

## Dates and Events of Note

- November 13-15 Empire State Green Industry Show, Riverside Convention Center, [www.nysta.org](http://www.nysta.org), 800-873-8873 & enclosed material
- December 4 Horticulture Roundtable CCE Monroe County
- January– April 2008 CCE Monroe Horticulture school, contact Karen Klinginberger 461.1000x225
- March 13-16, 2008 GardenScape flower and garden show. [www.rochesterflowershow.com](http://www.rochesterflowershow.com)

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Cornell Cooperative Extension is supported by public and private funding. Primary cooperating partners are the County of Monroe, the State Of New York, SUNY's Land Grant Colleges at Cornell University and the U.S. Department of Agriculture.

www.cce.cornell.edu/monroe  
 monroe@cornell.edu  
 f. 585.442.7577  
 p. 585.461.1000  
 Rochester, NY 14620-3036  
 249 Highland Avenue

**Cornell University**  
 Cooperative Extension  
 Monroe County



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# Horticulture Notes



Early Fall 2007

## Markets & Marketing

Walt Nelson, CCE Horticulturist, [wnn1@cornell.edu](mailto:wnn1@cornell.edu)  
 Many things enable a business to make a profit. Retail sales and service firms obviously have products and or services they offer. How do these offerings in your firm stack up in the market place? In real estate parlance what are the 'comps' or comparables.

How do you differentiate your offerings, creating a niche? One suggestion is first embedding additional value in the offerings and at the same time coupling that with strong promotion of the added value. No need to make a better mouse trap if it is not promoted as such.

How lean can you make your business? Improved efficiency is another way to increase the bottom line, decrease the costs.

Although this greater efficiency is important, it is a commodity effort. Over time most enterprises can invest in greater efficiency.

What I see as a more individualistic skill is differentiating your firm. The phrase I use describing this is: "There is only one business that has your smiling face behind the counter, YOURS. Make the most of it!"

More skill is required to truly differentiate product/service. Leading edge European horticulturists, that are so good at the efficiency game, are moving into differentiating their products. One need not take a trip across the pond to see signs of this trend. On the other side of the Niagara River there are garden retailers and growers leaning forward to differentiate their products and their firms. Closer to home, here in the USA big box stores are conveying this to their customers.

Handwriting on the wall I read suggests we should not forget about efficiency. Energies are better spent on marketing your firm and its offerings.

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## Labor Survey Results

Ohio State University Extension nursery specialist Hannah Mathers and graduate student Alejandra Acuña are shedding new light on the approximately 40% cost of production in the green industries, **LABOR**. A hoped for outcome is improved staff communication and training.

Characterization of the green industry labor force was done with a multi-state survey of 1,548 nursery employees. Until now, basic information such as nationality, work experience, legal status, education level and salary, widely available for agriculture, had not been collected specifically for the green industry. Surveyed states included Ohio, Michigan, Delaware, Tennessee, Florida, Indiana, Kentucky, Arizona and Rhode Island.

According to the results of the survey, 70 percent of the industry's labor force is Spanish-speaking or of Hispanic origin, and over half are from Mexico. Hispanic migrant laborers dominated the green industry in all of the states surveyed, with the exception of Indiana. Mathers speculated that the data collected is representative of the green industry labor force throughout the country.

The greatest impact that is changing the face of the green industry, and agriculture overall, is the migrant labor force, according to Mathers. She believes businesses can be more successful if they take a greater interest in their labor force.

The following are some survey results: Over 70 percent filling green industry jobs are general laborers aged 18-34 with middle school being the highest level of education.

The number of women entering the labor force is increasing. In 2003, less than 5 percent of migrant laborers were women. Now that number has risen to almost half. Mathers said such a significant finding has implications for training and health benefits.

Only 22 percent of workers understand English, creating communication barriers in the workplace. Such barriers can impact job performance and productivity, Mathers believes.

**Continued on Page 5**

## Thrips Biocontrol with Predatory Mites

Gary Couch, NYS IPM, gjc15@cornell.edu

The NYS IPM program has been evaluating the use of predatory mites for thrips control in bedding plants for over a decade. The results, both in production and retail settings, have been promising enough that we encourage other growers to utilize this approach.

