Vegetable Crops Hotline

A newsletter for commercial vegetable growers prepared by the Purdue University Cooperative Extension Service

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IN THIS ISSUE

Seed and Root Maggots - *(Rick Foster)* - Three species of seed and root maggots attack vegetables in Indiana. The seedcorn maggot feeds on seeds and seedlings of sweet corn, cucurbits, lima and snap beans, peas, and other crops. Cabbage maggots can cause serious damage to transplants of cabbage, broccoli, cauliflower, and Brussels sprouts and make the fleshy roots of radishes, turnips, and rutabagas unmarketable. Onion maggots are pests of seedling onions, developing bulbs and onions intended for storage.

Seedcorn maggot flies emerge in April and May and lay eggs preferentially in areas with decaying organic matter. Fields that are heavily manured or planted to a cover crop are more likely to have seedcorn maggot injury. Maggots burrow into the seed and feed within, often destroying the germ. The seeds fail to germinate and plants do not emerge from the soil, leaving gaps in the stand. When infested seeds germinate, the seedlings are weak and may die. Maggots also will feed within the stems of transplants.

Any condition that delays germination may increase damage from this pest. Damage can be reduced by planting into a well-prepared seedbed, sufficiently late to get rapid germination. The slower the rate of growth, the greater the likelihood of seedcorn maggot injury. For any type of early season transplant, soil temperatures should reach at least 70° F or more for 4-5 days in a row to avoid maggot injury. Anything that raises soil temperature (black or clear plastic mulch) will increase soil warming and decrease the possibility of seedcorn maggot injury. Once damage is observed, the only management strategy available is the decision to replant or not. If you decide to replant, be sure to use treated seed. When resetting transplants be sure to wait 5 days from the first evidence of wilted plants before you reset. Unfortunately, we don't have any insecticides that can be applied at planting time that will provide good control of seedcorn maggots. Admire Pro® and Platinum®, which both provide several weeks of excellent systemic control of striped cucumber beetles when applied at planting, are not labeled for seedcorn maggots and the control is marginal at best. Capture LFR® is labeled for control of wireworms, grubs, and other soil insects on cucurbits but not for seedcorn maggots. I have one year of data with Capture® that showed fairly promising results, but more data are needed.

Figure 1: Seed corn maggot activity can destroy seedlings like this muskmelon plant during the early season. *(Photo by Dan Egel)*

Cabbage maggot injury is also favored by cool, wet conditions. The flies, slightly smaller than a housefly, emerge in late April or early May and lay white eggs at the base of newly set plants. Larvae from this first generation tunnel in the roots of small plants, causing the plants to appear sickly, off color or stunted, and may cause them to die. Early cabbage and turnips are particularly vulnerable to damage. Control of first generation maggots can be achieved using soil insecticides such

as Capture LFR®, Lorsban® or diazinon at planting or transplanting. For short season crops such as radishes and turnips, long-residual insecticides cannot be used. Cabbage maggots usually do not affect later planted crucifers.

Onion maggot flies emerge throughout May and lay eggs at the base of onion plants. The maggots attack the underground portions of the onion plants and cause plants to wilt and die. Seeded onions are more susceptible than transplanted onions. Do not overseed to compensate for losses to onion maggots. The flies do not space their eggs evenly, so you may end up with smaller bulbs because the plant spacing is too close. The second-generation flies emerge during July and the third generation emerges during late August and early September. Each generation will damage onions.

Removing cull onions after harvest and planting as far as possible from fields planted to onion the previous year can reduce damage. Soil drenches of Lorsban® (dry bulb only) or diazinon at planting will effectively control first generation maggots and provide some control of the second generation. As the onions begin to mature, they become physically resistant to attack from onion maggots, unless they have been injured in some way. Be careful during field operations not to damage the growing plants in any way. A nick in an onion bulb allows the maggots to enter and begin feeding. Also, the flies are attracted to the damaged onions to lay eggs. Reducing the amount of physical damage to the onions at harvest as much as possible will also reduce the amount of injury from the third generation. Do not apply foliar sprays to kill flies before they lay eggs.

