



The Squash Vine Borer

*Everything You Ever Wanted to Know About ...
But Were Afraid to Ask*

by Ron Clark

The **squash vine borer** (*Melittia satyriniformis* syn. *Melittia cucurbitae*) attacks various varieties of winter squash, summer squash, and pumpkins. Melons and cucumbers are usually not attacked. Squash and pumpkins with large hollow stems are the most susceptible. Squash, such as *Blue Hubbard*, are the most affected. Zucchini squash and pumpkins are seriously affected. *White Bush Scallop* squash is less affected. And, *Summer Crookneck* squash is even less so.

Damage

The damage caused by the squash vine borer larvae often goes undetected until the infested plants wilt and die in late July and August. The first symptom of feeding damage occurs when plants wilt at midday. The larva usually enters the plant near the base of the stem for zucchini or the lower 3 feet of the vine for vining squash or pumpkin. As larvae tunnel through the vines they destroy the vessels in the stems that transport water, causing the plant to wilt and eventually die. These wilt symptoms may be confused with those caused by bacterial wilt or *Fusarium* wilt. Look for entrance holes near the base of the wilting vines. Where a squash borer enters, a stem is marked by a hole with sawdust-like material sticking out called frass. If frass is present near the entrance holes, split the stem lengthwise to confirm the presence of larvae

Damage is usually worse in areas where squash and pumpkins are grown year after year.

Description

The adult squash vine borer is a stout dark gray moth with hairy black and red hind legs, opaque metallic green front wings, and clear hind wings with dark veins (Figures 1 & 2). The adult borer resembles a wasp and is about 1/2 to 5/8



Photo: Kansas State University

Figures 1. Adult Squash Vine Borer



Photo: University of Rhode Island

Figures 2. Adult Squash Vine Borer
(Abdomen is orange-red with black dots)

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IOGA MISSION:

To educate ourselves and others in reasons for and methods of environmentally friendly gardening; and to encourage the reduction of chemical dependency in gardens, lawns and farms.

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inch long with a orange-red abdomen with black dots. Wingspan is 1 1/4 to 1 1/2 inches. Male and female moths are similar, although the male is more colorful, smaller, has a narrower abdomen, and more feathery antennae. Unlike most moths, they fly about the plants during the daytime, appearing more like a paper wasp than a moth.

Life History

The squash vine borer overwinters as a fully grown larva in cocoons in the soil 1 to 6 inches deep. It pupates in the spring and the adult emerges in June. Moths are active during the daytime. They rest on leaves in the evening and early morning. The moths fly slowly in zig-zags around the plants and are active for about one month.

The females typically lay their eggs one at a time, rather than in clusters, on the main stem near the base. But the eggs can also be found on leafstalks or on the undersides of leaves. Eggs are flat, brown, and about 1/20 inch long. After 7 to 10 days the larvae hatch and immediately bore into the plant. As the larvae bore into the stems of the squash and pumpkins, they leave behind a telltale sign of frass at the entrance hole. The larvae develop and feed inside the stalk, eventually killing the leaf. The larvae are white or cream colored with brown heads, growing to almost an inch in length (Figure 3). A larva feeds for 14 to 30 days before exiting the stem. Once the larvae are inside the stems, little can be done to control the pest. When full-grown, the larvae leave the stem and crawl into the soil to pupate where they spin silken cocoons.

In Indiana squash vine borer pupae overwinter in the cocoons and have only one generation a year. In many southern states two generations within the same growing season are common. The pupa is brown and 5/8 inch long and is contained inside a cocoon that is made of earth-covered black silk and is 3/4 inch long.



Photo: C. Welty, Ohio State University

Figure 3. Squash Vine Borer Larva

Moth Detection

Monitoring tells you if and when squash vine borers are present. There are two methods for detecting squash vine borer adults. The first is actual observation of adult activity in the garden. These moths are conspicuous insects when flying and easy to detect; watch for them when you're in your garden. The adults make a very noticeable buzzing sound when flying that is easy to detect.