The benefits of using biocontrol are numerous. The lack of an REI (re-entry interval) means they can be applied during normal working hours without disrupting other greenhouse tasks or incurring the added expense of overtime for late evening/night spray applications.

No pesticide license is needed and applications are simple and straightforward. The applicator incurs none of the risks or general unpleasantness associated with mixing, handling and applying pesticides.

New York growers on the Ontario greenhouse IPM tour saw cropping systems with no insecticide applicaitonss

Resistance is not an issue but use of the mites can prolong the usable life of other thrips insecticides by reducing our reliance on them.

While there are many positive benefits, we realize that a lack of confidence in the mite's ability to successfully control thrips can be a strong barrier against adopting this practice.

This is especially understandable if the grower has had the unfortunate experience of losing large numbers of plants to an outbreak of INSV, a virus that can be carried and spread by thrips.

### How it works:

The predacious mite, *Neoseiulus cucumeris*, (often just called "Cucumeris" by greenhouse growers) feeds on young thrips and will also feed on spider mite eggs or even pollen. The idea is to flood the plants with these miniature "eating machines" so few, if any, thrips survive to reproduce.

### How to implement:

The mites come in two formulations, sachet

and loose. The sachets are essentially small paper bags that contain some predatory mites (approximately 300), bran, and bran mites.

The predatory mites feed on the bran mites and breed. Once set out in the greenhouse a corner of the bag is removed and, as their numbers build, the predatory mites crawl out and spread over the crop. The sachets are set out at rate of 1 bag per 25 sq/ft. (approximate cost for a 2500 sq/ft house is \$.03 per sq/ft per application). While they may continue to emerge for 12 weeks, most have emerged after about 6 weeks therefore it takes at least two "applications" to cover the bedding plant cycle.

Alternatively you might go with a lower initial rate and set out additional fresh bags every two weeks. This method has worked reasonably well in our trials and only one spray application for thrips was needed all season (total cost of mites for a 2500 sq/ft house including shipping charges was \$.05 per sq/ft. or \$125. ).

The second, loose, formulation has a high number of predators in a container with bran and enough bran mites to keep them alive during shipping. The bran and mites are sprinkled over the crop at a rate of 17-25 predators per sq/ft (40,000-60,000 for a 2500 sq/ft house (approximate cost \$.01 per sq/ft per application).

As the predators don't reproduce to any great extent once released, weekly or bi-weekly repeat applications are recommended. Just as in a chemical control program, thrips levels should be monitored with yellow sticky cards.

Once the predators arrive they should be checked for viability. Exposure to extreme cold or heat may have destroyed them during shipping. After gently shaking the container, place a small amount of the bran-mite mixture onto a piece of paper (dark colored paper works best). Examine the brownish-pink predators and white bran mites with a hand lens for signs of movement. Do not store the product, it is advisable to get them into the houses within a day of arrival, two at most.

### Pesticides & Mites:

While the predators may keep your thrips levels low enough that you never need to spray for them (the lead grower that participated in the study has only made two applications for thrips in the past six growing seasons!), you may have to spray for other pests, such as

sences. *L.angustifolia* is an evergreen, bushy shrub with dense spikes of fragrant deep blue flowers and narrow aromatic silver gray leaves.

In 2006 'Ellagance Sky' was awarded a Fleuroselect Gold Medal for its unique colour, its uniformity and richness in flowering. 'Ellagance Purple' has now joined this prestigious rank; in effect extending the colour range of first year flowering Lavandula. The Fleuroselect judges were impressed by the earliness, uniformity, colour and floridity of this striking new variety. 'Ellagance Purple' has a compact and uniform plant habit and is extremely free flowering. Moreover, it has outstanding garden performance throughout the season, its intense purple-blue blooms appearing over a prolonged period of time. A bonus factor is its short "seed to sale" cycle. These characteristics make it desirable to all sectors of the market.

*L. angustifolia* is an important species in the professional horticultural industry. Many varieties are vegetatively propagated for production planning purposes. The result of the Fleuroselect trials shows that 'Ellagance Purple' serves as a great alternative for the professional growers, just because of its uniformity and easy, quick and cost-efficient culture from seed.

'Ellagance Purple' is great as an edging perennial where it will grace walkways, raised walls and borders. It will stand out in beds and drifts of mass plantings. This handsome ornamental plant will also shine as a pot plant.

