



BUDS and BUGS



MSU Extension—Huron County, 99 W. Soper Road, Suite B, Bad Axe, MI 48413

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Huron County Master Gardener Newsletter



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ARE YOU READY FOR LASAGNA GARDENING?

By Denise Pattison, Advanced Master Gardener,
& Susan McNamee, Master Gardener

On June 18-20 Sue and I traveled to Michigan State University to attend the Master Gardener Summer Conference. Yes, it was hot, humid and at times rainy, but the dormitory we resided in had a room air conditioner and Sue took the top bunk!

We spent time gaining gardening knowledge, sharing horticulture stories with old and new friends, shopping and eating. Gardeners are friendly types and have a good sense of humor. Some of them also wear out of the ordinary headgear--funny hats.

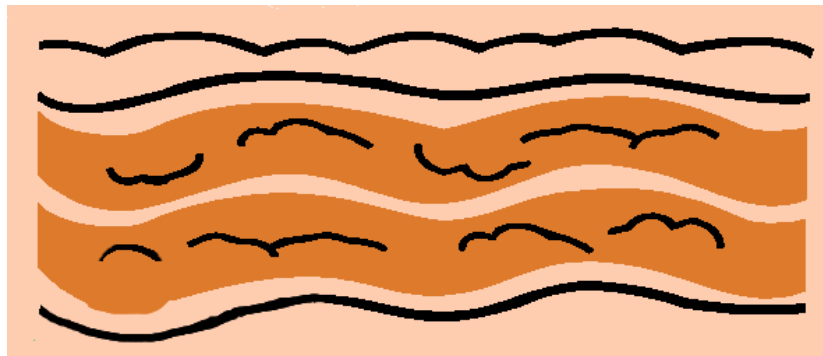
The keynote speaker was Patricia Lanza and she was articulate as well as humorous. She kept our attention with her new gardening ideas and

how she decided to do the layering type of gardening she advocates.

Ms. Lanza has authored and published three books. Sue and I each purchased one with the idea of exchanging when we finished ours. We stood in line to have them autographed, almost missing lunch! We found out why the line moved so slowly; she had a comfortable conversation with each person and did not hurry you along.

She advocates you keep your shovel and tiller in the garage and go about selecting your growing location. She suggests you have the following at the site: a large quantity of newspapers, pails of water as well as

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2006 FAIR BOOTH, FAIR GARDEN AND NEW GARDEN STAND

For the first time in years, we will not be having a presence in the Merchants' Building at the Huron Community Fair. At the regular monthly (July 5) Master Gardener meeting it was decided that we would be unable to effectively promote, staff and/or do all of the tasks necessary to host a booth at the fair. This is not a decision that was taken lightly and we hope we have an alternative that will fit most MG's schedules.



We are going to concentrate our efforts at the Fair Garden this year. John Weis has ordered 10 ornamental grasses and 20 wildflower plants that will be on display and will be used as door prizes for the week. Master Gardeners need to provide the flower element of the garden — potted annuals, attractive filler to draw the fairgoer's eye.

Other items that will be needed are 30 one-gallon milk jugs (clean, of course). The grasses and

wildflowers will be placed in these with the proper soil the plant needs to thrive.

We are having a tent, complete with table and chairs, to host a "booth" in the open. Workers will still be needed to work shifts. A sign-up sheet for workers (6th thru 12th) was circulated at the meeting. Those who initially signed up for the Fair Booth have first dibs at the Garden Stand schedule. If you don't hear from the office on this, please call.

If you have ideas for drawing fairgoers to this area — contests, demonstrations, etc. — please share them at the August meeting or just call the office (989-269-9949). It doesn't matter how wild your ideas — brainstorming is a wonderful thing! We do need to have the events scheduled, planned and run by the Fair Board so we can promote them on the radio and in our newspaper articles.

SEE YOU AT THE FAIR!

FAIR GARDEN CLEAN-UP SCHEDULED Tuesday, August 1 5:00—7:00 p.m.