For organic growers there are no pesticides that provide effective control of these maggots. Row covers can provide some protection and may be appropriate in some cases.

Pheromones and Pheromone Traps - *(Rick Foster)* - One way insects communicate with individuals of the same species is with pheromones. Pheromones are volatile chemicals released by an insect that usually can be detected only by individuals of the same species. There are a number of different types of pheromones, but the most common type is the sex pheromone. Usually the females will emit a tiny amount of a chemical that attracts the male to her and increases the likelihood of mating. Because the chemical is volatile, air currents carry it. The male detects the pheromone in the air with receptors on his antennae. He then flies upwind to find the source of the pheromone, a prospective mate. The chemical compositions of pheromones for a number of pest species have been identified and synthetic copies can be produced in the laboratory. Synthetic pheromones can be used in conjunction with traps to catch male insects.

Listed below are some, but certainly not all, of the suppliers of pheromones and traps.

- **Alpha Scents, Inc.** 1089 Williamette Fals Drive, West Linn, OR 97068. 503-342-8611; **http://www.alphascents.com**
- **Gempler's**; P. O. Box 270; 100 Countryside Dr.; Belleville, WI 53508; 800-382-8473; **http://www.gemplers.com**
- **Great Lakes IPM**; 10220 Church Rd., NE; Vestaburg, MI 48891; 517-268-5693; **http://www.greatlakesipm.com**
- **Insects Limited Inc.**; 16950 Westfield Park Rd.; Westfield, IN 46074-9374; 317-896-9300; **http://www.insectslimited.com**
- **Pacific Biocontrol Corporation**; 620 E. Bird Lane, Litchfield Park, AZ 85340; 623-935-0512 or 800-999-8805; **http://www.pacificbiocontrol.com**
- **Scentry Biologicals Inc.**; 610 Central Ave.: Billings, MT 59102; 800-735-5323; **http://www.scentry.com**
- **Trece Incorporated**; P. O. Box 129. Adair, OK 74330; 866-785-1313; **http://www.trece.com**

You can buy most pheromone traps from these suppliers, but for corn earworm/tomato fruitworm, I recommend that you use the wire mesh trap which is available from:

Bob Poppe's Service; 25738 N. 3200 Road; Lexington, IL 61753; 309-723-3201.

The wire traps catch more moths and last longer than the nylon traps.

To get the most from your pheromone traps, they must be used properly:

- Place the traps and the pheromones out before you would normally expect the insect pest to be active. That way you can monitor the adult activity, which will warn you that damage from the larvae may be coming soon.
- Be careful how you store pheromones. Ideally, they should be frozen until ready for use. At the very least, they should be refrigerated. If you keep them on the dashboard of your truck, they won't work well when you place them in the trap.
- When handling pheromone lures, do not touch them with your hands. Use a pair of forceps or wear latex gloves. This is especially important when you are using pheromones for more than one pest. Contamination of a lure with another pheromone will likely reduce the effectiveness.
- Lures usually should be changed every 3-4 weeks, although this will vary for individual lures.
- Check traps regularly, at least weekly. Daily would be better.

Mild Winter Weather and Insects - *(Rick Foster)* - One of the hottest topics of conversation lately has been about the effects of the extremely mild winter we have experienced on populations of insects in the upcoming growing season. Here are a few points to consider about this subject:

- Many insects are adapted to living in harsh climates and have the ability to survive quite well even during a particularly cold winter. Comprehensive studies of insect mortality (life tables) reveal generally minor effects from winter temperatures on survival.
- It's tough being an insect. There are a lot of things trying to eat you. When pest insects become active, so do their natural enemies. Predators, parasites, and pathogens are important regulators of the populations of insects. If you want to have a little fun, watch this time-lapse video of a parasitized hornworm that we produced last year: **http://www.youtube.com/watch?v=nZZyJQNmOV8&feature=youtu.be**.
- No matter what the winter weather, most insect pests survive in sufficient numbers that if the weather and other conditions are optimal for their success in the spring and summer, they can reach damaging levels.
- Insects will become active earlier than normal this year. Insect development is driven totally by the accumulation of degree days, so the warmer it is, the faster they develop. It's mid-March and we are already getting reports of people being bitten by mosquitoes. On the other hand, I am also getting reports of farmers planting corn and beans already.

