FY 2012 PROGRAM WORK TEAM ANNUAL REPORT

1. Full name of your Program Work Team (PWT):
   Greenhouse Horticulture Program Work Team

2. Please list names, affiliations and e-mail addresses of the PWT Co-Chairs: (With an asterisk [*], please indicate the co-chair responsible for finalizing this report.)
   *Neil Mattson, Department of Horticulture, Cornell (nsm47@cornell.edu)
   Chris Logue, CCE of Schenectady County (cal20@cornell.edu)
   Elizabeth Lamb, NYS IPM (eml38@cornell.edu)

3. Please identify your PWT’s activities, accomplishments, and, most importantly, outcomes and impacts over the past year.

The Greenhouse Horticulture PWT provides Cornell extension programming to producers of greenhouse bedding plants, flower crops and greenhouse vegetable crops across New York. There are 615 wholesale floriculture producers in NYS producing $171 million a year in wholesale value. These operations support more than 7,000 employees.

Advisory Board
Stakeholders from different facets of the greenhouse industry form a 15-person Advisory Board that meets twice a year with the PWT to help with planning and evaluation of applied research and extension programs at Cornell. During 2012, the Advisory Board met with the PWT at the NYS Department of Agriculture and Markets in Albany on March 5th. The meeting included a roundtable discussion with NYS Ag Commissioner, Darrel Aubertine. Advisory board members weighed in on challenges and opportunities in the NYS greenhouse industry. Our second meeting was held on October 2-3 in Cooperstown. We began planning for the 2013 floriculture field day, discussed challenging new diseases, and the advisory board renewed their support for the annual and perennial trials at Bluegrass Lane.

Phone conferences during the year were used to keep the members of the PWT and the advisory board in close communication at minimum cost. On April 23 and May 30, extension educators around the state joined for a phone conference to discuss significant pest problems that occurred during the spring growing season. Conference calls on April 6 and June 28 covered final plans for the summer Floriculture Field Day.

The Advisory Board requested programming that improves greenhouse business profitability via a) enhanced marketing and social media skills b) information on new economically devastating disease
issues (impatiens downy mildew, chrysanthemum white rust, and boxwood blight) c) better tools for using biological controls and scouting in integrated pest management (IPM), d) information on energy efficient production and e) education of garden center operators, and private and professional gardeners.

Stakeholder programs
The educational goals of the PWT were addressed at the Floriculture Field Day (July 24, 125 attendees, additional information below) on campus. In addition, Long Island colleagues hosted an Agricultural Forum, Impatiens Downy Mildew Grower Meeting (40 attendees), Worker Protection Standard Mock Inspection Programs (160 attendees), Impatiens Downy Mildew Grower-Retailer Summit (116 attendees) and a Poinsettia Open House (30 attendees). Approximately 400 growers attended annual Nursery and Bedding Plant Schools held in the Buffalo area (January 10), Long Island (January 17), the Capital District (January 31), and the Hudson Valley (February 9). In addition a greenhouse floriculture open house was held on March 22 (30 participants) for attendees to view research trials in progress and here research updates on plant growth regulators, fertilizers and substrates, and insect control.

Floriculture Field Day
A primary activity of the Greenhouse Horticulture PWT is Cornell’s annual Floriculture Field Day, held on July 24 in Ithaca. More than 125 educators and industry reps attended. The morning program centered on a theme of diversification and response to changing consumer values to improve profitability. A popular session was a Question and Answer panel of three greenhouse operations that have made their own diversification efforts including year-round herb production, cut flowers and Farmer’s Markets, and overwintering estate plants. Of the 50 evaluation respondents, 82% learned some tips they planned to implement at their own operation. The afternoon included Walkabouts (guided tours) with information on annuals and perennials that work in the landscape and pest and disease management. Participants had the opportunity to view the new cultivars at the Bluegrass Lane research facility and we ended the day with an ice cream social.

Kathy Pufahl Memorial Container Design Contest
The 9th Annual Kathy Pufahl Memorial Container Design Contest, a part of the Field Day, brought 12 noted NY and national industry experts to Ithaca as judges and provided a forum for learning and horticultural inspiration from the 24 entries. Winners and winning entries can be viewed at http://www.greenhouse.cornell.edu/container_contest/fieldday_2012.html. This year the contest reached the $10,000 milestone for funds raised in support of IBD research at Mt. Sinai Hospital.

New and noteworthy pests
Impatiens downy mildew is a new disease that is having a dramatic effect on NYS greenhouse
growers, landscapers and home gardeners. Early reports suggest that there will be a reduction in production of garden impatiens in 2013 of at least 25% and some growers will no longer produce impatiens. Margery Daughtrey and Nora Catlin, from the Long Island Horticulture Research and Education Center and Suffolk County CCE, are providing much of the information for growers around the country. In addition to fact sheets and articles on disease identification and prevention, and alternatives for the home garden for a variety of audiences, they have provided information and photos to others for presentations and articles in national trade journals (http://ccesuffolk.org/floriculture-program/). Programs were held at: LIHREC, March 2012 (45 growers), LIHREC with Farm Bureau, August 2012, Division of Plant Industry, Albany (20 growers), Long Island (Grower and Retailer Summit with Ball Horticultural, 80 growers).