You can also use yellow trap pans to detect squash vine borer adults. This can be any container (e.g. pan, pail, bowl) colored yellow and filled with water. Because squash vine borer adults are attracted to yellow, they will fly to the container and be trapped when they fall into the water. Place traps by mid June. Check your traps at least once a day. When you notice squash vine borer adults in your traps you know they are active and it is time to take further action.

Natural Enemies

The stage most susceptible to natural enemies is the egg stage, which is attacked by parasitic wasps. Larval and adult *Ground Beetles* (Good Bug) shown in Figure 4 can attack larvae of squash vine borer, but do not appear to cause significant mortality.



Photo: W. Cranshaw- Purdue University

Figure 4. Ground Beetle (Good Bug)

Cultural

Minimize planting of hollow stemmed squash and pumpkins. Plant vine crops such as butternut squash, cucumbers, melons, and watermelons.

Grow a solid stemmed variety such as **Zucchetta Rampicante Tromboncino** (Pinetree Seeds) shown in Figure 5. (*HEIRLOOM This tasty zucchini grows like squash and will need a lot of room for its 5' runners. The light yellow-green fruit is slender with a bulbous end and should be harvested at about 10". Left on the vine you can get variously twisted squash 3' long and 6" wide. Firmer than the zucchini your used to, the*

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flavor is mild and delicious. Can be grown up a very strong trellis.)



Photo: Pinetree Seeds

Figure 5. Zucchetta Rampicante Tromboncino

Plant 8-10 seeds per hill for zucchini and do not thin. A lush growth seems to keep the moth from finding the stems on which to lay eggs. And when one plant does succumb to the borer, then there are other smaller, stunted plants ready to take its place.

A second planting of summer zucchini in late June or early July will mature after adult borers have finished laying eggs. Or, plant one or two (or more, depending upon family size) zucchini seeds every 14 to 21 days, so you will always have fruit all summer.

Place straw all around the squash plants, even up into the leaves, to avoid the squash borer. This makes it harder for the moth to lay eggs.

Rotating your squash and pumpkin.

Promptly pull and destroy any plants killed by squash vine borers.

Remove crop debris in the Fall to destroy any larvae remaining inside stems.

Disc the soil in the fall after harvest and then plow the following spring to destroy cocoons left over from last season. This combination produces mortality from both the cold and from difficulties escaping from the soil.

Planted a very early-*Hubbard* squash as a trap crop to alleviate pest pressure on other squash or pumpkin.

Physical

Use row covers up until bloom.

Wrap the lower stem with nylon stockings or aluminum foil to prevent egg laying which generally occurs

within a couple inches from the point where the stem emerges from the soil. Another variation on this technique for vining plants is to cut little pieces of row cover and use them to just wrap the vine itself

As soon as your hollow-stem, summer squash starts to lay down from the weight of the plant, place aluminum foil on the ground underneath the stem at the base to disorient arriving moths.

An old gardener trick for vining squash and pumpkin is to cover the vine with earth at various points along its length, inducing rooting at several points, thereby continuing to feed the developing fruit despite the loss of the original stem.

Destroy the moths in twilight or early morning when they are resting on the upper side of the leaf bases.

The only place that I have seen the squash vine borer adult moth – lots of them – is on milkweed flowers during daylight. So if you have milkweed (possibly for monarch butterflies), monitor the flowers and knock the moths into a jar of soapy water.

Pick off the eggs off the stems before they hatch.

Once larvae are present within the stems control must be quick. Experienced gardeners watch the stems for signs of frass protruding from small holes, which is a giveaway to the presence of the larva inside. Some gardeners carefully cut the stem along its axis and remove the caterpillar before it does too much damage. Others use a stiff wire, a needle, or a toothpick to kill the borer without too much damage. Once the larvae have been removed, cover the damaged area with dirt and keep moist to promote new root development.

(An easy way to find where the vine borers are located in the vine or stem is to wait until dark and examine the plant with a flashlight. The light will shine through the stem except where the squash vine borer is sitting. When you find the squash pests, either carefully slit the stem lengthwise and remove the vine borer caterpillar or use a toothpick or other skewer to pierce through the stem and into the vine borer.)

