

The Lady Beetle News

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

An Autumn for the Record Books

With an extra abundant food supply (aphids in soybeans) in Ohio this past summer, the multicolored Asian lady beetle (MALB) was able to reproduce prolifically. So homeowners were met this fall with larger populations than they have seen before. Lots of callers to the Lady Beetle Hotline also reported an increase in aggressiveness as many received numerous bites.

Thanks to those of you who called in to report the date of arrival of the MALB swarm in your location. From the data thus far it appears that there were three significant flight periods, October 1,2 & 3; October 9,10 & 11 and October 19 & 20, with the middle period being the most serious. As expected each of these time periods had higher than normal temperatures and were preceded by a rain event and then a drop in the temperature to near freezing. This information should help us to predict the arrival of the beetles in coming years.

Calling All Research Assistants

In an attempt to learn about the effectiveness of different measures used to manage the MALB, the OSU IPM program handed out or mailed out research data sheets on which to record what, where and when actions were taken. Thanks to those who have already sent their sheets back, however it would be helpful to receive many more. So if you still have your data sheets please take some time to fill them out and return them to our office. One note, the return address listed on each sheet has the wrong zip code. The correct zip code should be **43210**. New data sheets can be found at our web site: <http://www.ag.ohio-state.edu/~ipm/lady/data.htm> or by calling the Lady Beetle Hotline 800-678-6412.

From the data sheets received thus far, the most popular and reportedly effective method of reducing the number of MALB in your home is to apply a pesticide on the exterior of the home. The following chart shows which chemicals were used, who made the application and the average cost of the treatment. The pesticides are listed in order of frequency of use with the chemical named most frequently listed first.

Homeowner Applied Pesticides

Chemical	Cost
Cyfluthrin	\$25
Permethrin	\$ 9
Tralomethrin	\$ 8
Sevin	\$10
Dursban	\$14
Lambda-cyhalothrin	\$20

Pesticides Applied by Professional

Chemical	Cost
Cyfluthrin	\$130*
Lambda-cyhalothrin	\$ 73
Deltamethrin plus Cypermethrin	\$122
Bifenthrin	\$ 53
Permethrin plus Dursban	\$ 85

*sometimes included additional chemicals applied inside the home.

58% of the respondents reported applying the pesticides after the first swarm of MALB arrived. The other respondents applied their pesticides anywhere from one week prior up to the day of arrival. The respondents were also to rate the efficacy of the treatment. All of the pesticide treatments that were applied by a professional were rated as significantly reducing the number of beetles that got into the home. The homeowner-applied pesticides were rated slightly less effective. Cyfluthrin, Deltamethrin +Cypermethrin, lambda-Cyhalothrin and Permethrin were consistently rated as effective chemicals. Furthermore the timing of the application of the chemical does not appear to affect its effectiveness. However, if the chemical is applied after the beetles arrive, it must be done while they are still swarming on the exterior of the home.

Homeowners also reported using other methods to exclude the MALB from their home. Caulking to seal gaps and holes and screening any large openings were other popular management techniques. Most reported caulking around windows and doors in addition to filling in any other visible cracks. This method alone did not keep the beetles completely out of the home. However, when used in conjunction with other methods, especially exterior pesticide sprays, the homeowners indicated a significant reduction in the number of beetles entering the home. Camphor cakes or oil, vanilla candles and bay leaves were other exclusion methods used. The camphor cakes or oil and bay leaves were placed around the windows, usually between the screen and the window on the exterior side. The candles were used in the attempt to keep the MALB out of the room in which they were burned. Most research participants indicated that the botanicals had no observable effect on their MALB population. However, a few people with only a moderate infestation problem reported that camphor worked well for them.

Most of the data sheets also indicated that people relied heavily on vacuuming, usually numerous times per day, to manage their MALB population. Some people even indicated that they purchased a vacuum or shop vac just for this purpose. This method did not eliminate the beetles from the home but did provide some help. It should be noted that all beetles vacuumed were disposed of, not released outside.

Very few people tried trapping devices to help manage their MALB problem. The few that used sticky traps (both white and yellow) found them to be ineffective. Black light traps were also suggested. A few people constructed homemade versions and also found them to be useless.

The final method employed by a few homeowners was to apply a pesticide on the interior of the home, usually around the windows and doors. Most of these chemicals were applied by the homeowner who commonly used permethrin. The professionally applied chemicals included chlorpyrifos and chlorpyrifos with permethrin. All of the homeowners who applied pesticides to the interior of their home also applied them to the exterior. So it is difficult to determine the success of the interior pesticide treatment alone. However, all of these people found this combination of pesticide treatments to be successful.

Pesticide Trial Results

Since pesticide application to the exterior of the home appeared as the most promising mitigation technique, a pesticide trial was conducted by the IPM staff. Five pyrethroid pesticides were tested on their residual effect and efficacy as a killing agent against the beetles. Twenty-five white vinyl siding disks were treated with insecticides on 27 Aug 2001. Insecticides tested were:

Demand CS (9.7% lambda-cyhalothrin)

Talstar (7.9% bifenthrin)

Tempo SC (11.8% cyfluthrin)

Suspend SC (4.75% deltamethrin)

Demon EC (25% cypermethrin,)

Treatments were replicated 5 times. The disks were then placed outside during the day and exposed to natural sunlight for 21 days. Disks were only brought in at night to avoid dew or rain. On September 18, 5 beetles were placed on each insecticide treated disk and untreated control for one hour. After exposure the beetles were then removed and evaluated at 6 times period (16 hours, 24, 40, 48, 64 and 78 hours after treatment) and placed in 3 categories, alive, dead, or moribund.

At 78 hours all treatments provided some level of control. The Demand and Suspend treatments were the best with over 95% of the beetles either dead or dying. The Talstar treatment was next with 84% while Tempo and Demon killed 50% or less of the beetles at this time. Therefore, it appears that one application to the exterior of a vinyl sided house with Demand, Suspend or Talstar should give at least 3 weeks of protection and may provide seasonal control of the MALB.

Exit Data Needed

Another piece of information needed is the date when the beetles become active again in the spring as they search for a way to leave your home. Please call the Lady Beetle Hotline (800-678-6412) and report your MALB exit date. THANK YOU!!!

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