(just prior to the regular monthly meeting)



Now that we are concentrating our efforts at the fair garden (see above article), it is even more important that we have it looking WONDERFUL for the fair. Come prepared to weed the path, neaten the bricks and cement blocks, and generally clean and beautify the fence line and flag pole area...and whatever else needs attention.

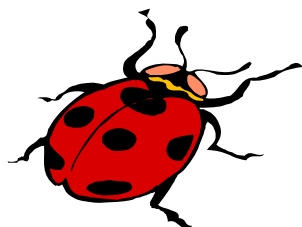
If you have any questions on this project, call John Weis at 989-883-2746.

GOOD BUGS DO WORK

By Edward Grafius, MSU

We're all familiar with some of the 'good bugs' that occur around our yards and gardens, such as lady beetles and praying mantises. Natural enemies also are common in vegetable crops, but they can be much less visible and their effects may not be easy to see.

Even though we may not see them, natural enemies are often responsible for keeping pest populations low and keeping our crops "out of trouble." Most of our common pests of vegetable crops have natural enemies that act to help control them. These natural enemies can be divided into predators, parasitoids and diseases. There are lots of examples and photos at www.nysaes.cornell.edu/ent/biocontrol/.



Predators

Predators include lady beetles, ground beetles and spiders that kill and eat pests. For example, lady beetles (both adults and

larvae are predators) and green lacewing larvae attack aphids in potatoes and many other vegetable crops. Hover fly larvae often attack aphids in celery. A small ground beetle, *Bembidion quadrilineatus*, eats onion maggot eggs laid on the soil surface beside onion plants. There also are beneficial nematodes that are predators or parasites of insects in the soil, entering the insect and infecting it with a bacterial disease that kills the insect.

Parasitoids

Parasitoids lay eggs in or on the pest, the eggs hatch, and the parasitoid larva consumes the pest from the inside as it grows. (We call them parasitoids, rather than parasites, because they kill their hosts.) Tiny wasps and some flies are common parasitoids.. Parasitoid wasps are stingless and often very small. They do not have large nests and colonies like other wasps and bees.

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(Continued from page 1) *LASAGNA GARDENING*

a water source, peat moss, grass clippings, chopped leaves, compost or decomposed horse or sheep manure and go at it.

First, you layer heavy sheets of very wet newspaper on the surface even overlapping. Next, you add compost or decomposed manure, grass clippings, peat moss, and chopped leaves. She suggests you cover the paper with 1 or 2 inches of peat moss or organic material. You would layer an inch of peat moss or other dry material between each layer. You need to build layers to a height that will take care of the roots of the plants you intend to plant. If your intention is to plant seeds have a depth of only 5 or 6 inches. Remember that the soaking wet newspaper is only applied once as the first layer. She suggests

you pull the layers aside, and insert the plant roots down to, but not through, the newspaper, set the rootball on top of the paper and pull the layers around it.

Her book is filled with recipes and suggestions for weed elimination and is an entirely new way of approaching your planting. There are many hints and suggestion about using the lasagna method and we are eager to share her ideas with you. The books we purchased are: "Lasagna Gardening with Herbs" and "Lasagna Gardening." Her new book is "Gardening for Small Spaces."

We hope you enjoy trying this new concept. As Master Gardeners, welcome anything you may add to this new idea. Enjoy.

(Continued from page 3) *GOOD BUGS*

The imported cabbageworm is attacked by a wasp called *Cotesia glomeratus*. Many wasp larvae develop inside a single cabbageworm and emerge to pupate outside of the worm.



Diamondback moth larvae are parasitized by a wasp, *Diadegma insulare*. Up to 90 percent of diamondback moth larvae may be parasitized and killed by *Diadegma insulare*.

