 of a landscape renovation at the Elliott Alumni Center on the Durham campus. Students applied their classroom theory to real-world situations while, at the same time, a more environmentally friendly and sustainable landscape was installed and taxpayer and tuition dollars reduced—not a bad deal!

The project began in the spring 1998 Landscape Design Studio. A teaching team from George Pellettieri Associates of Warner guided the design class to completion of individual site plans. One of the students, Alexander Guide, then combined the best of the class's work into a unified design solution. Presentations to the alumni association's building committee were well received, and funding was approved by Ernie Gale, new director of the association.

This past fall, final design revisions were completed by Amy Craig of the Sustainable Landscape Group, Office of Sustainability Programs at UNH. Estimating, purchasing, and implementation were integrated into a fall class in landscape construction led by Michael Sheffield, adjunct instructor at the Thompson School. Construction

work included removing asphalt, creating stonedust seating areas with granite benches, and installing native plant material. It is anticipated that funding will be available to employ a Hort Tech student during the summer to help maintain this and other new plantings.

Over time, as additional phases of the Elliott Alumni Center landscape are completed, this site will become a showcase for the New England Ecological Garden at UNH, demonstrating and interpreting a new aesthetic of sustainable landscaping to students, faculty, staff, alumni, and visitors. Dr. Tom Kelly, Director of Sustainability Programs at UNH, has called this a "learnscape"—a landscape uniting human well-being, economic viability, and ecological health to educate in sustainable living.

Other landscapes initiated in similar fashion during the 1998 season include a section of the Memorial Union Building and an area around the old infirmary, Hood House. Over winter, students in Landscape Design Studio will apply themselves to a new site as the UNH campus becomes a regional resource in sustainable living education.

John Hart, associate professor in the horticulture curriculum at the Thompson School of Applied Sciences, University of New Hampshire, Durham, can be reached at 603-862-1091.

The Web: Is It for You?

DEB BREWER

Can a web site be profitable for a small business? Can you get your money's worth in increased sales? Can you afford one to begin with? Will you have to spend a lot of time and money keeping it current? Do you need to buy a new computer? These are some of the questions that most small business people have whether they are in retail—selling their homemade salsa—or wholesale—selling plant materials.

In this article, I will try to give you useful details pertinent to your industry. If, in the end, you still have questions and/or concerns, feel free to contact me.

Small businesses are definitely creating a presence and making an impact on their bottom line through the Internet. But, as we all know, nothing in this world comes without a price. Most successful small businesses have paid a professional to develop the web site; they have learned how to market it online and offline; and they continue to put forth the effort to keep the site current and continue the marketing. These are the basics to a successful web site.

The creation and nurturing of a web site is similar to opening a location on Main Street, Anytown, USA. Would you renovate the space to accommodate your needs? Would you open your doors and advertise by putting out a sign and/or advertisements in the local media? Would you continue to advertise your products and new products? And would you assist people by interacting with them and helping them solve their problems with your expertise and/or products? Of course, you would do all these things and these all apply to a web site.

Creating your "space" on the Internet is done during the development phase. During this phase, the content, aesthetics, and navigation are critical. To ensure the site is useful and visitors will return, the web site should include free information pertinent to the target market in addition to the information about your products. If you are a retail grower, then you could offer information about what the home gardener or the landscape contractor should be doing at a particular time of year—perhaps a calendar with the tasks listed for the particular zone and/or region. If you are a wholesale grower, information might include new varieties that you offer or updated pest control. Free information will draw the visitors back to the site and will also, and most importantly, make them think of your company as experts in the field. They will remember your company name. The distribution of this free information is synonymous with you interacting with customers in your store.

Advertising your web site after it is created is the

most critical part of the whole process. A web site can be an excellent site in terms of aesthetics and content, but if no one can find it, it will fail. Advertising a web site can be accomplished many ways. The developer of the site should be able to register it with the search engines so that you are included in their indices. Other advertising would include local directories, which are becoming more and more popular. Sometimes assembled by the state library, the local news media, or a web developer, "regional directories" are a common place to find businesses that cater to a particular locale. Trade associations of your target market is another way to find your customers. There are so many ways to advertise your site, that it is impossible to list them all in this article, but hopefully you have the idea that advertising your site is very critical to its success.