One of the insects that we often talk about in regard to winter temperatures is the corn flea beetle. This year we believe that survival of this insect, which vectors the pathogen that causes Stewart's wilt on sweet corn, will be high throughout the state. However, if you are planting sweet corn seed that has been treated with one of the neonicotinoid insecticides (clothianidin or thiamethoxam), flea beetles will likely be well controlled by those treatments and will not cause any problems. If you are planting untreated seed, you should scout your early sweet corn and treat if flea beetles are observed.

For other insects, it should generally be business as usual. You should be scouting your fields on a regular basis so that you detect damaging pest populations before they cause crop loss.

Actigard® Use for Bacterial Spot of Tomatoes - *(Dan Egel)* - Bacterial spot of tomatoes is an increasingly important disease on tomatoes in Indiana. This article discusses bacterial spot and the use of the product Actigard® to manage this disease on tomato.

Symptoms - bacterial spot causes lesions on all above ground portions of the tomato plant. Dark, necrotic lesions may reach 1/8 of an inch in diameter on leaves and often have chlorotic halos. Lesions on fruit may reach more than ¼ inch in diameter and may be scabby and raised in appearance or sunken and spreading (see Figure 2).

Figure 2: Lesions of bacterial spot of tomato range in appearance from round and scabby lesions (above) to sunken and spreading (below). *(Photo by Dan Egel)*

Management - The first line of defense against bacterial spot is cultural practices such as crop rotation, sanitation, host resistance, and seed health. Although no varieties are resistant to bacterial spot, susceptibility varies. Ask your seed company representative or see this series of publications from Purdue University: **http://docs.lib.purdue.edu/do/search/?q=egel%20and%20maynard&start=0&context=119483**. Seed health was discussed in the last issue of the *Hotline* (issue 547).

Products with copper hydroxide or copper sulfate as an active ingredient are the primary products used for bacterial spot management. However, strains of the bacterium that cause bacterial spot may be resistant to copper (See *Hotline* issue 532). Applications of copper products tank mixed with mancozeb fungicides (e.g., Dithane®, Manzate®, Penncozeb®) may help to overcome

this resistance. Other management strategies which may be used to combat copper resistant strains includes use of the products Tanos®, Serenade Max® and AgriPhage® (See *Hotline* issue 532 and the *Midwest Vegetable Production Guide for Commercial Growers* ID-56). More details for the use of Actigard® on tomatoes for bacterial spot are included below.

Actigard® Label - The Actigard® label for tomatoes includes uses for bacterial spot and bacterial speck, a disease which causes similar symptoms. The use rate ranges from 0.33 to 0.75 oz per acre. Water volumes per acre to be used with rates of Actigard® per acre are stated on the label. Growers are directed to begin the season with low water volumes and increase the volume as the plant canopy increases. To avoid yield drag, Actigard® should not be applied to stressed plants. The pre-harvest interval is 14 days. See the label for many other details.

How Actigard® Works - The active ingredient in Actigard® does not have any direct effect on the bacteria that causes bacterial spot or any other pathogen. Rather, Actigard® 'tells' the plant it is under attack so that the plant may make biochemical adjustments to defend itself. This is the reason that applying Actigard® to stressed plants might cause a yield loss - in such a circumstance Actigard® might make the stressed plant 'work too hard'.

Recommendations for Using Actigard® - Use a product with copper hydroxide or copper sulfate tank mixed with a mancozeb product on about a 7-day schedule. Use Actigard® approximately every other application for about 4 applications per season. Always increase the gallons of water used with Actigard® applications as suggested on the label. The first application of Actigard® should be at a medium or low rate per acre. By the end of the season, the highest rate of Actigard® should be used.

