PURDUE UNIVERSITY

PURDUE EXTENSION

The Indiana Flower Grower

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Message from Roberto Lopez

Dear Indiana floriculture greenhouse growers, horticultural businesses, distributors, and organizations,

As your new floriculture extension specialist I would like to introduce myself and welcome you to The Indiana Flower Grower, an electronic quarterly newsletter. Please feel free to send me your suggestions and comments on how it can be improved.

I will briefly start off by telling you about myself and my goals. I was born and raised in Albuquerque, New Mexico where I attended The University of New Mexico and received my B.S. degree in Biology and Economics in 2001. I then moved to East Lansing, MI where I received my M.S. and Ph.D. from Michigan State University in Horticulture in 2003 and 2007, respectively, under the advisement of Erik Runkle. My research was focused on flowering of orchids, propagation and post-harvest physiology of non-rooted cuttings. I officially became an Assistant Professor in the Department of Horticulture and Landscape Architecture on September 4, 2007 with an appointment in floriculture extension, research and teaching.

My goal is to provide you with sustainable, energy efficient and grower-friendly decision-support tools generated at Purdue and other Universities to help you enhance profit margins, quality and production. Based on your input, this information will be delivered in English and Spanish via the internet, workshops, seminars, video conferences, trade magazine articles, CDs/ videos, and on-site visits. If you have not already filled out a grower survey (attached at the end of the newsletter), please fill one out and send it to me.

My principle research interests are: 1) flowering of ornamental crops, 2) controlled environment greenhouse production, 3) sustainable floriculture production, 4) propagation, production, and marketing of new ornamental crops, and 5) plant growth regulation.

Indiana Flower Grower of the Year

Bud Brehob is the 24th Indiana flower grower to receive recognition as an IFGA Grower of the Year. He joins 23 other people in holding this distinguished honor.

1984 Jack Messer	1992 Doug Hackbarth	2000 Diana Graves
1985 Bill Davis	1993 Adele McIntosh	2001 Joe Boarini
1986 Louie Schlegel	1994 Gordon Elsbury	2002 Bart Bernacchi
1987 Bob Bernacchi	1995 Bernie Ferringer	2003 Tina Hood
1988 Bill Rozzi	1996 Dave Jones	2004 Jim Adams
1989 Max Samuelson	1997 James Gapinski	2005 Dan Gibbs
1990 Steve Hood	1998 Adam Henning	2006 P. Allen Hammer
1991 Dave Thode	1999 Glen Kingma	2007 Bud Brehob

Larry Houser (left) presenting Bud Brehob (right) with an IFGA Grower of the Year Award.

Bud Brehob

Although Bud Brehob is no longer a grower, he and his family have a long history of growing plants. In 1898, Bud's grandfather started in business as a truck farmer. In 1951, Bud started working full time for his dad, Carl, as a truck gardener. Shortly after that, the business became known as Carl Brehob and Son. In the beginning, they grew greenhouse and field vegetables such as lettuce and tomatoes. Later they raised bedding, vegetables, and potted plants.

In the early 60's, there were between 60-70 truck gardeners on the south side of Indianapolis. Everyone was buying supplies separately, and paying freight. A more practical solution was to pool the orders and have them shipped to one location – Carl Brehob and Son. Then the growers would come in and pick up their supplies. Eventually, other growers would come in to buy the materials they needed. In 1975, Bud's father passed away and Bud continued growing until 1977. Today, Bud with his sons distributes supplies to small to midsize growers.

As for growing, Bud continues to raise flowers and plants around his home. As he says, "My heart is always with the grower."

2008 Indiana Easter Lily Guidelines

By Roberto G. Lopez, Floriculture Extension Specialist, Purdue University

Easter lily crop

Easter 2008 will be on March 23rd - the earliest it has been since 1913. Timing this year will require that you closely monitor the crop to make sure you stay on schedule.