'Ellagance Purple' – a winner for both the professional grower and the consumer and a unique addition to the colour range of the award-winning 'Ellagance' series.

*Rudbeckia hirta* goes by the common names black-eyed Susan, gloriosa daisy or yellow oxeye daisy. There are about 25 species of Rudbeckia, all native to North America. Black-eyed Susans grow in prairies, dry fields, open woods and along road shoulders.

In 2003 'Prairie Sun' captured Fleuroselect Gold. 'Maya' followed suit in 2005. Now 'Cappuccino' joins the parade of Gold Medal winning *R.hirta* varieties. This time around the Fleuroselect judges gave raving reviews on various aspects of this notable novelty. Besides being semi-tall and uniform, 'Cappuccino' bred by Dr. Zoltán Kováts of the Research Institute for Fruit Growing

and Ornamentals in Hungary for Clause Tézier is strong, vigorous and has good basal branching. Since it is also programmable, this variety is bound to be embraced by the grower market. The retail market will also welcome 'Cappuccino' for its impressive overall garden performance. This tetraploid variety will produce large bronze-brown coloured blooms for an extended period of time and delight the consumer.

'Cappuccino' is a versatile plant, ideal for creating dazzling focal points in borders and flowerbeds or containers where it they will add height, colour and interest. This reliable summertime bloomer provides bright splashes of colour in a mixed perennial border or porch planter. Being drought-tolerant it is suitable for xeriscaping and attractive to bees, butterflies and birds. This favourite summertime flower is easy to grow and regular deadheading will further prolong the blooming period.

### *Salvia farinacea* 'Fairy Queen'

bred by Ernst Benary Samenzucht is native to Mexico and Texas. Common names include mealycup sage or blue sage and "Mealycup" refers to a white powdery substance found on the calyx and upper stems of this plant. *Salvia farinacea* is an herbaceous perennial that is commonly grown as an annual in most cold winter areas for its brightly coloured flowers and aromatic foliage. 'Fairy Queen' salvia offers up a winning combination of uses: bedding, container and cut flower with fragrance, and drought tolerance

The Fleuroselect judges were full of praise for the lovely new colour of 'Fairy Queen'. This attractive new variety bears multiple spikes of bicolor blue and white flowers on dark distinctive flower stems from June to October. A small white spot on each sapphire blue flower creates the illusion of fairy dust. 'Fairy Queen' has a bushy and compact habit and thick stems.

'Fairy Queen' stands out in a multitude of uses. It brings mystical, airy presence to beds, borders, meadows and cottage gardens. Being fragrant, this variety attracts butterflies, bees and hummingbirds to the summer garden like other *Salvia farinacea* varieties; it is suitable for xeriscaping since it is drought resistant. This variety is an excellent summer pot item and also a great candidate for growing in containers and window boxes and makes great flower arrangements, whether fresh or dried.

## Fleuroselect Winners 2008

A similar counterpart to All America Selections in Europe is Fleuroselect. The Fleuroselect winners for 2008 are below.

***Begonia semperflorens 'Volumia Rose Bicolor,'*** bred by Syngenta Seeds species name translates as 'always flowering-cultivated.' There are wax begonia cultivars varying in size, compactness of the plant, foliage colour (*remember we are reporting on European introductions*), and degree of doubling of the flowers. These begonia varieties provide non-stop flowers in a palette of colours combining dramatically with beautiful leaf shades and textures. They are the most commonly used Begonia today.

According to the Fleuroselect judges, the most striking attribute of this cultivar is its excellent garden performance throughout the season. Another significant aspect of this garden jewel, of interest to growers, is its neat and compact habit. Remarkably large and

*Wax begonias capture the largest segment of the begonia sales market, with their numerous and varied attributes.*

persistent rose bicolor blooms adorn this well branched plant. This makes it a winner in the retail market.

'Volumia Rose bicolor' is an excellent bedding plant for creating masses of colour in edgings, entrance ways, mass plantings and borders. It will excel in container gardens, planters, pots, hanging baskets, or window boxes.

***Delphinium consolida 'Sydney Light Blue,'*** bred by Kieft Seeds Holland, is a gorgeous addition to the colour range of the award winning 'Sydney' series.