According to the label, a maximum of 8 applications of Actigard® can be applied per season. Most growers should keep the number of Actigard® applications at 4 or fewer. This is especially true if the grower has not used Actigard® in the past.

Remember that Actigard® will be more likely to increase disease control over and above the standard copper/mancozeb treatment if 1) copper resistant strains of the bacterial spot organism are present, 2) tomato varieties that are susceptible to bacterial spot are used, 3) the weather is very conducive to bacterial spot (i.e, warm and rainy).

I will be happy to answer any question you might have about Actigard® or bacterial spot of tomato.

Food Safety Starts in the Greenhouse - *(Scott Monroe)* - Good Agricultural Practices (GAPs) are those techniques or processes used by growers to reduce the risk of microbial contamination in produce. Because fresh produce often does not have a "kill step" between the grower and the consumer (unlike meat products), it is necessary for the entire produce industry to take a Farm-to-Fork approach to minimize the incidence of foodborne illness.

GAPs are often overlooked during transplant production. However, taking a few precautions in the greenhouse during this critical time can reduce the risk of your crop being exposed to human pathogens early in the season. The following are recommendations for growers who are using transplants:

- Remember that watering in the greenhouse is basically no different than irrigating in the field. Water used in the greenhouse should be held to the same standards as irrigation water. Surface water and water from wells should be tested for generic E. coli, with results reported as MPN (most probably number) or CFU (colony forming units) per 100 ml. If generic E. coli are present, the water may not be suitable for irrigation. Growers using water from municipal or rural water systems may request a copy of the test from the water company showing that the water is potable. A list of laboratories certified to test drinking water in Indiana may be found at **http://www.in.gov/isdh/22450.htm**.
- Personal sanitation and hygiene are critical components of any GAPs plan. Make sure everyone who works with produce is aware of and understands the hygiene policies for your farm. These should include hand washing before working in transplant production areas and after restroom use. No one should eat, drink, smoke, or chew while working with transplants. Set a good example: let people see that you follow the same rules and take them seriously.
- No one who exhibits signs of foodborne illness should work in transplant production facilities. Sick individuals should be reassigned or sent home for the day. All exposed cuts, scrapes, or open sores should be covered before people enter the transplant production areas.
- Efforts should be made to exclude animals from transplant production areas. If necessary, block openings when ventilating to discourage wildlife or domestic animals from wandering into the greenhouse. This may involve using screen wire or poultry netting to cover openings when the side curtains are down, or placing barriers or bird netting over entrances when greenhouse doors are open.
- All potting soils should come from a reputable source. Any manure used as an ingredient in potting soil mixes should be properly composted.

- Growers who are outsourcing their transplants should discuss and become familiar with the production practices and food safety plans of their transplant producers.

Remember that GAPs encompass more than just field operations. All greenhouse, cold frame, and high tunnel activities should be conducted with the same goal in mind: to produce transplants with the lowest possible risk of microbial contamination prior to going to the field.

Understanding Wage and Hour Requirements for Agricultural Employers - *(Patricia Lewis, US Dept. of Labor)* - The U.S. Department of Labor's Wage and Hour Division enforces three separate and distinct federal laws establishing minimally acceptable labor standards for wages and working conditions that may impact agricultural employers or associations. These labor standards are set forth in the Fair Labor Standards Act (minimum wage, overtime pay, child labor and recordkeeping requirements), the Migrant and Seasonal Agricultural Worker Protection Act (vehicle safety, housing safety and health, disclosure of wages and working conditions, farm labor contractor registration and other requirements), and OSHA Field Sanitation (drinking water, toilets and hand-washing for field workers).

This article will explain the very basic provisions of these multi-faceted laws but if more information is desired please call the Department of Labor's toll-free help line at 1-866-4USWAGE (1-866-487-9243) or contact the Federal Department of Labor's Wage and Hour Division Indianapolis, IN District Office at (317) 226-6801. Information also is available on the Internet at **http://www.wagehour.dol.gov**.