NOW FOR THE COST ISSUES . . . Computer hardware prices have come down in recent months to easily below \$1,000. Internet access usually amounts to between \$15-\$30 per month. A domain name costs \$75 to register and \$35 per year after the second year to maintain. Developers charge for site development in a number of ways. Some charge a set contract price for the entire development job and others charge by the hour. As with anything, make sure you get in writing what is being offered by the developer. Since this industry is new, it is easy to negotiate a contract without the deliverables and costs being clearly spelled out. A five page site (a page being equivalent to an 8 1/2" x 11" piece of paper) could be anywhere from \$500 to \$1,500. And hosting charges (web site storage) range from \$20-\$100 per month depending on the size of your site and whether or not you are going to accept credit cards online. (These prices are only estimates and the actual prices in your specific area may vary.)

In closing, a web site for a small retail or wholesale grower can be successful if the owner is willing (and has the time) to devote to growing and maintaining the site. In the end, the small business who ventures into cyberspace now will be ahead of the game in the future as finding products and services online will become the normal way of conducting business.

Deb Brewer is President of CrystalVision Web Site Design and Internet Services, a company providing high quality web sites, hosting, maintenance, and consulting services. She has been in business for three years and continues to expand as the need for quality web developers increases. She can be reached at 603.433.9559 or db@cvcwp.com.

Gillyflower Glen Evolving, Involved . . .

The NeWest Mall Shopping Plaza in New Ipswich . . . a couple restaurants—Irena's (family-style) and The New Ipswich House of Pizza, Bellecete's True Value Hardware, Ultimate Sensations (nails, car piercing, skin care), Hoppy's ("Groceries, Meat, Beer"), and Gillyflower Glen Florist and Gifts: maybe not an ideal mix, but a stable one that seems to work.

Gillyflower (an old English word for dianthus) Glen was started by John Isham (who describes himself as "also old and English"), former administrator of the town of Peterborough, as a retirement activity.

The business has two segments. The first, The Gardens at Gillyflower Glen, began as a hobby at his home in Peterborough long before his retirement in 1995. In his enthusiasm, he grew far more than he could use. After giving as much as he could to friends, he began to sell.

The lot is small—only 1 1/3 acre, and most of it is in production. Gardens around the house have been torn up several times to make room for more plants. Shade plants are now his specialty. Within that category, he's narrowed his choices to four—hosta, lilies, columbine, and astilbe.

Because the business is small and the only labor is his own, he can work on a small scale, buying a few plants, seeing how well they grow, then dividing them and selling those not needed for stock.

Even in starting up a small operation, much work had to be done. A half acre of pine and maple was cut and stumped. Because the soil is clay, raised beds seemed needed. He used equal parts of sand, manure, and compost, which he rototilled and let sit a year. Initially, boards held the soil in place; now the wood has washed away and the beds stabilized.

"No one really specializes in hosta here," he says, but many growers (King Farm, Cavacchio, Van Berkum, etc.) carry selections, each slightly different than the others. He's begun collecting—his own selection numbers "around fifty" and ranges from the four-foot tall Krossa Regal to the smaller dwarf types.

Each fall, he quarters each mature hosta with two

cuts of a sharp spade. The plants remain in the ground over winter and individual sections are transplanted or potted and sold in the spring. (John sees this method as less stressful to the plants.)

The other collections are small (he has only twenty types of lilies, half a dozen of astilbe, and maybe seven of columbine—including the native, which seeded in naturally), but growing. (Of course, having simplified by choosing four specialties, he then decided to grow ground covers as well. Bad management? In a larger operation, perhaps; here it's an indication of genuine enthusiasm.)