Growing Media

A good, well-drained and aerated medium (soil or soilless) is required for lilies to prevent root rot. Perlite and superphosphate should **NOT** be added to the media to avoid leaf scorch. Medium pH should be maintained between 6.5 to 7.0 for soil-based media and 6.0 to 6.5 for soilless media. Bulbs should be planted approximately 0.5 to 1 inches from the base of a 'standard' pot to encourage stem roots.

Fertilization

Easter lilies require moderate fertility of 150 to 200 ppm nitrogen. A constant fertilization program throughout the production cycle is required. However, excessive salt levels can decrease plant height and increase the incidence of root rot.

Forcing Temperature

After cooling (vernalization), potted bulbs should be forced at 62 to 65 °F for a late Easter and at 63 to 65 °F for an early Easter such as this year (Table 1). Easter lilies grown in Indiana at a constant day/night temperature (0 DIF) 64 °F day/night as compared to 70/60 °F day/night produces an acceptable finished height and form. Once flower initiation has occurred, plant development can be controlled by leaf counting and adjusting temperatures (leaf unfolding rate increases linearly with average daily temperature). By counting the number of leaves that have unfolded each week and knowing the number of leaves that are left to unfold, you can determine if the crop is on track for your visible bud target date.

Table 1. Easter Lily Schedule for pre-cooled (case cooled) CTF (controlled temperature forced) lily bulbs. These are only guidelines. Your cultural practices and environmental growing conditions may require adjustments to this guideline.

Wks. before Easter	Week of	Case Cooled	CTF
24	Oct 7	Bulbs are shipped	Pot, place at 63 to 65 °F
23	Oct 14	Start cooling (41 to 44 °F)	
22	Oct 21	Cooling 	Start cooling (41 to 44 °F)
21	Oct 28		Cooling 
20	Nov 4		
19	Nov 11		
18	Nov 18		
17	Nov 25	Place pots in greenhouse (63 to 65 °F)	
16	Dec 2		Place pots in greenhouse (63 to 65 °F)
15	Dec 9		
14	Dec 16		
13	Dec 23	Shoots emergence	
12	Dec 30	Shoots 1” to 3”	
11	Jan 6	Shoots 3” to 5”	
10	Jan 13	Shoots 5” to 9”, flower initiation	
9	Jan 20	Shoots 9” to 12”	
8	Jan 27	Shoots 12” to 15”	
7	Feb 3	Feel flower buds, space plants to final spacing	
6	Feb 10	Visible bud	
5	Feb 17	Apply Fascination (5 to 10 ppm) to lower ½ of plant	
4	Feb 24		
3	Mar 2		
2	Mar 9		
1	Mar 16	Ship	
0	Mar 23	Easter	

Easter lily with 1 inch buds

Temperature (continued)

The rate of plant development from visible bud to flowering is only linear between 57 °F and 72 °F. For example, increasing the average daily temperature from 60 °F to 65 °F decreases time to flower by 4 days. An increase in temperature from 75 °F to 80 °F results in only a two-day decrease in time to flower. Table 2 shows the predicted time from visible bud to flower at average daily temperatures ranging from 55 °F to 85 °F. Temperatures above 75 °F should be avoided because flower buds may abort.

Table 2. Time from visible buds to first open flower at various average daily temperature.

Average daily temperature (°F)	Days from visible bud to flower
55	42
60	38
65	34
70	31
75	27
80	25
85	24

Height Control

Easter lily plants will generally double in height between visible bud stage and flowering. For example, if your target height at flower is 22 to 24 inches including the pot, then the height at visible bud should be 14 to 15 inches including the pot. Graphical tracking should be used to monitor crop progress through flowering and height control strategies should be used to regulate stem elongation.

The amount of stem elongation is influenced by the difference between the day and night temperature setpoints (DIF). Stem elongation is promoted when the day temperature is warmer than the night temperature (positive DIF). During the opposite environmental conditions, where day temperature is cooler than the night temperature (negative DIF), stem elongation is inhibited.