Delphinium or larkspur is a member of the Ranunculaceae family and is native to the Northern Hemisphere and the high mountains of tropical Africa.

The Fleuroselect judges were full of praise for the new colour 'Sydney Light Blue'. The pastel light blue blooms are truly unique. It has strong and uniform flower spikes and is the third Gold Medal winner in the 'Sydney' Series. The remarkable ease in growing this variety was also noted as a bonus point. This new variety is a welcome addition to the award winning 'Sydney' series. Like other varieties within this series, 'Sydney Light Blue' is especially suitable for professional cut flower cultivation because of its vertical branching.

Moreover, it performs extremely well under the controlled conditions of a greenhouse.

The series is renowned as being the first Larkspur series perfectly suitable for professional greenhouse cultivation. Unlike other Delphiniums, Sydney has a vertical branching habit that enables denser production. The surprisingly short cultivation period means that production planning can be scheduled from spring to autumn hence extending the sales period. An equally distinguishable feature which serves to add its market value as a cut flower is the strong and uniform flowers spikes that proudly carry an abundance of large fully double flowers.

***Monarda hybrida 'Bergamo'*** bred by Kieft Seeds Holland and Florensis is native to North America. It goes by the common name of Bee Balm or Bergamot. 'Bergamo' has very distinctive flower-heads each one consists of a large number of curving tubular flowers growing out from a central point, creating a shaggy dome of petals. They are grown for their aromatic foliage as well as flowers. The whorls of Sage-like blossoms and decorative bracts attract butterflies and hummingbirds.

'Bergamo' stunned the Fleuroselect judges by its earliness and magnificent new colour. This annual Monarda produces masses of intense rose-purple flowers from June to August. 'Bergamo' has a neat and compact form that is beneficial to growers. This intriguing new variety also has a dwarf habit that makes it interesting as a pot item for large containers. It has good garden performance and is highly resistant to mildew.

'Bergamo' can be used in creating an impressive border display. It will have great impact when used in mass plantings and edgings. This handsome plant will also shine out in rock gardens, meadow settings and prairie lawns. Vigilant deadheading will prolong the blooming period. Use it to create superb flower arrangements too.

***Lavandula angustifolia 'Ellagance Purple'*** bred by Kieft Seeds Holland is native to the western Mediterranean region. It goes by the common name of English Lavender. The name lavender is derived from the Latin word "lavare" (wash), referring to lavender's use in bath es-

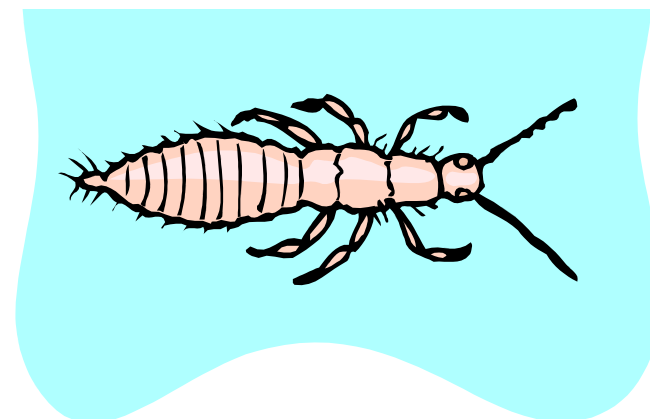
## Thrips from page 2

aphids or spider mites, or for disease control.

Since the predators are living creatures, it's important to know what, if any, effects pesticides will have on them. In general, fungicides have not shown any adverse effects on the mites so disease control is usually not an issue. However, insecticides and miticides vary greatly both in their initial and residual effects. For example, the commonly used insecticide, Orthene, kills the predators and its effect lasts up to 10 weeks so its use should be avoided if you wish to use predatory mites. Other insecticides may be harsh initially but have little or no residual effect so can be used just before a release. A few have no immediate or residual impact. A database of pesticides and their effects on predatory mites can be found at: <http://www.koppert.nl/e0110.html>

### Conclusions:

It should be noted that the predators are not well suited to stopping a raging infestation. If you already have high thrips numbers, prior to introducing the mites you should first knock them down with a compatible insecticide such as Conserve. The mites also have a more difficult time controlling thrips if you aren't taking other thrips suppressive steps such as controlling weeds under the benches. With the great variation among different greenhouses and plant mixes the formulation and rates appropriate to your operation may need to be adjusted. If you are considering using the predators next season but have additional questions or would like assistance in trialing the predators please contact Brian Eschenaur, a member of the Ornamentals IPM Team at 461.1000x240.