Insecticides

Squash vine borer can be killed by insecticides but the trick is in the timing of the application. An insecticide is effective when applied at the time that eggs are hatching. A preventive treatment regime is to apply an insecticide when vines begin to run (or mid June for non-vining varieties) or when the first adult borers are detected. Re-apply every 7 to 10 days (chemical insecticides) for 3 to 5 weeks. The application should

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be directed to the base of plants, at crowns and runners. In order to avoid killing honey bees and other pollinating insects, apply the insecticides in late evening and directly to the base of the plants, avoiding the flowers.

Rotenone and *pyrethrum*, are natural (plant derived) sprays or dusts that can be used in an organic regime. However, they probably need to be applied more often than the 7-10 days recommended for chemical insecticides since they are short-lived and are effective for probably only 1-2 days.

Gardens Alive says to use a weekly spray of *insecticidal soap* on the stems or vines to smother the eggs and larva (use a commercial product, not home-made; there is a fine line between beneficial soap and plant-killing herbicide).

Gardens Alive says to use BTK which is organic and non-toxic. Sold under brand names like *Dipel*, *Thuricide* and *Green Step*, this form of *Bt* ONLY kills caterpillars that munch on the sprayed plant part. So spray the stems or vines once a week and there will be BTK on the stem when that hungry caterpillars come out and start munching.

Gardens Alive says to just wipe the stems every five days vigorously with a damp cloth to wipe away the eggs. (An Auburn University researcher found this tip in a farming book from the 1890's.) Wiping with BTK or *insecticidal soap* should be even better.

Gardens Alive says to inject the attacked vine with BTK or beneficial nematodes. Nematodes are microscopic garden helpers that love to prey on tasty caterpillars. And, the moist inside of the stem or vine will protect the nematodes as they go a' hunting. You'll find garden syringes (Figure 6) sold for injecting nematodes and BTK at some garden centers and by mail order.



Figure 6. Gardens Alive Syringe of One Million

Purdue University's Alternate Control Outreach Research Network (ACORN) says to spray plants with a fine mist of water, then dust with diatomaceous earth (D.E.) to cover the whole plant (or most likely at least the portion of the stem or vine most likely to be

attacked). D.E. kills most pests when they are soft bodied or in their larval, maggot, or grub stage. Effectiveness is unknown.

Let us know if you have success with any of the suggestions given here.

Finally, if you are successful in thwarting the Squash Vine Borer ...

You have to ask yourself the question ...

What the heck am I going to do with all the zucchini?

References

Squash Vine Borer, Ohio State University Extension Fact Sheet HYG-2153-92, Entomology, Celeste Welty, 1992.

Squash Vine Borer Management in Home Gardens, University of Minnesota M1209, 2007.

Squash Vine Borer, University of Wisconsin Extension Garden Facts A3756-E, K. A. Delahaut

Squash Vine Borer, The Pennsylvania State University, Entomological Notes 2002

Good Price on Organic Fertilizer!

Chickity Doo Doo (5-3-2.5) fertilizer is \$16.95 for a 40 lb bag (\$14.95 per bag when you buy 3 bags) at *Worm's Way* in Bloomington, IN. This was much cheaper than at local garden stores in Indianapolis last year (\$22 - \$25 per bag)



January IOGA Meeting

MINUTES

The January meeting convened at 11:00 at the Zionsville Public Library with an excellent pitch-in lunch by and for the attendees.

Old Business:

The treasurer, Ron Clark, presented a short report and announced that yearly dues were due today. The report was accepted by the membership present.

The minutes from the October 2008 meeting were reviewed as presented in the January Newsletter and were accepted by the membership.

Ann Leatherman volunteered to become the new secretary and will continue to be the keeper of the booth. Ron Clark is the new treasurer. Claudia and Ron Clark are the IOGA newsletter editors.

There following changes to the by-laws were presented to the membership for consideration:

- a) The board shall select by majority vote a replacement officer if the current officer is unable to complete his or her term of office,
- b) The president shall sign checks if the treasurer is unable to do so,
- c) The treasurer shall keep the membership lists and the not-for-profit tax status current, and
- d) The secretary shall keep the minutes of all meetings and send them promptly to the newsletter editor.