Growth retarding chemicals can be used to reduce internode elongation, but caution should be exercised once plants have visible buds. Spray or drench applications of A-Rest (ancymidol) or Sumagic (uniconizole) can be used for height control of Easter lilies. Application should be made very early (3-inch stage) to avoid a "palm tree" lily. Early application also helps to even the crop. When used, the second application should be made at the 6-inch stage. Drenches are less active in root medium containing bark; therefore drenches need to be adjusted in such media. A spray treatment is often preferred on lilies grown in bark mixes. The need for lily height control varies greatly among greenhouses. As a general recommendation, 0.25 mg active ingredient A-Rest per pot as a drench or two spray applications of 50 ppm is recommend. Sumagic guidelines are 0.03-0.06 mg active ingredient per pot as a drench or one to two spray applications of 5 to 10 ppm. Several spray applications at lower concentrations always results in a more attractive plant than a single spray at higher concentration. Finally, the longer you wait to space plants, the taller plants will be at finish. Typically, plants should be spaced to their final density at least a week or two before visible bud.

Figure 1. Root rot (photo courtesy of MSU College of Knowledge)

Disease Prevention

Easter lilies have the potential for developing root rot during production. Routinely remove plants from their pots and inspect the roots. The roots should have white root tips and any discoloration is likely a root rot pathogen (Figure 1). Preventive fungicides should be used on a regular schedule, especially late in the crop cycle. After removing plants from vernalization and at the visible bud stage, it is recommended to drench with a fungicide for prevention of *Pythium*, *Phytophthora*, and *Rhizoctonia*.

Easter lily information adapted from previous Michigan State University and Purdue newsletters:
http://www.ipm.msu.edu/grnhouse05/G2-04-05.htm#1
http://flowers.hort.purdue.edu/web/AAbulletins/Fall%20bulletin%202001.pdf

Effectively Using Fungicides

By Janna Beckerman, Extension Plant Pathologist, Purdue University

Many people assume that if a chemical is used to control a disease-causing agent, it will cure the plant, no matter when and how they use it. This is an unfortunate and erroneous assumption. Unlike aspirin, which often cures headaches and eases hangovers, fungicides do not cure diseases. Fungicides work by preventing disease from becoming established in the first place. In this way, they act more like a vaccine, than an antibiotic or other drug. Most fungicides, particularly natural or organic fungicides, protect plants by covering their surface and preventing infection from occurring. Other fungicides are systemic, and are active within the plant, preventing disease from becoming established. This doesn't mean that fungicides don't work—far from it. A properly chosen, and properly applied fungicide is an important component of any disease management program. However, it is important to remember that fungicide use should be secondary to an accurate diagnosis of the problem, and then fungicide use should integrated with the proper cultural practices, and an understanding of pathogen, and disease biology.

***Pythium* root rot in poinsettia**

Using a fungicide effectively requires a solid strategy of integrated plant management. As opposed to focusing on the pest or pathogen in a traditional integrated pest management (IPM) program, integrated plant management focuses on identifying the right plant for your greenhouse conditions and management strategies aimed at keeping that plant healthy. The backbone of integrated plant management includes carefully matching the plant to the media, light levels and watering conditions; proper sanitation; appropriate fertilization and pruning, when necessary. These strategies work together to prevent disease problems from developing in the first place.

***Pythium* root rot in poinsettia**

Seven Habits for Highly Effective Fungicide Use

Prevention is the key word here and it is essential to successful plant management. Even under the best of situations (early diagnosis, low disease levels, resistant cultivars), it is important to remember that fungicides are only effective when properly used. The steps in this process are:

1). The correct diagnosis

Have you correctly diagnosed the problem? This is not the time for guessing. Prior to applying any chemical, make certain of your diagnosis. Fungicides are only effective when the disease causing agent is fungal! If you are certain of your diagnosis, proceed to the next step of identifying which pesticide is best for the problem you wish to manage. The most effective fungicides are often fairly specific in their use—fungicides to control *Phytophthora* or *Pythium* root rot aren't going to work for *Rhizoctonia*, and *vice versa*. "Spraying and praying" have never been effective management strategies.