He feeds once in springtime (a granular 10-10-10) and maybe a liquid feed (nothing special) in mid-summer if the plants seem to need it. He waters with a hose.

He's open Sundays and Mondays and evenings. Advertising

has always been through word-of-mouth, although he now has an annual open house that is advertised in local papers.

THE SECOND ASPECT of the business is Gillyflower Glen Florist and Gifts, at the plaza outside the center of New Ipswich.

John had thought about having a small shop and selling plants from his garden there, so he attended some SCORE-sponsored training sessions (designing a business plan—that sort of thing), then "pretty much followed what they said."

The choice of the site was pragmatic. Peterborough already had both florists and garden centers and he didn't want to go into competition with friends; he looked in the Hillsboro and Dublin areas, but "Hillsboro also already had two shops and Dubliners tend to go to Peterborough," so he chose the tri-town area of Greenville, Mason, and New Ipswich.

NeWest seems somewhat out-of-the-way for a florist shop, but in the tri-town, or Mascenic, area ("Mascenic" is not native American—it's simply letters from the names of the three towns arranged in a pronounceable form), there's no single population center.

He rented commercial space that had, for fifteen years, housed a branch of the Peterborough Savings

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Bank. It had been divided into two 1200-square foot sections. He used just one, keeping the partitions housing various offices and using these for his own office and for specific product groupings.

Selling cut flowers and floral arrangements seemed obvious—but he knew nothing about them. He talked a retired florist friend into working with him (“for a year and two weeks—he got me through the second Mother’s Day”), and teaching him the arts of design and of running a florist shop.

Gillyflower opened in May, 1996. “There was some rough sledding for awhile:” there had never been a florist shop in the area and people didn’t think about buying flowers because the opportunity had never been there. So part of the job was getting people used to a new idea.

Also, townspeople, perhaps surprisingly in this age of mobility, have remained connected to specific ethnic groups: Greenville is strongly French-Canadian; New Ipswich is Finnish. Both groups are large enough to be fairly self-sufficient, so part of the job has been to build trust of an “outsider.”

But there were few advertising opportunities—word-of-mouth still is how it’s done in small, semi-rural places. But marketing can take different forms. For John, it became finding the right product mix.

He chose not to compete with the hardware store—there’s no bird seed or tools, but to complement it, the idea being that if people stopped at one place, they might come over and buy something here too—and if there were a possibility of finding two things rather than two versions of one, they might be more apt to stop.

The mix is casual—if there’s a single theme, you might call it “everything for festive occasions.” There are party supplies—plates, cups napkins; balloons; incense; candles; greeting cards; gifts—Beanie Babies; examples of local crafts—birdhouses and wooden garden ornaments—and photography.

There’s chocolate candy and a selection of Finnish items—decals of flags and cute Vikings, Viking helmets (although the Finns were never Vikings); framed inspirational messages sell well; a surprising amount of space is used to display Camille Beckman scented sachets, hand creams; and bath powders—“I carry nine scents—it’s a year-round seller that appeals to a basically female clientele”. If the some of the choices seem unusual, they’re also pragmatic.

Silk flowers and artificial floor plants are scattered throughout the shop (“I originally bought them for decoration, but people wanted to buy them, so now I keep a few on hand.”); there’s not a lot of live material. He buys this in small amounts two or three times a week. A decorative display cart, with gro-lights in its

roof, stays filled with four-inch house plants; he often offers weekly specials—one week, it was roses at six dollars a dozen.

In spring and summer, he brings plants (planted in quart containers) down from his garden and sets them on a cart out front. If they begin to look ragged, they go back to be replanted and others take their place. John also has a small cutting garden at his home and supplements bought-in cut flowers with some of his own.

Christmas brings wreaths and poinsettias and holiday arrangements in the cooler. Again, numbers are small, but everything’s fresh.