The motion to make these changes to the by-laws were approved by the membership.

New Business:

1. Volunteers needed for Conservation day at the Statehouse on 1/27/09 were requested. Lynn Jenkins, David Englert, Rosie Bishop, and Rosie Oaks volunteered.

2. Flower and Patio Show: There has been no contact yet. There have been changes in the show. Maria Smietana will check about an invitation to the show and send out information to Fred Soskel.

The business meeting adjourned at 12:35 and we then enjoyed a power point presentation by Bobbie Mattasits of her trip to Switzerland to tour and investigate biodynamic and organic farming practices with a question and answer session following.

Respectfully submitted

Ann Leatherman



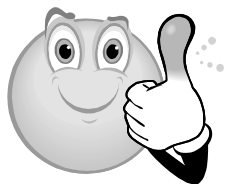
At the January IOGA meeting, IOGA member Bobbie Mattasits discussed her two week trip last summer to Switzerland to investigate biodynamic and organic farming practices



Planting Information

High Mowing Organic Seeds is a good source of information about growing, harvesting, and saving seeds. For each variety of plant, they provide 1) a section on growing the plant, 2) a section on diseases and pests, and 3) a section on saving seeds. www.highmowingseeds.com,

Gardening Tips



In celebration of the spring planting season, we're sending you some great ideas for your garden! Lots of good ideas from our members (the experts!!)

Paula Boone

1. Keep weeds under control by moving the soil around (hoeing, raking, cultivating) before the weeds are 1/4-1/2 inch tall. Do this once a week so that ideally no weeds ever show. It works!

2. Having loose soil allows one to move the dirt up around the beets, onions, etc. to smother any tiny weeds. No bending or stooping that way. It works!

3. Keep your hoe of choice sharp. My favorite is a diamond-shaped hoe made by the DeWitt company of the Netherlands. One can purchase it through Abundant Life Seeds.

Purchasing three or more at one time brings the price down to around \$72 a piece. I use the hoe on all five of my garden plots. It allowed me to expand from one garden plot to five. It works!



(Editors Note: DeWitt makes a variety of hardened steel hoes that maintain their sharpness longer. The current price for a single DeWitt diamond-shaped hoe from Abundant Life Seeds is \$99.75. Earth Tools, Inc., www.earthtoolsbcs.com, has the same hoe for \$47. They also carry other styles of DeWitt hoes)

Joy Florestano

We rely heavily on wood chips obtained from local tree trimmers. They have enabled us to start large garden areas without backbreaking labor, and are periodically renewed to keep down weeds.

We garden for wildlife, primarily butterflies and birds, and started all of our beds using the "newspaper method" we learned at the IOGA seminar at the Riviera Club a few years back. It is also promoted on the website www.lesslawn.com. The location of some of our beds were planned, but in many cases we just transformed a particular weedy spot or depression into an "instant garden." Besides the layers of newspaper we laid down about an inch of coffee grounds (recycled from a nearby cafe) and topped with about 3 to 4 inches of wood chips. Some areas were planted immediately, by digging down through the layers and cutting a hole

in the newspaper; other gardens were developed over time. Coffee grounds and wood chips were also used to improve the soil under shrubs and trees which are gradually becoming woodland gardens. The shrubs responded immediately to the moisture retention, and the soil is becoming enriched as the coffee grounds and mulch break down. Contrary to popular belief, coffee grounds do not seem to increase the acidity of the soil, as most of the acid is removed in the brewing process. (See discussions on the GardenWeb's "Soil, Compost and Mulch Forum" <http://forums2.gardenweb.com/forums/soil/>)

Using a heavy mulch layer to control weeds has one drawback: plants that would normally self sow may not do so. That can be solved by saving seed and using the "Winter Sowing" method www.wintersown.org, which has many other advantages. Plants can be placed where desired, including into new beds. Seedlings get a head start and are much stronger than ones grown indoors under lights. Our favorite containers for winter sowing are one gallon plastic ice cream buckets with lids. These have enough depth to allow plenty of head room for the plants. Drainage holes can be made in the bottom of the buckets using a hot soldering iron. Cut a circle from the plastic lid, leaving only a narrow rim. After sowing the seeds, place a piece of plastic cling film over the bucket and secure with the ring, then cut holes in the film for ventilation. The GardenWeb also has a forum on Winter Sowing.