2). Selecting the appropriate chemical

Although many chemicals, particularly the strobilurins, have activity against a wide range of pathogens, most do not. Often times the best control can be obtained with a specific fungicide, instead of a fungicide with a broad range of activity. This may require some research on your part to identify which fungicide works best. An excellent website to consult is the Turf and Ornamental BlueBook Website at: http://www.greenbook.net/turf&specialty.asp

Powdery mildew on roses

Remember to determine if the plant you wish to treat is labeled and that no contraindications exist. Certain plants develop phytotoxic reactions to some fungicides, and these reactions are almost always noted on the fungicide label. Make sure you can follow the recommended instructions as to the number of applications, or the addition of any adjuvants. Spending a few hours of your time is not going to change the outcome of your disease problem. However, not spending that time can cost you your entire crop!

3). Applying the chemical at the right time

By the time the symptoms are severe, it is too late to begin spraying. Fungicides, in general, protect new growth. No fungicide in the world is going to "cure" or "heal" any already present lesions. Fungicides protect new growth, and stop the spread of the disease—nothing more, nothing less. When applying a fungicide, recognize temperature limitations (rain, windy, too hot, or too cold) and apply during appropriate weather conditions. When applying any chemical, be sure to protect yourself appropriately.

Fungicides are formulated in different ways, to increase efficacy and safety. Some of the most common formulations are:

G-Granular
DF-Dry Flowable
WG-Wettable Granule
WP-Wettable Powder
EC-Emulsifiable Concentrate

4). Applying the appropriate amount

Many people believe if a little is good, a lot is better! Nothing could be further from the truth, or more toxic. Most fungicides have gone through numerous trials to identify optimal amounts. Excessive amounts can result in phytotoxicity (plant damage). Less than labeled amounts usually fail to control the disease problem, and can create additional problems in the form of resistant pathogens (see step 7). Ideally, the first application should be made at a time just before the pathogen contacts the plant surface. Unfortunately, this requires an understanding of the pathogen life cycle, and the environmental conditions that trigger the release and spread of the pathogen.

5). Adequately covering the plant
Fungicides applied to the foliage act as a chemical barrier on the plant surface, preventing the pathogen from infecting the treated plant. In order to be effective, coverage must be complete. The effectiveness of the barrier depends upon how well the plant surface was covered, and how well the spray spreads to the plant. Some plants, particularly those with very hairy or waxy foliage, are difficult to cover properly. To improve coverage, and adherence, many fungicides have adjuvants, or spreader-stickers. Usually, the label alerts the user to these problems. Some fungicides, like Daconil, leave a residue that makes observing coverage simpler. Many find the residue aesthetically displeasing. In deciding a spray program, it is often difficult to combine good coverage and no residue. Ultimately, it is your decision—black spots or white residue.

6). Applying the chemical at the appropriate frequency
Your work isn't done after applying the fungicide. The first fungicide application establishes a barrier on the plant surfaces. Continued application of fungicides **in rotation** is needed to keep the barrier active and effective against the disease causing agent. The fungicide label usually states the frequency of reapplication (usually 7-14 days). A key difference between synthetic and natural fungicides become apparent here: Organic fungicides require more frequent application as they quickly are washed off, or break down, usually within several days to one week. Synthetic fungicides usually have greater than 7 day re-application. However, synthetic fungicides also break down when in contact with water, sunlight, or oxidation. Regardless of which fungicide you chose, re-application or rotation with another fungicide is needed to keep the fungicide barrier active.

Two other factors impact application frequency: Plant growth and rainfall. The rate of plant growth affects barrier completeness. As the plant continues to grow, new leaves and shoots appear. This tissue is unprotected, and vulnerable to infection. Repeated application of fungicides protects new growth. Rainfall also impacts the frequency of reapplication. Repeated or frequent rainfall (or overhead watering) can remove the barrier. If excessive rainfall, or rapid growth of the plant occurs, the shorter interval between sprays should be used. This protects any new growth, and any growth that has had the previous application of fungicide washed off. If plant growth is slower, or less watering has occurred, the longer suggested interval should be used as a guideline.