SINCE OPENING three years ago, business has tripled. Two months ago, he took down the wall, tore out the tellers’ cages, and doubled his space. Again, he kept the small compartments that had held bank offices (“a gift shop shouldn’t look like a supermarket”) and there is now an area of party supplies, a quiet place for people to discuss and choose flowers for various functions, and an area for seasonal displays.

Greeting card choices have increased—from two racks to “four racks and two spinners.”

He’s bought a larger cooler. The first cooler was simply a display cooler. The new cooler contains, behind the display area, a six-by-seven foot walk-in storage area. And he’s hired a full-time “designer-in-training.”

He still does little advertising, but his marketing seems long term and correct. This year, Santa came by for a day. People could bring their children to be photographed in his lap. The event was advertised by fliers in banks and other businesses. Seventy-five kids—and their parents—showed up.

More importantly perhaps, John’s involved in organizing the Mascenic Board of Trade. There are over two hundred small businesses in the tri-town area, often on rural roads with little or no signage. We don’t want to change this, but we do want people to know what’s available and to encourage people from other areas to come and shop here.” Dues are minimal—ten dollars; fifty businesses have joined: the first project will be a directory and map showing members’ locations.

So the outsider is slowly becoming an insider . . . and as John becomes more a part of these highly individualistic and independent communities, Gillyflower Glen will grow and prosper. (BP)

Gillyflower Glen Florist and Gifts is at the NeWest Mall on Route 124 in New Ipswich. The phone number there is 603-878-0804. Gillyflower Glen Gardens is at 223 Macdowell Road in Peterborough. The number there is 603-924-6389.

An Attractive Problem; A Growing Concern

DIANE E. YORKE

Plants that wreck havoc where they grow. We call them invasives, non-natives, exotics, aliens, noxious weeds, and biological pollution. Some are attractive to the horticultural community because they mature early, are disease-free, and offer profuse flowering. Most are hardy, grow aggressively, produce large quantities of seeds, reproduce vegetatively, and are free from any predators that limit their reproduction and spread. These collective common traits are what make some plants such serious competitors when released in a new environment. Pretty as they may be, many introduced plant species are causing problems and have become a growing concern.

How they got here is nothing new. Thousands of plants have been brought to the United States for food, fodder, windbreaks, and other reasons. But others arrive accidentally in the ballast of ships, in products, on people, and through a variety of transportation. Though the majority blend in and cause no problem, others become invasive and spread across the landscape, leaving irreparable damage in their wake.

Invasives are especially problematic in disturbed areas, suggesting a relationship between disturbance and invasion. However, no habitat is exempt. They grow in forests, wilderness areas, lakes, rivers, wildlife refuges, wetlands, and urban spaces, infesting over 100 million acres nationwide. Thousands are established, across the country, with 94 listed as Federal Noxious Weeds, and 1,400 scientifically recognized as pests. Once established, they reduce and degrade plant communities, degrade riparian areas, create fire hazards, reduce land values, and interfere with recreational and harvesting opportunities. The economic cost is upwards of \$20 billion annually.

Some think invasives are the second greatest threat to biodiversity after habitat destruction. They compete with native plants for sun, water, and nutrients and alter hydrology and soil chemistry. Over time, they affect entire communities and ecosystems as they alter environmental conditions and processes. Of particular concern is the risk posed to fully two-thirds of all threatened and endangered species and their habitats

by invasives. Determining the ecological cost is impossible, as there's no price that can be placed on losing valuable habitats and native species.

Examples are everywhere. Least damaging, but closest to home, are the invasives that appear out of nowhere, such as the dandelion introduced in the early 1600s as a salad green. Another common backyard nuisance is oriental bittersweet, the twining vine. Though embraced for its decorative yellow-and-red fall fruits, it invades even undisturbed forest areas, where it overtakes and kills many of the plants it entwines. Then there are the wildlife enthusiasts among us who planted an autumn olive or two in our back forty, only to find them now an impenetrable spreading thicket, and appearing along roadsides, fields, and forest edges.