The Fair Labor Standards Act (FLSA) - Virtually all employees in agriculture are covered by the FLSA since they produce goods for interstate commerce. There are, however, some exemptions, which exempt certain employees from the minimum wage provisions, the overtime pay provisions, or both.

Employees that are employed in agriculture, as defined in the FLSA, are exempt from the overtime pay provisions. Thus, they do not have to be paid time and one-half their regular rates of pay for hours worked in excess of forty in a single workweek.

The FLSA's definition of agriculture excludes work performed on a farm that is not incidental to or in conjunction with such farmer's farming operation. It also excludes operations performed off a farm if performed by those employed by someone other than the farmer whose agricultural products are being processed.

Any employer in agriculture who did not utilize more than 500 "man days" of agricultural labor in any calendar quarter of the preceding calendar year is exempt from the minimum wage and overtime pay provisions of the FLSA for the current calendar year. A "man day" is defined as any day during which an employee performs agricultural work for at least one hour.

Although exempt from the overtime requirements of the FLSA, agricultural employees must be paid no less than the minimum wage – currently $7.25 per hour. There are numerous restrictions on the employment of minors who are less than 16 years of age, particularly in occupations declared hazardous by the Secretary of Labor. Substantial civil money penalties are prescribed for violations of the monetary and child labor provisions of the law. The FLSA also requires that specified records be kept.

The coverage provisions and scope of State laws and regulations may vary significantly with that of the FLSA. Please consult with the appropriate State Department of Labor or visit **http://www.dol.gov/whd/state/state.htm**. [Editor's note: Many Indiana-specific regulations are covered in the Legal Considerations for Agricultural Employers - Indiana Agricultural Employer Checklist available at **http://www.infarmbureau.org/PublicPolicy.aspx?id=2630**. See next article in this issue for additional information.]

The Migrant & Seasonal Agricultural Worker Protection Act (MSPA) - The Migrant and Seasonal Agricultural Worker Protection Act (MSPA) protects migrant and seasonal agricultural workers by establishing employment standards related to wages, housing, transportation, disclosures and recordkeeping. MSPA also requires farm labor contractors to register with the U.S. Department of Labor.

A Farm Labor Contractor is someone who, for money or other valuable consideration paid or promised to be paid; recruits, solicits, hires, employs, furnishes or transports migrant and/or seasonal agricultural workers or, provides housing to migrant agricultural workers. Agricultural employers, agricultural associations and their employees are not included in the term. Certain persons and organizations, such as small businesses, some seed and tobacco operations, labor unions, and their employees, are exempt from the Act.

Before performing any farm labor contracting activity, a farm labor contractor must register with the U.S. Department of Labor and obtain a certificate of registration. A farm labor contractor must be specifically authorized to provide housing or transportation to migrant or seasonal agricultural workers prior to providing the housing or transportation. Persons employed by farm labor contractors to perform farm labor contracting activities must also register with DOL.

Each person or organization that owns or controls a facility or real property used for housing migrant workers must comply with federal and state safety and health standards. A written statement of the terms and conditions of occupancy must be posted at the housing site where it can be seen or be given to the workers.

Agricultural associations, agricultural employers, and farm labor contractors must assure that vehicles used or caused to be used by a farm labor contractor, agricultural employer, or agricultural association to transport workers are properly insured, are operated by licensed drivers, and meet federal and state safety standards.

Agricultural associations, agricultural employers, and farm labor contractors must inform migrant and seasonal agricultural workers about prospective employment, including the work to be performed, wages to be paid, the period of employment, whether state workers' compensation or state unemployment insurance will be provided.

OSHA Act Field Sanitation - The Occupational Safety and Health Act of 1970 was enacted to assure safe and healthful working conditions for working men and women. In 1987, the Occupational Safety and Health Administration issued regulations establishing minimum standards for field sanitation in covered agricultural settings. Authority for enforcing these field sanitation standards in most states has been delegated to the Wage and Hour Division.