7). Rotating your chemicals
Every time certain fungicides are used, there is a chance that the target organism may develop resistance. This is less true for organic fungicides, which are usually toxic by a variety of mechanisms. With newer synthetic fungicides, which kill in a very specialized fashion, the risk of resistance is much, much higher. For this reason, it is important to develop and implement a strategy to prevent the resistance from developing. Over time, the resistant strain replaces all other strains and the disease becomes increasingly difficult to control. To prevent this from occurring, many fungicide labels provide information to assist you in developing good rotations. By rotating, or rotating and tank mixing your fungicides, you reduce the risk of fungicide-resistant fungal pathogens developing, and extend the useful life of "favorite fungicides."
When deciding on which fungicides to use, take into account how and when the disease strikes, which fungicides are most effective, and other problematic diseases.

National Poinsettia Cultivar Trial


2007 Poinsettia Crop

The National poinsettia cultivar trial **will not** be held at Purdue this year. However, it will return in 2008! Check out the trial information for North Carolina State and the University of Florida: http://flowers.hort.purdue.edu/PoinsettiaSite/default.html

Want to visit a site closer to home, check out the Mid-American Poinsettia Trials: http://www.oznet.ksu.edu/poinsettias/Open%20House%20Information.htm

America in Bloom - Growing New Markets for Flowers

By Alicia Wells, Coordinator − Special Projects, OFA - An Association of Floriculture Professionals


Columbus, IN

Does your city compete in America in Bloom (AIB)? AIB is a non-profit organization dedicated to promoting community beautification through the use of flowers, plants, and trees. Communities throughout the United States participate in the AIB beautification contest each year. Participation encourages municipalities, businesses, and residents to plant floral displays and landscapes. The opportunity to grow and sell more plants, or design, install, and maintain more landscapes is enhanced by America in Bloom. The following Indiana cities participate in AIB:

- Aurora
- Columbus
- Frankfort
- Greendale
- Indianapolis
- Greenfield
- North Manchester
- Rising Sun

Indiana Winning Cities

Year	City	Population Category
2003	Indianapolis, IN	(500,001 to 1,000,000)
2004	Greenfield, IN	(10,001 to 15,000)
2006	Greenfield, IN	(15,001 to 20,000)
2006	Columbus, IN	(25,001 to 50,000)


Greendale, IN

For more information, please visit:
http://www.americainbloom.org/

Or contact Alicia Wells:
awells@ofa.org
Phone: (614) 487-1117
Fax: (614) 487-1216


Aurora, IN

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Plant and Soil Testing Labs

The following commercial laboratories offer plant and soil testing analysis services:

A&L Great Lakes Lab, Inc.
3505 Conestoga Drive 209
Fort Wayne, IN 46808
Phone (260) 483-4759
Fax (260) 483-5274
Email: lab@algreatlakes.com
Web: http://www.algreatlakes.com/

AgSource Belmond Labs
1245 Hwy 69 N
Belmond, IA 50421
Phone: (641) 444-3384
Fax: (641) 444-4361
Email: ldippel@belmondlabs.com
Web: http://www.bellabsinc.com/

Brookside Farms Lab
308 S. Main St.
New Knoxville, OH 45877
Phone: (419) 753-2448
Fax: (419) 753-2949
Web: http://www.blinc.com/greenhouse.htm

Conrad Fafard, Inc.
P.O. Box 790, 770 Silver Street
Agawam, MA 01001-0790
Phone: 1-800-732-8667 or (413) 786-4343
Fax: 413-789-3425
Web: http://www.fafard.com/

Cal Mar Soil Testing Lab
130 S. State St.
Westerville, OH 43081
Phone: (614) 523-1005; 1-800-80-SOILS
Fax: (614) 523-1004
Email: susane@calmarlabs.com
Web: http://www.calmarlabs.com/