New Hampshire's greatest threat is purple loosestrife. It has received national attention as over 1.5 million acres of wetlands have been consumed nationwide. Though it may have arrived accidentally, it was also brought over from Europe in the early 1800s as both an ornamental and medicinal plant. It is still valued today for its showy flowers and for the copious amounts of rich nectar honeybees seem to favor. Though it's most abundant in New England, it is present in 40 states. A single plant can produce almost three million seeds, and it can spread vegetatively as well. In its native habitat, it grows in individual stands or in small groups of a few hundred plants. Without natural predators, it can grow in monotypic stands with upwards of two million plants. In spite of its beauty, it is particularly damaging as it replaces native cattails, grasses and sedges, and some rare, threatened, and endangered species.

Garlic mustard, Japanese barberry, common reed, Eurasian milfoil, goutweed . . . the list of examples goes on. It varies from state to state and even from organization to organization, depending upon the criteria used in classifying a plant as "invasive." However, despite the lists and the known impacts of many invasives, they continue to be sold in wildflower seed mixes, promoted as ornamentals and wildlife plants,

and used for erosion control. All of this has resulted in federal and state agencies, non-profit organizations, communities, and individuals coming together to address the issue of invasive plants.

Solutions to control invasives include managing and restoring existing problem areas and increasing public awareness of the problem while promoting the use of natives. On-the-ground removal options range from handpicking to prescribed burning. A solution that has become attractive to a public increasingly against the use of herbicides is biological control. Though this seemed a hit-or-miss method in the past, causing some present day concerns, today's guidelines require any introduced insect predator to pass a strict host specificity test. A recent success story using biological control is the introduction of four beetles that attack purple loosestrife. The beetles have been released in selective spots in New Hampshire and elsewhere where they

have attacked the leaves and roots of loosestrife and reduced it by up to 90 percent in some places. Though there won't be a total elimination of invasives using this method, it does limit their spread and allows for the reestablishment of natives.

Invasives are on the move. Kudzu, a high-climbing vine that devours large areas of native vegetation, has grown up to a foot a day to take over the southeast. Surviving mild winters, it has arrived in Massachusetts. Mile-a-minute is another all consuming and destructive vine that has withstood the cold to spread as far north as New York. Our only hope is they won't grow as quickly as they have elsewhere or move as fast as some of their names imply.

Diane E. Yorke is a natural resource biologist with the USDA Forest Service in Durham, New Hampshire. For further information call 603-868-7709.



PIONEER POINTERS

What Can Go Wrong?

At the beginning of a new year, growers' thoughts seem to turn to construction projects, to be completed "after the spring season." Soon, the site has been sized up and estimates reviewed, the builders have provided their quotes, and the recent great and not-so-great projects of others have been visited. You've talked to the building officer at town hall. You've even talked to your loan officer and had the discussion on working capital (*The Plantsman*, 6/98) and planning for expansion (*The Plantsman*, 6/97) and are comfortable that you have chosen a smart way to finance the project. You're all set, right?

Once you are at this point, our observation is that three things can commonly go wrong and that "commonly" is the correct word. The first is that visit to the building officer. Inevitably, what were believed to be no-issue rubber-stamp permits and approvals from various health, building, zoning, wetlands, etc., commissions are not "no issue." The message here is to probe further during that first visit, especially if your timeline is tight.

This leads to the second wrinkle: the timeline. Schedules which are too tight lead to problems coordinating suppliers and builders, as well as getting all the needed municipal permits

to begin with. Leave yourself room to breathe and you will be able to make the appropriate changes during construction without causing chaos. A failure to budget enough time is an invitation to disrupted production schedules and increased costs.

The third—and often most significant—financial wrinkle is cost overruns. Everyone invariably thinks they have a good handle on the project, but it isn't uncommon to see 10-20% overruns on "high" cost estimates. Fifty-percent overruns are not unheard of and, when they occur, they can have a significant negative impact on financial position. While a lender can review the proposal for "big picture" issues and ask if certain items have been budgeted in, it's often a long list of small items that break the budget. Ultimately, it is the owner who needs to assure that all bases are covered—and it is the owner who reaps the rewards or suffers the failure after a construction project is finished.