In general, the field sanitation standards apply to any agricultural establishment employing 11 or more workers on any one day during the previous 12 months, to perform "hand labor." "Hand labor" includes hand-cultivation, hand-weeding, hand-planting, and hand-harvesting of vegetables, nuts, fruits, seedlings, or other crops, including mushrooms, and the hand-packing of produce in the field into containers, whether performed on the ground, on moving machinery, or in a shed.

Covered agricultural employers must provide portable drinking water, suitably cool and in sufficient amounts, dispensed in single-use cups or by fountains, located so as to be readily accessible to all employees.

Covered agricultural employers must provide one toilet and hand washing facility for every 20 employees, located within a quarter-mile walk, or if not feasible, at the closest point of vehicular access. Pre-moistened towelettes, once allowed by some state regulators, cannot be substituted for hand washing facilities. Toilets and hand-washing facilities are not required for employees who do field work for three hours or less each day, including travel to and from work.

Employers must maintain such facilities in accordance with public health sanitation practices, including upkeep of water quality through daily change (or more often if necessary); toilets clean, kept sanitary, and operational; hand washing facilities refilled with potable water as necessary and kept clean, sanitary, and safe; and proper disposal of wastes from the facilities.

Updated Indiana Ag Employer Checklist Available - The Indiana Agricultural and Horticultural Employer Checklist was updated in 2011 by the Indiana Agricultural Law Foundation. The 16-page checklist titled 'Legal Considerations for Agricultural Employers' includes six sections to assist employers in performing various tasks required by Indiana and Federal labor laws and regulations. The checklist is divided up into four phases of the employment process: (I) Before Hiring; (II) After Hiring; (III) During Employment; and (IV) Annually. Section V provides a list of references and Section VI provides additional labor laws, regulation compliance thresholds and contacts. The document is available at **http://www.infarmbureau.org/PublicPolicy.aspx?id=2630**.

Soil Health; a Top Priority for Indiana Farmers and NRCS - *(Kris Vance, NRCS)* - Indiana farmers are on a Health kick! No, they are not necessarily taking up Zumba or going to a health club every morning before they start their day's work, but they are taking steps to improve the health of the soil that is the heart of their livelihood. Soil health is being improved with a combination of conservation practices that include cover crops and conservation buffers and drainage systems where needed and appropriate. To assist Indiana farmers in their efforts to improve Soil Health, NRCS in Indiana is devoting time and resources throughout the state. A state Soil Health Coordinator has been named to coordinate the effort. Barry Fisher, State Agronomist and long time no-till and cover crop promoter, will lead the state Soil Health Team, which will promote the benefits of improved soil health at field days, demonstrations, through training of other employees, conservation partners, and farmers, and one-on-one conservation planning. Are you interested in improving the health of your soil? If so contact your local NRCS or Soil and Water Conservation District for more information.

Midwest Vegetable Trial Report for 2011 - The Midwest Vegetable Trial Report for 2011 is available from the Education Store as a CD, or may be downloaded as a pdf file. The bulletin includes reports from 28 trials on vegetables in the Midwest and Northeast. Purdue trials on muskmelon, squash, sweet corn, tomato, watermelon, and organic fungicides for control of cucurbit powdery mildew are included. Visit **https://mdc.itap.purdue.edu/item.asp?itemID=20489** to order or download, or call 888-EXT-INFO and ask for CD-16-18.

USDA AMS Offers Webinar on Using Fruit and Vegetable Market News Retail Report - *(USDA-AMS)* - On March 28, from 2 - 3 p.m. Eastern Time, the USDA Agricultural Marketing Service (AMS) is offering a free, interactive webinar on USDA's Fruit and Vegetable Market News, a Web-based resource that provides price and movement data for hundreds of agricultural commodities. Learn about the wealth of timely, valuable data available from the National Fruit and Vegetable Retail Report, including:

- Fresh produce prices at the retail level on a national and regional basis,
- Graphs and overviews of price and market activity data, and
- Analyses of fresh produce inclusion in weekly retail advertised specials at thousands of stores across the country.