Insect Diseases

Fungal, bacterial and viral diseases also attack insect pests. Green peach aphids are often infected by the fungus *Pandora neoaphidis*. The fungus *Entomophthora muscae* attacks onion maggot adults and other flies. *Bacillus thuringiensis* (Bt) is a specialized soil bacterium that can be used as an insecticide. There are many kinds of Bt. Each kind affects only a narrow range of insects and is non-toxic to humans and other vertebrates. Bts are generally safe for beneficial insects, including honeybees and insect predators and parasitoids. Bt foliar sprays are often accepted as organic insecticides because they are from a biological organism rather than manufactured chemicals.

Genes from Bt toxins have been isolated and incorporated into crop plants, using biotechnology to create resistant crop varieties. Several types of Bt corn are available with resistance to European corn borer and corn rootworms.. Bt potatoes resistant to Colorado potato beetle were commercially available from 1995 to 2000.

Insecticides

Predators and parasitoids are usually more sensitive than pests to the insecticides we use. Insect pests are frequently exposed to insecticides and often develop insecticide resistance.

Most pests are exposed to toxic chemicals produced by plants. For example, potatoes, cabbage, celery and onion all produce toxins to help protect themselves from pests. The pests that attack specific crops are adapted to these toxins and sometimes it takes only a little change for them to be resistant to insecticides. Colorado potato beetle, onion maggot and diamondback moth are well known for their ability to adapt to insecticides. Unfortunately, natural enemies are not normally exposed to plant toxins and usually don't develop insecticide resistance.

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MSU GARDEN DAY

August 4, 2006

Come and hear gardening experts and attend two choice workshops at Garden Day on the MSU Campus, East Lansing, Michigan on Friday, August 4, 2006!

Join us for a fun-filled day that includes garden talks from nationally-known speakers, Dr. Frank Telewski and Mr. Gordon Hayward. You will have a choice of two break-out sessions and enjoy a boxed lunch in the company of other passionate gardeners and experts. The beautiful MSU horticulture gardens are just footsteps away for you

to stroll through and nourish your gardening appetite! Also included is the Garden Day Marketplace with vendors offering a wide variety of plant material and your garden favorites.

For registration and information visit:

www.hrt.msu.edu/outreach/GardenDay2006.htm

*Master Gardener Volunteers will receive 5 hours of educational credit.

OPEN TO THE PUBLIC

EXPAND YOUR KNOWLEDGE

At each monthly meeting, we call for assistance in the office with homeowner calls. We would like to have volunteers scheduled weekly. This allows us to tell clientele that on such-and-such-a-day, our Master Gardener volunteer will be getting back in touch with them. This keeps the clientele happy because they know they'll get an answer; it works out well for you, the MG, because you know on that day you will have calls waiting for you; and it works well for the office staff because we know the clientele will be taken care of in a timely fashion and we can get on with our other work. *(This is also a terrific way to obtain more volunteer hours.)*

Master Gardeners, you know your schedule and when you can come in. If you call on the spur of the moment, chances are there won't be any calls for you since we try to answer the calls in a timely fashion...bugs and diseases don't always wait to cause severe damage or move on to another life stage.

One of the first jobs you can do when you come in is to get familiar with the resources in the office. See what books are here, look through the MG file cabinet, get on the internet to look for answers. Some days are busier than others.

Thanks go out to Susan McNamee, Paula Brunell, Pat Goodnow and Wilma Erskine for volunteering this summer at the MG desk. Thanks, too, to John Weis for handling the tougher (and numerous) tree calls we are getting! John has even gone out on the road to visit some of the sites to investigate problems. If anyone else would be willing to travel (especially the north & east sides of the county), please let us know.

We do get a variety of calls each month. A sampling of them follows: emerald ash borer, trimming yews, grape leaves (leafhopper), pear leaves (spider mites), dogwood and cherry leaves (sanitation), insect ID (springtail, carpenter bees), roots growing in a garden, fly specks on siding, leaves cupping (aster yellows), pond leeches, tent

GARDEN WALK 2006

The preliminary count is in and it looks like 84 tickets were sold for our Garden Walk. We received many wonderful comments about the quality of the gardens and the ideas generated by them.

We had an issue with newspaper publicity this year and that will be addressed at our next meeting.