Building projects, while not always fun, can be exciting experiences. The fun part is being able to pat yourself on the back when it's done and say that it's all that you planned for and on budget to boot. If you have any questions about the lender's phase, please call our office at 1-800-825-3252. (KK)



Happy New Year! I hope 1999 brings a better growing season than last year, or at least one that is closer to 'normal'. The unusual weather patterns that began last March continued through early December with above-normal temperatures (at least the heating costs were reduced). Thanks to the mild temperatures, the Plant Diagnostic Lab continued to receive samples through November. Most of the samples were a continuation of problems seen earlier in the season, such as anthracnose and other foliar diseases on trees and shrubs, rusts, botrytis blight on annuals and perennials as well as on greenhouse crops, root rots such as pythium, anthracnose and red thread on turf, and the development of stress-induced cankers and diebacks on woody species. Given the relatively high incidence of plant diseases in 1998, the potential for disease problems in 1999 is significant. I think it's important to consider what the major diseases were in 1998 and what measures can be taken to reduce the likelihood of their occurrence if favorable environmental conditions exist (prolonged wet weather).

WOODY ORNAMENTALS

Anthracnose and other leaf spots and blights were widespread throughout the northeast. Maple anthracnose was the worst I've seen in 17 years. Sycamore, oak, and flowering dogwood were also common hosts of anthracnose. Management of most anthracnose diseases on woody hosts can be achieved with good sanitation. Remove and destroy as many of the leaves as possible be-

fore bud-break in the spring (the leaves are the source of new infections). If the leaves can't be removed, use a mulching mower to reduce the leaves to small particles. Valuable landscape specimens and nursery stock should receive two to three fungicide applications at 7-10 day intervals beginning at bud break. Sycamores and flowering dogwoods require the removal of dead twigs and branches prior to bud-break followed by fungicides. Removal of fallen leaves is also very effective for the control of apple scab on crabapples. Fungicides will probably be required for some highly susceptible cultivars.

Ascochyta leaf blight and bacterial blight were the most common problems on lilacs. Ascochyta has two phases, a shoot blight in the spring (which resembles bacterial shoot blight) and a foliar phase during the summer and fall. Dead shoots and branches should be pruned prior to bud-break and fungicides should be applied. Thinning dense bushes will also help reduce disease severity.

Shoot blight, caused by the fungus *Monilinia*, was widespread on most ornamental *Prunus* species, particularly flowering almonds and cherries. This disease has been very damaging for last several years, so protective fungicide sprays may be warranted on nursery stock and valuable landscape specimens. Fungicides should be first applied when the blossoms open followed by a second application ten days later. Once again, dead shoots should be removed before bud-break.

Spruce that were infected with rhizosphaera needlecast last year should be treated with fungicides

this spring. The first application should be made when the new needles are half-expanded. Rust diseases were phenomenal in 1998, particularly on cedar, juniper and serviceberry (amelanchier). Most of these rusts have a two-year life cycle, but there are usually overlapping populations of the fungus. Removal of galls from cedars and junipers can help, but it is usually more practical to treat the deciduous host with fungicides beginning just after bud-break.

HERBACEOUS ORNAMENTALS

Botrytis blight was the most significant problem during June and early July, particularly on bedding plants, Asiatic lilies, and peonies. All plant debris from last year's crop should be removed before growth resumes this spring. Plants should be spaced adequately to allow for good air circulation. Overhanging branches from nearby trees should be pruned to reduce shading and promote the rapid drying of wet foliage. If overhead irrigation is used, water early in the day to allow the leaves to dry prior to nightfall. Fungicides will be necessary if we have periods of prolonged wet weather. Management of leaf spot diseases is the same as that of botrytis blight.