The webinar is free, but you must register to participate. Space is limited. Register at **http://bit.ly/y6w4jS**. For additional information about Market News visit **http://www.marketnews.usda.gov/portal/fv** or contact Audrina Lange via phone at (202) 720-3344, or e-mail: **audrina.lange@ams.usda.gov**

Editor's Note: If you are receiving a paper copy of the *Hotline*, this is the last issue you will receive unless you have paid the $15 subscription fee or have paid 2012 dues to Indiana Vegetable Growers Association (IVGA). Online subscriptions are free.

2012 Vegetable Crops Hotline Subscription Form

____Yes, I would like to subscribe to the 2012 *Vegetable Crops Hotline*. Enclosed is a $15 check made payable to **Purdue University.**

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Indiana Vegetable Growers Association

Membership Renewal /Application

Benefits of IVGA Membership:

- Midwest Vegetable Production Guide for Commercial Growers (ID-56) (new edition usually available in January)
- Subscription to Purdue's Vegetable Crops Hotline newsletter
- Listing in IVGA Directory of Wholesale Vegetable Production (optional)
- Your web site linked on www.ivga.org
- Corporate members only: free ad on www.ivga.org
- Networking with other vegetable growers

To renew or join, correct or fill out the form below and send in with your check payable to ***IVGA***.
If you have already renewed for the current year, but haven't provided the information requested below, please check here _____, complete this form and return it to the address below.

The information below will be printed in the membership directory that is sent to members only. It will also be used to mail you the Vegetable Crops Hotline, to fax or e-mail the Hotline Bulletins, and for IVGA correspondence. Please complete or correct, if necessary, the following information. If you would like anything omitted from the directory, please indicate so below.

Membership expires on Dec. 31 of every year

First_____ Last_____

Company_____

Address 1_____

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City, State, Zip_____

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ID-56 Delivery: Please indicate whether you will pick up your copy of the ID-56 at one of the following meetings: IHC (Indiana Hort Congress), IVGS (Illiana Veg Growers' School), or SW In. Melon Mtg. If you do not pick it up, it will be mailed to you in March.

☐ IHC ☐ IVGS ☐ SW ☐ Mail ☐ Other

Would you like to receive **free subscriptions** to trade magazines that may be offered to IVGA members?

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☐ **Regular, $40/year**

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The **Indiana Vegetable Growers' Association Directory of Wholesale Vegetable Producers** will be updated periodically. To be included, please review your information below and make any necessary changes or additions. The wholesale directory is available to anyone who requests it and will be posted on the web. Indicate quantity of each item as follows: S=small quantities, X=wholesale quantities, T=semi truckload quantities. For certified organic, mark as 'O'.
Contact information for Wholesale Directory if different from elsewhere on this form:

Contacts_____

Phone 1_____ Phone 2_____

Fax_____ Phone 3_____

Business Address_____

_____

E-mail_____

Website_____

Apples	☐	Peaches	☐
Asparagus	☐	Peppers, bell	☐
Beet	☐	Peppers, hot	☐
Blackberries/Raspberries	☐	Potatoes	☐
Broccoli	☐	Pumpkin	☐
Cabbage	☐	Pumpkin, mini	☐
Cantaloupe/Muskmelon	☐	Radishes	☐
Cauliflower	☐	Snap bean	☐
Chrysanthemums	☐	Spinach	☐
Collards/Mustard/Turnip Greens	☐	Squash, summer	☐
Corn Stalks	☐	Squash, winter	☐
Corn, ornamental	☐	Straw	☐
Cucumber	☐	Strawberries	☐
Daylilies	☐	Sweet corn, bicolor	☐
Eggplant	☐	Sweet corn, yellow	☐
Gourds, ornamental	☐	Sweet corn, white	☐
Herbs	☐	Tomatillo	☐
Kale	☐	Tomato	☐
Lettuce	☐	Turnips	☐
Onions, bulb	☐	Watermelon	☐
Onions, green	☐	Other crops	☐

Please list _____