Chemical Service Lab., Inc.
3303 Industrial Parkway
Jeffersonville, IN 47130
Phone: (812) 280-1090

Ingrams Soil Testing Center
P.O. Box 553, 924 W. Monroe
Sullivan, IL 61951
Phone: (217) 728-7413
Email: istc2@sbcglobal.net

JR Peters Lab
6656 Grant Way
Allentown, PA 18106
Phone: (866) 522-5752
Email: info@jrpeterlab.com
Web: http://www.jrpeterslab.com/index.html

Midwest Laboratories
13611 B. St.
Omaha, NE 68144
Phone: (402) 334-7770
Web:https://www.midwestlabs.com/index3.html

Mowers Soil Testing Plus, Inc.
Box 158, 117 E. Main St.
Toulon, IL 61483
Phone: (309) 286-2761; 1-800-354-8197
Fax: (309) 286-6251
Website: http://www.mowersplus.com/

Premier Horticulture Lab
183 Paradise Blvd., Suite 108
Athens, GA 30607
Phone: 1 800 424-2554
Web: http://www.premierhort.com/

Scotts Testing Lab
Phone: 1-800-270-3714
Email: fred.hulme@scotts.com or
keith.santner@scotts.com
Web: http://www.scottstestlab.com/

Spectrum Analytic Inc.
P.O. Box 639, 1087 Jamison
Washington Courthouse., OH 43160
Phone: (740) 335-1562; 1-800-321-1562
Fax: (740) 335-1104
Web: http://www.spectrumanalytic.com/

United Soils, Inc.
108 S. Crystal Lane
Fairbury, IL 61739
Phone: (815) 692-2626
Fax: (815) 692-4483
Email: agronomist@unitedsoilsinc.com
Web: http://www.unitedsoilsinc.com/

Waters Agricultural Labs
257 Newton Hwy, P.O. Box 382
Camilla, GA 31730
Phone: (229) 336-7216
Email: info@watersag.com

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Indiana Flower Grower Survey

Dear Indiana Growers,

Please assist me by completing the following survey. I will compile the responses from growers from across the state to better focus my research and extension efforts.

Please rank in order of importance to your operation (10 - most important, 5 – moderately important; 1 – least):

Research:
___ Propagation
___ Production
___ Sustainability
___ Poinsettia Trials ___Other trials_____
___ New crops
___ Post-harvest
___ Plant growth regulators
___ Environmental management
___ Marketing
___ Other _____

Extension:
___ Workshops/ seminars
___ Video conferencing
___ Quarterly newsletter
___email, mail or fax (circle preferred)
___ Online question/ answer
___ Email alerts
___ Trade magazine articles
___ Floriculture website
___ CDs / Videos
___ Other_____
___ Spanish programs_____
(indicate topics of interest)

Grower information:
Operation Name:
Full Address (city, state, zip):

Phone #:
Email:
Owners Name(s):
Size of greenhouse (sq ft):
Retail ___ Wholesale___ Mail order___
Directions:

Fax #:
Website:
Grower Name(s):
Major crops:

Thank you,

Roberto G. Lopez
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Upcoming 2008 Industry and University Events