Stem cankers caused by the fungus *Phytophthora* was fairly common on sedums. (The stems develop a water-soaked lesion which quickly collapses and rots.) The easiest method for control of this disease is to rogue out the infected plants as soon as symptoms are seen. Fungicides should be applied to the remaining plants if wet weather prevails or overhead irrigation is used.

GREENHOUSE CROPS

Botrytis was the 'Big' disease problem! Good air circulation, sanitation, and reducing the humidity are the primary means of cultural control. When fungicides are required, it is important to rotate the classes of chemicals used to prevent disease build-up due to fungicide resistance.

One important disease to mention as a potential problem in 1999 is bacterial blight of geraniums. Losses due to this disease have been relatively light for the last few years, but there have been early reports (from other diagnostic labs) of bacterial blight on some of the geranium stock which represents this year's spring crop. The most common symptom is wilting of one or more leaves, even though the soil is moist. Leaf spotting, although less common than wilt, may occur if severely infected plants are present nearby. Leaf spot develops when the bacterium is splashed from one plant to another or drips from hanging baskets onto plants below. Leaf

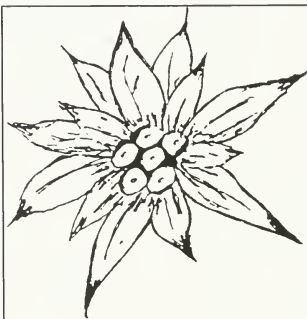
spotting is usually accompanied by yellowing, often in a V-shaped pattern. The symptoms on ivy geraniums are not as obvious as those on seed and zonal types. On ivy geraniums, the symptoms are easily confused with edema or nutrient imbalances. If bacterial blight is suspected, a laboratory diagnosis is necessary to confirm the presence of the bacterium. If confirmed, strict measures are needed to reduce potential crop loss: (i) plants cannot be cured or protected by fungicide sprays or drenches, (ii) infected plants should be destroyed and soil should not be reused, (iii) suspicious plants should be isolated until a diagnosis is completed (cuttings should not be taken from suspicious plants), and (iv) tools, pots, flats, and bench tops should be sanitized with a disinfectant.

TURF

Snow molds should not be as much of a problem as in previous years because the ground was frozen prior to the establishment of permanent

snow cover (at least in the southern portions of New Hampshire and Maine). Remember, however, that if we get a significant thaw during January or February followed by additional snowfall, snow molds may develop to significant levels. Although fungicides applied during mid-winter thaws have some effectiveness, they are not as effective as a combination of systemic and contact fungicides applied in the fall.

If you wish to submit plant material to the UNH-PDL for diagnosis, send samples (with a check for \$12.00) to: The UNH Plant Diagnostic Lab, C/O Dr. Cheryl Smith, Plant Biology Department, 241 Spaulding Hall - UNH, Durham, NH 03824. Samples should be accompanied by an identification form (available from your county Cooperative Extension office or by calling 862-3200). Cheryl Smith is the UNH Cooperative Extension Specialist in Plant Health, and can be reached at 603-862-3841, e-mail: cheryl.smith@unh.edu.



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 Hot lavender, mints, savory, marjoram,
 The marigold, that goes to bed wi' th' sun,
 And with him rises weeping. These are flow'rs
 Of middle summer, and I think they are given
 To men of middle age.

—William Shakespeare, *The Winter's Tale*, IV, iv

February, with Valentine's Day, is a time to express our feelings to lovers, family members, and friends—each in different ways. An old-fashioned expression of affection is the Tussie Mussie, a bouquet in which the herbs and flowers do the talking. It is usually small, often with a rose at the center, and edged with scented leaves or a circle of lace. The stems are tied with a ribbon.

I asked my husband not to bring me a heart full of candy this year. I hope he brings me flowers in a little Tussie Mussie and I'll read a message into the bouquet.

Red roses, of course, symbolize true love. They've been the mainstay of the language of flowers for centuries. I'll accept them with great joy.

I'd love to receive blue flax. It stands for appreciation.

