

## Stop 9. Managing a New Pest (European Crane Fly) and an Old Pest (Japanese Beetle)

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**European Crane Fly Damage Observed in Detroit Area and Grand Rapids.** New European crane fly damage appeared on home lawns and on some golf courses in mid April this year. Because crane fly larvae need moist soil, the damage is usually on irrigated turf. Turf on the infested lawns was extremely thin or dead in patches, with large crane fly larvae being found in the soil and on the surface. The large 'leather jacket' larvae complete development in May before pupating in the soil and emerging in June as an adult crane fly, which looks like a 1.0 inch-long mosquito. The thin turf and accompanying excavation by skunks and raccoons looks like grub damage, but can be easily distinguished by the presence of the gray to tan-colored leather jackets (see photo below). Infested lawns can be treated in April with Sevin (or another turf product containing carbaryl). However, to prevent damage this fall and in spring of 2013, lawn care professionals or golf course superintendents will need use one of the following products and the indicated timing below. Timing is critical, as Kevin Timmer in Grand Rapids reported damage to several lawns that had been treated with imidacloprid in May last year (2011). For images of European Crane Fly please visit the MSUE news website: [http://msue.anr.msu.edu/news/european\\_crane\\_fly\\_damage\\_appearing\\_now\\_in\\_grand\\_rapids](http://msue.anr.msu.edu/news/european_crane_fly_damage_appearing_now_in_grand_rapids)

Product	Correct Timing for European Crane Fly
<b>Sevin (carbaryl)</b>	<b>In May or late fall when turf damage is discovered</b>

*The following treatments are preventive:*

<b>Acelepryn (Chlorantraniliprole)</b>	<b>May (also protects against grubs and other turf pests)</b>
<b>Arena (clothianidin)</b>	<b>Late July and August (also protects against grubs)</b>
<b>Merit (imidacloprid)</b>	} <b>Should provide protection when applied from late July to mid August (also protects against grubs)</b>
<b>Allectus (imidacloprid + bifenthrin)</b>	
<b>Aloft (clothianidin + bifenthrin)</b>	
<b>Meridian (thiamethoxam)</b>	

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### Natural Biological Control of Japanese Beetle

Previous research at MSU supported by MTF and Project GREEN indicates that survival of Japanese beetle larvae in the soil from October to May is reduced by as much as 50% when the pathogen, *Ovavesicula popilliae*, is established. We have successfully established this pathogen at several golf courses in the Detroit and Kalamazoo areas. At golf courses where the pathogen has been detected for 10 years or longer, populations appear to be declining. As a result, grub damage to turf is unusual and defoliation of linden trees, rare. The good news is that we have some dead infected beetles for you to take home to your own golf course to get *Ovavesicula* established there. The bad news is that it may take 5 – 10 years from when *Ovavesicula* is first

introduced until populations begin to decline. If you are located in Kalamazoo/Battle Creek area there is no need to introduce more infected beetles because the pathogen is already well-established in that area. If you have introduced infected grubs or beetles in the past, it is not necessary to do it again.

***Directions of how to implant infected beetles:***

Find an area of irrigated rough on the golf course where you usually have grubs. Use a screw driver to punch a hole into the soil about 1.0 inch deep. Enlarge the hole enough so that you can place the beetle 1.0 inch deep. Cover the hole and step on it after the dead beetle is placed in the ground to prevent birds from finding it. Repeat this for each dead beetle in the bag. Space the dead beetles about 5 paces apart. Do not place dead beetles where any insecticide has been used. Only choose irrigated turf sites where it is likely to find Japanese beetle grubs in the fall. Do not use insecticides in the introduction area for 3 years.