Constance Ferry—Companion Planting:

-Basil with tomatoes as it improves flavor and growth of tomatoes and help fight disease and helps repel tomato hornworms.

-All *Umbelliferae/Apiacea* family plants (i.e. carrot, dill, fennel) attract lacewings and other beneficial insects into your garden.

-Tansy is specific to repelling ants. I suggest you grow the tansy where you can control the tansy and use the fresh cut herb or dried herb where you need to repel the ant in the garden or home. You can also make a spray of tansy.

-Sage or any salvias attract many butterflies, bees and hummingbirds into the garden which ensures good pollination.

-Nasturtiums attract flea beetles which can devastate eggplant transplants in 3 days. I always grow extra nasturtiums elsewhere as the blossoms and leaves are edible.

-Catnip can be grown and then cut and used as a mulch

to deter flea beetles also. It does attract cats too!

-Finches love catnip and birds help to keep the insect population down in the garden.

-Thymes and lavenders are excellent for attracting bees into the gardens and their strong fragrance from their essential oils repels insect pests also.

There are many many more companion plants. Carrots do love tomatoes and garlic is the best pest repellent in the garden and can be planted here and there throughout the garden.

Kris Medic

Water the Compost -- For many years, I didn't "get it" that moisture was a key factor in cooking compost. Motivated by reports that caffeine was getting into our surface waters, I began putting leftover coffee and tea in the compost bucket rather than down the drain. So we are keeping our leftover caffeinated beverages out of the wastewater cycle and accelerating our compost with the extra moisture. Our compost bucket is sloppier now, but our compost breaks down faster. It's a win-win.

David Englert

My pepper plants enjoyed being close to my chives last year.

Basil, grown in abundance and picked. I made pesto (add garlic, olive oil, some lemon juice and salt) and made 10-12 oz. jars off this and froze.....here's the tip/comment, basil does freeze just fine, the product has been enjoyed all winter.

Compost, if you are anal as me, recipe: 1 in. of straw at the base, followed by 6 inches of green material, topped with 1/2 - 1 inch of top soil, then followed again by 1 in. of straw.....repeat. Record temp last year was in the low 150's.....shooting for 160 this year.

Amanda Fredericks

For fertilizer I use composted manure. I've heard of horse stables giving away free manure if you load it and take it away.

The way I try to fight bad bugs is by rotating my crops.

I use companion planting with my corn. I plant squash around the corn as a living mulch for the corn and the corn shades the squash in the heat of the summer.

Lynne Sullivan

I just wanted to pass along a caution that I read about in

the current (Spring 2009) Mother Earth News: Guide to Growing Your Own Food. They report that an herbicide called aminopyralid released by Dow Agrosiences in 2005 to control weeds has been linked to home garden failures in Great Britain and could affect gardens in the U.S. as thousands of acres of North American pasture and rangeland have been treated with aminopyralid. Evidently, the herbicide is persistent enough to remain in straw that has been sprayed and is found in manure from animals that have eaten treated pastures. When home gardeners have used this straw, manure or even commercial compost that uses ingredients tainted with these common soil amendments, their gardens have failed. The report cautions that gardeners use only amendments that they know to be safe and free of this herbicide.

Bill Scott

As to fertilizer use, I rely on compost (sometimes boosted with the addition of blood meal or spent brewery mash). For some vegetables like tomatoes, peppers and eggplants, preparing a hole for the plants that has been filled with a shovel full of compost mixed with a shovel full of soil and for the tomatoes, approximately 1/4 cup blood meal and 1/2 cup boned meal. For the eggplants and peppers I use about half of the blood meal/bone meal quantities. I will use fish fertilizer periodically during the growing season for the rest of my vegetables.