## Empire State Green Industry Show

The Empire State Green Industry Show, hosted by the New York State Turfgrass Association, New York State Nursery/Landscape Association, New York State Arborists - ISA Chapter, Inc., and New York Flower Industries, comes to the Rochester Riverside Convention Center, November 13-15.

The show features accredited education sessions for all green industry professionals and the largest green industry trade show in New York, as described in the program brochure enclosed with this newsletter. The 2006 show attracted 1,807 attendees and 231 exhibitor booths. The Empire State Green Industry Show provides an opportunity for attendees to enhance their professional development, learn about current research and regulatory information, network with peers and meet prospective customers.

The keynote presentation will be given by Commissioner Patrick Hooker with the New York State Department of Agriculture and Markets. He will discuss his vision regarding issues facing the horticultural industry on Tuesday, November 13, from 4:00 to 5:00 p.m.

On Thursday, November 15 from 6:30 to 8:00 a.m., Edward L. Hanbach and Michael Nierenberg with the New York State Department of Environmental Conservation will participate in a regulatory panel discussion. Participants can enjoy breakfast while having their questions answered regarding neighbor notification laws and lawn care contract implementation.

A wide variety of recertification credits will be available including 42.25 New York State Department of Environmental Conservation recertification credits, 1.80 Sports Turf Managers Association Certified Education Units, 1.85 Golf Course Superintendents Association of America Education Points, 27.50 International Society of Arboriculture Certified Education Units, and 42 Certified Nursery/Landscape Professional credits.

A round table luncheon will take place on Tuesday, November 13 from 11:30 a.m. to 1:00 p.m. Participants can choose from a variety of pertinent discussion topics and exchange ideas with their colleagues.

For more information regarding the 2007 Empire State Green Industry Show or to access the exhibitor and attendee brochures, visit the show web site at [www.nysta.org](http://www.nysta.org) or call the show office at 800-873-8873 or (518) 783-1229.

## Canna Viruses

Brian Eshenaur, NYS IPM, bce1@cornell.edu

Their bold foliage and bright flowers make cannas a popular plant, giving a tropical look to Northeast gardens. Unfortunately, in recent years, two virus diseases: Canna Yellow Mottle Virus and Canna Mosaic Virus have impacted the production and sales of this popular plant. Symptoms include stunting and yellow and brown leaf flecks and yellow streaks along veins.



Normally diseases show up in a spotty or clustered pattern in a greenhouse crop. Rarely are all plants infected unless the stock material arrives infected. This spring an alert greenhouse grower in NY noticed that all his cannas of one variety, 'Rosemond Cole', seemed stunted and had some foliage discoloration. Working with his extension educator he had the plants tested and they were found to

*Canna viruses could have a potentially cooling effect on the tropical look that is popular now.*

have both Canna Yellow Mottle Virus and Canna Mosaic Virus. He was not alone, this problem was widespread this year. Spread of these viruses can occur by any type of a mechanical injury that moves plant fluids. Handling during propagation and division is of particular concern. In addition, aphids can transmit Canna Mosaic Virus but insects have not been found to transmit Canna Yellow Mottle Virus.

Plant virus disease infections are systemic in the plant and the only treatment is to remove and destroy infected plants. It is very important to use only virus-free rhizomes or plants for production. Ask your supplier if the plants you are considering purchasing have been tested to confirm they are virus-free.

## How Do Your Numbers Add Up?

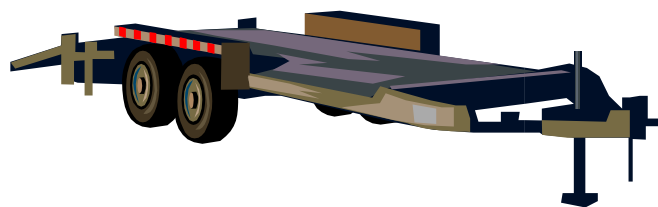
The United States Department of Agriculture (USDA) recently released its report, "Floriculture Crops 2006 Summary," which contains statistical information provided by growers in the 15 largest floriculture-producing states.