In association with the Division of Plant Industry, Department of Agriculture and Markets, a series of email and web-based pest alerts on the quarantine pest chrysanthemum white rust were sent out to approximately 150 greenhouse growers. The emails were to provide information on environmental conditions that promote the disease, fungicides for prevention, and regional locations of confirmed cases of the disease in order to give growers the tools to avoid the serious losses caused by the disease. We intend to increase the number of pests for which updates are provided in 2013.

**CCE Agriculture and Food Systems In-service**

The Greenhouse Horticulture PWT organized a half day track for the CCE Agriculture and Food Systems In-service held in Ithaca November 12, 2012. Speakers were Neil Mattson, Melissa Brechner and Elizabeth Lamb. While the number of attendees was small, we were able to have a good discussion on issues relating to commercial horticulture, and organized a greenhouse tour and an IPM In-depth based on the contacts made at the meeting.

**IPM In-depth**

The NYS IPM Ornamentals Team, and other PWT members, held the 5th annual IPM In-depth hands-on workshop on July 23 to give growers coming to Ithaca for the Field Day an additional educational opportunity. Twenty-three participants had a chance to get hands-on experience with biological control of insects, root rots and media amendments. Of the 13 that had participated in previous summer In-depth programs, 12 have implemented new practices in their operations, including improved observation and monitoring, use of biological control and improved handling of nutrient management and water testing. With funding from NY Farm Viability Institute, similar IPM In-depth workshops were held in association with 5 CCE offices across the state. Of the 92 growers who attended the IPM In-depth hands-on ornamental workshops, 82 learned information that they planned to incorporate into their businesses and 85% of those who had attended previous IPM programs had already incorporated what they learned into their production. Two special IPM In-depths were held for 20 Division of Plant Industry inspectors, who act as a multiplier to extend the
information to additional growers.

**Websites, Social Media and Print Resources**
The PWT’s websites, [www.greenhouse.cornell.edu](http://www.greenhouse.cornell.edu) and [www.longislandhort.cornell.edu](http://www.longislandhort.cornell.edu), continue to be used as sources of information for growers and educators. *Elements of IPM for Greenhouses in NYS* are at [www.nysipm.cornell.edu](http://www.nysipm.cornell.edu). Bulb crop research results are available online at [http://www.flowerbulbs.cornell.edu/](http://www.flowerbulbs.cornell.edu/) and on CD. The *2011 Annual Report of the LIHREC for Nursery, Landscape and Ornamentals*, including floriculture research relating to crop performance, plant pathology, entomology, and weed science is available online at [http://www.longislandhort.cornell.edu/](http://www.longislandhort.cornell.edu/). Several *Cornell Guidelines* were updated for 2012 with the assistance of PWT members (see information on use of PWT grant funds below), including a new one for greenhouse production of vegetable bedding plants and vegetable crops, which will be available in 2013. Numerous articles were prepared for *LI Hort News, Greenhouse IPM Notes, Hudson Valley Horticulture Newsletter, Capital District Growing Trends Newsletter* and other extension newsletters, the *NYSFI Newsletter*, the *Ornamentals IPM e-Newsletter* and for national trade magazines. Nora Catlin is working with specialists from Purdue University, North Carolina State University and the University of New Hampshire to write e-Gro Alert, an electronic resource for greenhouse growers ([http://e-gro.org/alert.php](http://e-gro.org/alert.php)). The ornamentals program of NYS IPM has a Twitter feed and has started a Greenhouse IPM Update list-serve. Long Island Greenhouse has a Facebook page at [http://www.facebook.com/LIGreenhouse](http://www.facebook.com/LIGreenhouse).

**External funding sources**
The USDA/ARS, the American Floral Endowment, the Gloeckner Foundation, the Post/Schenkel Foundation, Friends of Long Island Horticulture, Hatch, Northeast IPM, NY Farm Viability Institute, NYS Flower Industries Research and Education Fund, EPA, NIFA, NE-SARE, NYS IPM, and various horticultural industries provided external funding for the Cornell Greenhouse Horticulture Program in 2011.

**Service to the industry**
Members of the PWT and Advisory Board provide service to the industry in many ways. In addition to their working directly with a large number of NYS growers, identifying problems and solutions, and analyzing samples, they are active in state, national and international programs. They are members of the Northeast Greenhouse Conference Planning Board, academic reviewers for the New England Floriculture Grants Program and other organizations, and collaborate closely with New York State Flower Industries (NYSFI), and the Long Island Flower Growers through joint projects.

**Greenhouse Horticulture PWT grant ($2,500)**
Funding was requested to provide support to Mike Helms and his staff at the Pesticide Management Education Program to merge the contents of the previously separate Cornell Guides for greenhouse
and herbaceous perennial crops, and to make this volume more user-friendly than its predecessors, as requested by growers. Combining the 2 volumes was not merely a process of adding 2 parts together but actually determining a format for the combined information that allows growers to easily identify which pesticides are labeled for a variety of different situations, both in the landscape and in the greenhouse. Additional information, including photographs, was added to cover identification and biology of pest species. Margery Daughtrey, the editor for both Guides, was instrumental in working with Mike Helms and the subject authors and in making sure all the parts came together. The combined guide, **Cornell Guide for the Integrated Management of Greenhouse Crops and Herbaceous Ornamentals**, will be available for sale in early 2013.