Borage would signify his courage—our courage, actually—to stick together all these years. And the bouquet needs sprigs of rosemary for the pleasures of memory. In nearly forty years of marriage, we have ac-

rued many, both good and bad.

Thyme stands for bravery; lavender, for loyalty; and salvia is for thoughtfulness, expressed in our thoughtful treatment of one another—an important ingredient in this Valentine bouquet. Let's add caraway for faithfulness and marjoram for joy, violets for sweet nature and mint for good cheer.

Each color of roses has its own meaning. White compliments purity; red, of course, declares true love. But it gets involved: for example, a Carolina rose declares that love is dangerous. Imagine the messages that could be sent.

At one time, they were. This language of flowers, which began in France in the early 1800s, reached its peak in England during the reign of Queen Victoria. Dictionaries of the language became very popular, although some authors found different meanings in the same plants. One could express devotion, passion, jealousy, and other significant feelings by putting together a few herbs and flowers, but it was important that

everyone involved was using the same dictionary! *The Language of Flowers* by Kate Greenaway, the English illustrator of children's books, was first published in 1884 and it remains in print today to serve as a guide to those who want to send floral messages.

All of this can lead you in many directions. A final note might be to include a love potion in the Valentine package to your love. The little *Viola tricolor*, known as Heartease or Johnny Jump-Up-and-Kiss-Me—named so because once you plant them, they seed all over the place and pop up just everywhere, is the best known old-fashioned herbal love potion. Violas can be simmered and steeped in hot water to make a tea or simmered with sugar and water to make a syrup which is then added to tea. The results are the same: love and easing of the heart—joy for your loved ones.

Tanya Jackson, a well-known area herbalist, can be reached at 603-431-8011.

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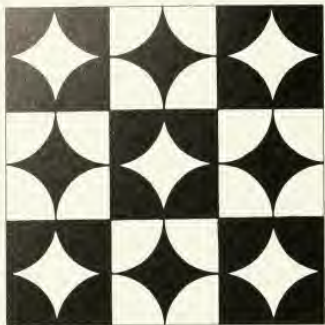
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Richmond, VA 23224
Phone 804-233-3454
FAX 804-233-8855



Winners!

All 1998 New England Greenhouse Conference attendees who submitted program evaluations became eligible for several prizes. These prizes and their winners, drawn at random from the names of the more than 500 conference attendees who submitted evaluations, are:

Dosatron, from Dosatron Int.:

Dave Capron, Center Ossipee, New Hampshire

Spear and Jackson spade and fork, from Gardener's Supply Company:

Bruce Stedman, Gorham, Maine

Two tickets to preview party for the 1999 New England Flower Show, from the Massachusetts Horticultural Society:

Elizabeth Wells, Westboro, Massachusetts

Windchime, from Bemis Greenhouses:

Ted Thiessen, Dr. Green's Garden Center, Port Jervis, New York

Congratulations. Sometimes it pays to fill out a form.

ASSOCIATION OFFICERS

President

ROBERT C. RIMOL
670 N. Commercial Street
Manchester, NH 03101
629-9004

Vice President

GEORGE TIMM
PO Box 476, Rte. 137 S.,
Hancock, NH 03449
525-4728

Secretary / Treasurer

CHRISTOPHER ROBARGE
UNH/TSAS Horticultural Facilities
Durham, NH 03824
862-1074

Directors

ROBERT DEMERS

656 S. Mammoth Road, Manchester, NH 03103
437-6336

DAVID GIURLEO

324 Howard Street, Northboro, MA 01532
508-393-4534

ANN HILTON

4 Karacull Lane, Pittsfield, NH 03263
435-6425

HENRY HUNTINGTON

7316 Pleasant Street, Loudon, NH 03301
435-8361

PETER VAN BERKUM

4 James Road, Deerfield, NH 03037
463-7663

TIM WOLFE

37 Lake Street, Salem, NH 03079
893-5858

Extension Liaison

NANCY ADAMS

113 North Road, Brentwood, NH 03833
679-5616



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