Date	Event	Location	Topic	Web site/ Email
Jan. 2	CFGA Meeting	TBD	TBD	http://www.cincinnatiflowergrowers.org/about.html
Jan. 3 – 4	Mid-States Hort Expo	Kentucky Expo Center, Louisville, KY	Spring Buying	http://www.mshe.org
Jan. 9	NIFGA	McNamara's Sandpoint, IN	Ball Seed	bernie.greenhouse@gmail.com
Jan. 10	NWIFA Meeting	Gelsosomo's Pizzeria Valparasio, IN	Safety and OSHA Compliance	http://faculty.pnc.edu/emaynard/nwifa/nwifa.html
Jan. 14	TAFGA	Toledo Botanic Garden Toledo, OH	Winter Conference	http://abe.osu.edu/green/floriculture/associations
Jan. 14 – 15	Indiana Green Expo	Indiana Conven-tion Ctr, Indy, IN	Trade Show & Education Program	http://www.inla1.org/pdf/IGE08_brochure.pdf
Jan. 16 – 18	Mid-Am Hort Trade Show	Lakeside Ctr. Chicago, IL	Education, Demonstra-tion	http://www.midam.org
Jan. 17, 24, 31 & Feb. 7	Purdue Extension	Pinney-Purdue Ag Ctr, Wanatah, IN	Managing for Success	
Jan. 20 - 23	Greenhouse Crop Produc-tion & Eng. Design	Holiday Inn, Tucson, AZ	Short Course	http://uanews.org/node/15862
Jan. 28 – 30	Hort Congress	Adams Mark Hotel, Indy, IN	Educational & Trade Show	http://www.hort.purdue.edu/hort/ext/hortcongress/
Feb. 5	TAFGA	Schmidlin's Greenhouse Delta, OH	Retail Meeting	
Feb. 20	NIFGA	Parks Department	David Ross merchandis-ing	
Feb. 28	TAFGA	Toledo Botanic Garden Toledo, OH	Bedding Plant Clinic	
Mar. 12	NIFGA	Hensch's Airport Greenhouse	Allen Hammer	
Mar. 13	NWIFA	Bernacchis LaPorte, IN	TBA	
Apr. 9	NIFGA	Broadview Greenhouse	Roberto Lopez on GH Lighting	
June 12	NWIFA	LE Garden Wheatfield, IN	TBA	

Officers of Flower Grower Associations in Indiana and Ohio

Association	Pres./Chair.	Vice Pres.	Sec./Treas.	Web site/ Email
Indiana Flower Growers (IFGA)	Larry Houser	Steve Dewald	Colleen Martin/ Roberto Lopez	http://flowers.hort.purdue.edu/
Northwest Indiana (NWIFA)	Dave Tice	Linda Ebert	Liz Maynard	http://faculty.pnc.edu/emaynard/nwifa/about_nwifa.html
Northeast Indiana (NIFGA)	Doug Hackbarth	Bill Davis	Bernie Ferringer	bernie.greenhouse@gmail.com
Cincinnati (CFGA)	Don Furterer	Ralph Ostendorf	Lisa Wittataster/ Scot McCabe	http://www.cincinnatiflowergrowers.org/about.html
Maumee Valley Growers (MVG)	Dean Krauskopf		Joe Perlaky	http://www.maumeevalleygrowers.com/about.htm
Toledo Flower & Vegetable (TAFGA)	Tom Creque	Andy Keil	Sandy Fall/ Sue Wolf	http://abe.osu.edu/green/floriculture/associations

Green Industry Education Working Group (GIEWG)

By Cliff Sadof, Mike Mickelbart, Janna Beckerman, Roberto Lopez, Purdue Extension Specialists

Indiana's green industry contributes billions of dollars to Indiana's economy and provides valuable services to its citizens. Numerous organizations exist to facilitate business interactions, develop a sense of professionalism, and further educational opportunities for industry members. Although we recognize the growing financial and operational success of many of these organizations (such as IFGA), we see the opportunity for increased growth of the industry with improved communication among groups. To this end we seek to develop a forum that will facilitate the identification of specific needs for that can be addressed through educational programming (such as the Indiana Green Expo), as well as paper and electronic media development. Further we need to explore how educational programming can be delivered so that it reaches both small and large communities.

Currently many Purdue Extension Educators and Specialists enjoy a good working relationship with these groups and are often called upon to contribute the educational programming for meetings. The GIEWG is not intended to usurp this process. Rather it is meant to improve the quality of these programs so they can address a list of prioritized industry-wide needs. In addition, this list of needs can be used to guide applied research to become more responsive to industry concerns.

Please send your questions or comments about GIEWG to Roberto Lopez (rglopez@purdue.edu)