A big THANK YOU goes out to Marie Phillips and Susan McNamee who were co-chairs for this project. Of course, none of this could have materialized without the willingness of the 8 homeowners who graciously shared their yards and even provided refreshments for their visitors.

The special deals provided by the restaurants were appreciated by many. Thanks, too, to MG Theresa Woodward for providing a shopping special on plants at her nursery.



And another big THANK YOU goes to each of you who worked at the homes. One of the strongest attributes of the Master Gardener program is YOU, the volunteers! You welcome the visitors, answer their questions and make them welcome. You add tremendously to their enjoyment of the gardens.

(Continued from page 4) *GOOD BUGS*

Biological Control

Sometimes, we learn about the effectiveness of natural enemies in a vegetable crop by observing what happens when the natural enemy is killed by pesticide applications.

We can see aphid outbreaks if the crop is sprayed too often with insecticides that are toxic to natural enemies but not toxic to the aphid. For example, researchers in Minnesota commonly spray potato plots with carbaryl (Sevin) to create green peach aphid outbreaks to conduct research. Sunflower aphid numbers were higher in Michigan celery fields sprayed more often with insecticides — just the opposite of what growers want.

Colorado potato beetle

Another way to see the effectiveness of natural enemies is to look at a pest like Colorado potato beetle (CPB), which does not have effective natural controls. The CPB does have some predators that consume eggs and larvae and a fly that parasitizes larvae, but natural enemies, such as the two-spotted stinkbug; but the stinkbugs do not build up quickly enough to control potato beetle populations. Because we have no effective natural enemies and no resistant potato varieties, potato growers rely mainly on insecticides for control of CPB. This is costly and puts a lot of pressure on the insect to develop resistance to insecticides.



Soybean aphid is another example of a pest with few effective natural enemies. Often, introduced pests like the soybean aphid don't have the normal numbers of natural enemies when they arrive in the United States and therefore create particular problems.

Managing crops

Insecticides are the main factors that disrupt natural enemies in vegetable crops. Reducing the number of insecticide applications, especially early in the season, is probably the most important practice to preserve natural enemies. Scouting crops and

spraying only when necessary is important. It may seem like an “insurance” spray early in the season would control the pest before it became a problem, but this tactic will probably kill far more natural enemies than pests, and the pests that do survive will be free to reproduce without their normal natural enemies.

Using selective insecticides whenever possible is a good practice. Bt is one of the most selective, but there are other products that also preserve natural enemies. As a general rule, insecticides that only list aphids or caterpillars on the label are likely to be safer for lady beetles and parasitoid wasps than products that are active against many groups of insects. Pyrethroids are effective for control of caterpillars and other pests but are generally poor against aphids. Because they are highly toxic to most natural enemies and poor against aphids, they can cause aphid outbreaks.

Crop diversity may also play a role in preserving natural enemies. Many studies show that reduced tillage and interplanting crops with non-crop plants can increase predator numbers. Planting crop borders with nectar-producing plants can serve as nectar sources for parasitoid wasps. Whether these factors can increase natural enemies enough to significantly control pests varies from pest to pest and is still unknown in many cases.

Natural enemies can also be purchased from biological control supply companies. This can be an effective practice in enclosed areas like greenhouses, but purchasing and releasing natural enemies is generally not economical or effective in large-scale commercial vegetable crops in the field.

Preserving natural enemies is an important pest management practice and one that can provide free pest control for growers. In an ideal situation, the natural enemies will react quickly if a pest begins to increase and provide automatic control. Even if pests occasionally reach damaging levels, natural enemies can greatly reduce the need for insecticide treatment. Because we don't see them very often, we probably greatly underestimate the hidden benefits of our unseen natural enemies.

EARWIGS

QUESTION: "I have a problem with earwigs on my plants. I have tried using a powder that was recommended for earwigs but it is not proving effective. What can I use to get rid of earwigs and all the bugs in my garden that is safe for my plants?"