Ann Niednagel

I like to call myself a lazy gardener, if the plant doesn't live I let it go and get more native plants that do live. For lawn care, I have eliminated at least a third of our lawn. However, in our subdivision lot we have to keep some green to keep the neighbors and kids happy. We use a corn by product that inhibits seed germination and provides a great amount of nutrients to our lawn. Gardens Alive an Indiana company out of Lawrenceburg sells *WOW*. (without weeds) lawn application that we apply twice a year to our lawn. The first two years we did spend some time hand digging the dandelions out of the yard but now don't have a problem. We also had the lawn aerated twice a year in the fall and spring. Now that the lawn is so much healthier we only have it aerated in the fall. I highly recommend *WOW*.! www.GardensAlive.com/WOW.

Marilyn Spurgeon

Divide your space in fourths and rotate crops. Cold lovers in one section, Corn in another, tomatoes and peppers in the third and pole beans and peas in the fourth.

Buy a shuffle hoe--rather than chop/ho, shove the hoe under the surface to cut off small weeds--do it often so they do not get big!

Keep ice cream buckets handy. They are good for collecting produce but also for putting about 1 inch of soapy water in to hold under Japanese beetles, cucumber beetles, and asparagus bugs--tap the plant and they fall in.

Put up two strands of electric fence--3 feet and 6 feet high--and bait with peanut butter on foil strips to attract deer that like shiny things and lick the peanut butter. One or two shocks and they are trained to stay away.

Make fence cages of reinforcement wire, about 5 feet high and 3 feet across to put around tomato plants. Anchor with one steel fence post. These make great cages--strong, easy to reach through to pick the tomatoes.

If your soil drains well, dig potatoes as you need them but mulch with a lot of leaves in the fall to protect from freezing .

Bait Have-a Heart traps with peanut butter, apples, or paw paws, and do not have a heart--get rid of the raccoons and opossums.

Put Castor beans down ground hog holes. Seems to get rid of them. Be sure your pets do not get into the holes.

Get a garden cart! and a Troy tiller.

Ron and Claudia Clark

The size of the seed is important!! Plant seeds to a maximum of three times their diameter. Be sure to keep them moist or the germination process will stop. Remember Paula Boone's hint...add water to the seed bed even if rain is forecast! Tiny seeds can be shaken on top of the soil and patted into place. Water only with a fine spray.

When planting tomato plants, dig a hole deep enough so you can plant the roots and at least half of the stem, along with the bottom leaves. Roots will form all along the stem, so planting deep will make a strong plant. Place the plant in the hole and fill the hole with water before you add dirt.

Got this idea from the Jane & Charlie Gerrari. Wire cages really help! Prevents tomatoes rotting on the ground and is also a lot easier to pick. (5' foot high, 10 gauge 6" x 6" wire mesh, used to reinforce concrete walks, can be purchased at Lowes, Home Depot, et al. It comes in a 150' roll. Our cages are 17" in diameter, 54" in circumference. One roll makes 33 cages.)

Some Gardening Tips from the Past

Jane & Charlie Gerrari

Plant white icicle radishes among zukes, cukes and melons to deter squash bugs. Also helps keep insects off of broccoli!

When planting tomatoes, add a mixture of: 1 handful each of bone meal and corn meal along with ½ handful of dry milk and ¼ handful of epsom salts.

Paula Boone

Plant rows north and south so sunlight makes maximum impact.

Wait until the soil is dry enough to work before planting seeds. Then add water to the seed bed trench before planting the seeds, even if rain is forecast.