According to the report, the wholesale value of floriculture crops dropped 4 percent in 2006 versus sales in 2005. Sales in 2006 were \$4 billion compared to \$4.15 billion in 2005.

The 2006 total number of growers was down 9 percent. In 2005, there were 7,178 growers in the 15-state program, but last year that number was 6,546. California remains the number one floriculture-producing state.

Total covered area for floriculture crop production in 2006 was 5 percent less than it was the previous year. Production under shade and temporary cover was down 6 percent, while open ground production decreased 9 percent.

One area that did increase was the "average peak number of hired workers employed" category. It was up 7 percent with growers saying they had an average of 18.1 workers during peak. In 2005, growers said that number was 16.9.



## Truck & Trailer Regulations

NYS Farm Bureau has printed the third edition of their farmer's guide to truck and farm implement laws and regulations. Landscape firms with trucks and trailers on the road are required to comply with many of the same rules. Purchase of the guide is through the Farm Bureau legal affairs office 800.342.4142 or their web site [www.nyfb.org](http://www.nyfb.org). Member price is \$20. nonmember price is \$40.

## Labor, From page 1

Job position is highly correlated with language proficiency. Workers with high English proficiency held advanced jobs.

The majority of those surveyed do not have health benefits (70 percent), nor they do not know what benefits they do have. Such information indicates that employers are not communicating to them the benefits they are entitled to, or they are working without proper documentation, according to Mathers.

"Nursery workers surveyed are receiving less than the average U.S. hourly earnings. Over 75 percent are earning between \$6 and \$10 per hour. According to the Bureau of Labor Statistics, the average hourly earning of non-supervisory workers during 2007 is \$17.16. Almost 70 percent of respondents indicated that a higher salary would improve their job environment.

The primary source of a worker's technical information was the supervisor, indicating that the worker is receiving little to no information outside of his or her working environment. Sixty percent of nursery workers have not received training courses related to their work, and only 8 percent have access to such courses.



Nearly 80 percent of the workers were interested in attending work-related courses or classes. They indicated they would welcome training in the areas of identification, such as plants, insects, diseases and weeds, as well as equipment safety.

Mathers said that such knowledge about the green industry's labor force is the first step in improving the well-being of migrant workers, building working relationships with employers and boosting overall productivity and efficiency of landscape, garden and nursery businesses.

Opportunities offered to the industry's labor force varies from one firm to the other. What works for one firm may not be suited for another. According to another survey conducted by Mathers and Acuña, the diversity of culture, language and experience level among the workforce varies geographically and among nurseries within those regions.

"Such differences in culture and lifestyle indi-

cate that across-the-board training is not as effective as tailoring programs for each specific group," said Mathers. "Results also seemed to indicate that workers at different nurseries had different needs, creating challenges of delivering the right training programs and technical information to the proper audiences."

Why is such information about the green industry's workforce so important? The answer is due to sheer numbers. Nearly 15 percent of the United States population is Hispanic, seeking work in service-oriented and labor-intensive businesses, like the green industry. The greenhouse industry is the fifth most important agricultural sector in the country. In Ohio, labor demand is anticipated to increase an average of 3 to 5 percent over the next several years.

Embracing diversity in an industry that is worth \$3.5 billion in Ohio, the need to understand the skills, traits, strengths and weaknesses of those who lend a hand to its success is vital, Mathers believes.

Mathers states working with the Hispanic audience is also important beyond the issue of diversity. "We have an increasing need to show impact with our outreach and Extension programming. Social research methods used in our surveys are an ideal way to evaluate and raise the scholarly aspect of Extension programming," said Mathers. "Studies like ours bridge the gap between Extension and research."

Survey funding was provided by the Ohio State University CARES Program, The Ohio Nursery and Landscape Association, the Horticulture Research Institute, and the Department of Horticulture and Crop Science.

*Is there a shortage of qualified/experienced landscape laborers? What is the entry wage enticing additional workers into the workforce? What will customers pay for landscape services? What does it take to attract good staff?*