ANSWER: Bear in mind that along with harmful bugs or pests, there are hosts of beneficial ones that are helping to keep the bad guys under control. If you get rid of these as well, your garden is open for being attacked once again by the bad guys with no beneficial ones to help keep them in check. Toxic chemicals that kill bugs also affect birds, amphibians, pets and humans to at least some degree.

Gardening has moved from a war to a compromise in recent years. None of us want to be out there using toxic products constantly. The idea now is to keep pest levels to a tolerable level, rather than elimination. I figure, if you can't see the damage from ten feet away it's really not all that bad and most of us can live with it. A few chewed leaves is not a cause for panic, really, but sometimes the damage done is much worse.

Having said that, I encourage you to explore the new world of more environmentally friendly products that every garden centre now stocks. Soap-based insecticides are effective on a wide range of common insect pests. There are other types that are bacteria-based that zone in on very specific pests, and these are terrific if timed correctly according to the label directions. You can also find predator insects that feed on the "bad" kinds, as well as parasitic nematodes that work well on things like lawn grubs.



The real key is discovering what your pests really are, then having a strategy to

deal with each specific kind. Your local garden centre will be happy to help you figure this out, just take along samples in a plastic bag. There may also be Master Gardener clinics held in your area on a regular basis, and these trained volunteers will also gladly help.



In terms of earwigs, there is NO way to eliminate them entirely, since most of southern Ontario has been infested for many years now. Control can be achieved, but there is no magic pill i.e. nothing that works so well that you can just apply it once and have it work for the entire season.

I'm not big on kitchen remedies, but here is what I do get aluminum tart shells and sink them in the soil so the rims are level with the soil surface. Put 1 inch of soy sauce in them, and 1/4 inch of vegetable oil. Check these in the morning and remove the dead earwigs. Top the traps up as needed, and don't forget to dump and replace the contents after a rain storm. You will soon find certain "hot spots" in the garden where there are loads of earwigs, and other places they hardly go at all. It's amazing how many earwigs one of these simple traps can catch. They are attracted to something in the soy sauce (probably yeast) then slip inside and drown under the layer of oil.

Start trapping earwigs in late April and early May next year. The adults tend to their own young, so the more you trap early in the season, the fewer will have a chance to breed and make the next generation. It's still worthwhile trapping them now, however.

I ended up switching to glass finger bowls from the dollar store, because birds started pecking holes in the aluminum, feeding on the dead earwigs.

SPRING INTO GARDENING

Huron County Master Gardeners' Spring Into Gardening Conference is set for March 31 at Ubyly Heights Country Club.

Volunteers are needed to:

- *Line up speakers
- *Arrange for prizes
- *Write asking for goody bag stuffers
- *Find handouts for the "free" table
- *Mail postcards to vendors letting them know of the scheduled date

If these are projects you would like to work on, please call the office at 989-269-9949.

We had approximately 425 attend (125 class participants and 300 walk-ins). This is developing into "the" educational gardening event in Huron County.

Congratulations and let's get a head start on 2007!

CALENDAR OF EVENTS

Call the numbers listed for times, fees and a more detailed description of the event or contact our office for a flyer, if it's available.

MSU Extension, Bad Axe (989) 269-9949

Aug. 1 Fair Garden Clean-up, 5-7:00 p.m. *Bring your tools and gloves.*

Aug. 1 Monthly Master Gardener Meeting, 7:00, MSUE conference room, Bad Axe

Aug. 6-12 Master Gardener **FAIR GARDEN and STAND** at the Huron Community Fair

Aug. 8 Primary election — Don't forget to vote!



Michigan State University

(517) 355-5191, #1-#409

Aug. 4 MSU Garden Day

MSU Extension, Flint (810) 244-8547

Oct. 14 Fall Into Spring Program

MSU Extension, Saginaw (989) 758-2500

Oct. 7 An Autumn Affair for Gardeners

MSU Extension, Mt. Pleasant

(989) 772-0911, #215

Apr. 21, 2007 Spring Into Gardening