The Lady Beetle News

The Ohio State University (OSU) Integrated Pest Management (IPM) Program
September, 2002

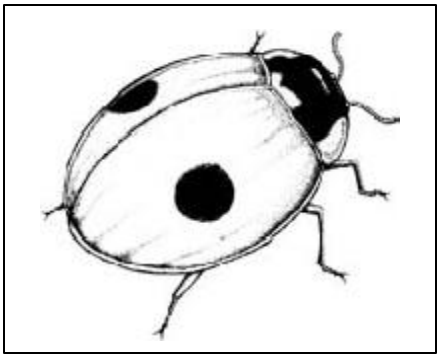
Time to Get Ready

It's the time of year that you should start thinking about what you are going to do to keep the multicolored Asian lady beetles (MALB) out of your home. Remember, prevention is your best defense!

While we still have some good weather, take time to look around the house, inside and out, and identify possible entry points for the beetles. Caulk the small holes and put small mesh screens over the large ones. Install and /or repair door sweeps and window screens. This effort will not keep the lady beetles out completely. However, it will eliminate the easy access points.

Once the caulking and repairs have been made, consider making a pesticide application to the exterior of your home. Beginning no more than two weeks before the beetles ususally arrive, spray or have sprayed (by a professional) sections of the house with a pyrethroid pesticide. There is no need to spray the whole house, concentrate on areas around windows and doors, under eaves, along rooflines and around the foundation. The pyrethroid active ingredients we have found to be most effective for the longest period of time include lamda-cyhalothrin, deltamethrin, and bifenthrin. Cyfluthrin and cypermethrin had good initial activity but declined significantly as time went on. So, if your timing is good, any pesticide containing any of these active ingredients should work well. However, if you are looking for good long term control, try using the first three chemicals listed.

We are working on developing a model to predict when the beetles will arrive so that you can time your pesticide application more precisely. Until that work is completed, it's best to watch the local weather broadcasts for the first predicted day near freezing. The bulk of the beetles appear to begin to fly in search of a winter hibernation spot the first or second warm day (over 60° F) after that frost or near frost event.



Researchers Unite

On August 29th and 30th of this year, a group of researchers and extension personnel met in Wooster, Ohio, for the first ever meeting on the MALB. In addition to some U.S. Department of Agriculture representatives, people came from many of the other states affected by lady beetle problems. Ohio, Kentucky, Michigan, North Carolina, West Virginia, Tennessee and Indiana were all represented. Discussion began on what are everyone's current research and/or extension MALB projects so we could develop a sense of who is working on what and what are the things we do know about the beetle. Next, the group listed various questions related to MALB biology, its impact on structures, its effect on native lady beetles, other predators and pests, its status as a pest in fruit, and human health concerns. In a short period of time, the group came up with over 40 questions that need to be answered to help us effectively manage the MALB. Finally, the group decided on what outcomes we'd like to see from a collaboration amongst the members of the group.

Highlights of the meeting include:

- MALB are attracted to sites with a high degree of visual contrast.
- An USDA-ARS researcher is working on a "push -pull" technique to keep MALB out of structures.
- OSU has refined a homemade light trap which does a good job catching beetles. Information about the trap can be found at: http://ipm.osu.edu.
- MALB is a significant homeowner problem in all of the states represented.
- Michigan is also experiencing problems with MALB in wine grapes.
- All of the meeting participants were willing to share information and collaborate on future research projects.

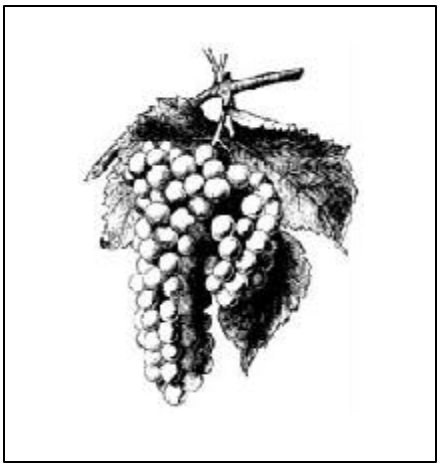
Much information was gained by all of the participants, but everyone agreed there is still lots of research that needs to be done.

Feeding Preferences

One of the attributes of the MALB that allows it to be so successful is that it is a generalist feeder. A limiting factor for many insect populations is the availability of food. They can have very specific food choices, and if the supply is limited, then so is the population of that insect.

The MALB does not have this problem. If it's primary food sources, aphids, mites and other soft body insects, are not available the beetle can switch to more plentiful sources. The MALB has been observed feeding on pollen, nectar, and on fruit late in the year. This latter choice has become a problem for some of Ohio's fruit growers, especially those who produce wine grapes. The beetles burrow into a grape cluster and feed on the soft-skinned grapes. This is a problem because it damages the fruit, but also a few beetles inevitably get harvested along with the grapes and get crushed as the grapes are prepared for the wine making process. Many of you know how terrible the beetles taste after having one fall into your food. Just a few beetles can adversely affect the taste of the wine.

The OSU IPM program staff decided to look at just what the beetles prefer to eat and when they like to eat it. This past April, beetles that recently emerged from overwintering were tested. Their top five food choices in order of preference were honey, watermelon, cantaloupe, peach and grapes. Beetles were tested again in August and showed similar preferences with cantaloupe, watermelon and peaches being the most popular followed by apples and blueberries. Honey dropped to number seven on the list. Interestingly, aphids and mites were in the bottom thrid of the list both times. It appears that the MALB are in search of sources of carbohydrates at these times of the year.



Field Observations

Last year soybean farmers in the midwest were having difficulty dealing with a new pest, the soybean aphid. However, the fields infested with the aphid also had high populations of MALB. This year the aphids seem to have disappeared. Did the MALB wipe out the soybean aphids? No one knows for sure. Without this abundant food source, will the MALB population be as large as last year? Does this mean a smaller infestation problem for Ohio's homeowners? Again it's difficult to say but we will find out soon enough.

New Website

In an effort to track the movement of the MALB around the country, the OSU IPM staff, with help from the North Central Region Pest Management Center, has set up a web site to collect this information. Visitors to the site (**www.pmcenters.org/northcentral/MALB/**) will have the opportunity to fill out a residential, commodity and research survey. The first survey is designed to gather data about the nature and timing of MALB infestations in the home. Many of you have already filled out this survey. The commodity survey will be used to track the beetle in different commodities as a beneficial insect or pest. The research survey is designed for researchers and extension agents to report when the beetles aggregate in their area. If you have already filled out a residential survey, you can still help by giving us the aggregation date for your area.

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