Controlling Disease & Insect Pests

Do the math! Less than 5% of the insects in our gardens are harmful. And 95% are helpful! By spraying to get rid of the 5% "bad guys" you are potentially killing 95% of the "good guys. To prevent pest attacks and disease, remember to:

- have healthy soil with lots of organic matter
- rotate crops to avoid build-up of insects and diseases that live in the soil
- learn to identify common insect pests and diseases
- watch your plants and be on the lookout for early signs of insect pests so you can take care of the problem when it's just starting
- plant the icicle radishes suggested by the Gerraris.
- hand pick the "bad guys" instead of spraying them.
- dispose of diseased material away from the garden area to avoid re-infection
- plant "trap crops" that attract pests away from you garden or use naturally repellent plants such as marigolds, garlic, and aromatic herbs (basil, oregano, mint) around bed edges

If all else fails, and you are having an infestation of bad bugs, get a short-lived, natural pesticide (*Rotenone* and *pyrethrum*) to minimize the damage you are doing to the good bugs. The deadly and long lasting chemical sprays are really damaging. Always use the minimum amount possible. Even natural insecticides kill good bugs more than the bad bugs.

Ask us...!

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UPCOMING MEETINGS

Mark your calendar

IOGA generally meets quarterly on the third Saturday of the month. Mark your calendar for upcoming meetings.

July 18, 2009
October 17, 2009
January 16, 2010
April 17, 2010
(Plant Auction)



Treasurer's Report

1st Quarter 2009

Opening Balance January 1, 2009 \$1316.54

Income

| | |
|------------------------------|----------|
| Membership Dues | \$568.00 |
| Donations | \$ 42.00 |
| Bank Interest (12/31 & 1/30) | \$.14 |
| Voided Check #2682 | \$ 6.00 |

Total \$616.14

Expenses

| | |
|------------------------------|-----------------|
| Newsletter | \$305.46 |
| Liability Insurance | \$162.00 |
| Misc. Expense | \$ 25.20 |
| Bank Service Charges | \$ 42.00 |
| <u>Check Printing Charge</u> | <u>\$ 18.95</u> |

Total \$553.61

Closing Balance March 31, 2009 \$1379.07

Respectfully submitted by Ron Clark, Treasurer

New IOGA Members

Douglas Rohde, Fishers, IN 46038

Mikel Thorne, Indianapolis, IN 46219

Tom McCain, Indianapolis, IN 46220

David Englert, Indianapolis, IN 46220

Mary Jane Winchester, Whitestown, IN 46075

Jackie Martin, Shelburn, IN 47879

Beverly Locke & Amy Horning, Anderson, IN 46017

How do I join IOGA?

Dues are \$10.00 per individual member, and \$12.00 for a dual membership (same address, one newsletter).

To join, please send your annual dues to:

I O G A
7282 E 550 S
Whitestown, IN 46075

Please include ALL of the following information:

Full Name
2nd Name (if dual membership)
Address
Phone Number
Email Address

(We do NOT share this information, but use it only for notices and newsletters to our members.)

IOGA
Meeting
Sat. Apr. 18
10:30 am

Annual Plant Auction at Zionsville Library
250 North 5th Street, Zionsville, IN

317-873-3149

- 10:30 Arrive with Auction Items
11:00—11:30 Introductions & Gardening Q&A
11:30—12:00 Great Pitch-in Lunch
(bring food to share plus table service)
12:00—12:15 Business Meeting
12:15 Auction Begins

Plants, books, and garden items will be available for auction. Your donations are appreciated. Please label plants with name and culture. Proceeds will be used to fund future IOGA programs. Each year the IOGA plant auction is attended by recently converted organic gardeners who are looking for plants and ideas, as well as those who have more experience and have lots of plants, tips and techniques to share.

For the pitch-in lunch, bring a favorite dish filled with food to share and your plate, fork, and drink.

From I-465 take the Michigan Rd./421 exit. At the exit, go north to SR334. Turn left to Zionsville and follow SR334 into Zionsville until it becomes Oak Street. Go west on Oak Street until you come to 5th Street. Turn right onto 5th Street. Park on the 5th Street side of the library (lower level). **Or,**

From I-65 take SR334/Zionsville exit. Go east on SR334 through Zionsville and watch for 5th Street. Turn left onto 5th Street. Park on the 5th Street side of the library (lower level).

Everyone welcome! Remember to car pool, if possible.

Join us and bring a friend!

Hoosier Organic Gardener
Claudia and Ron Clark, editors
7282 E 550 S
Whitestown, IN 46075



Bring an item to
the IOGA Auction
Sat. Apr. 18