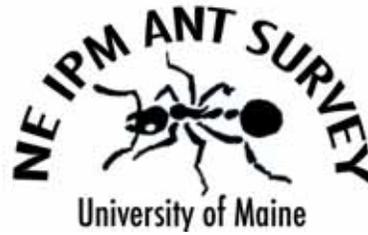


Dr. Eleanor Groden, Professor of Entomology
Dr. Frank Drummond, Professor of Entomology
Dr. Alejandro Arevalo, Postdoctoral Researcher
Tamara Levitsky, Scientific Technician
Carrie E. Graham, Graduate Student
University of Maine Department of Biological Sciences



MANAGING EUROPEAN FIRE ANTS

We are continuing to research new strategies for managing the European fire ant (*Myrmica rubra*, also called the European red ant) both in the field and the lab at the University of Maine. As we continue to develop better management strategies, we will post them to our website:

<http://www.umesci.maine.edu/biology/entomology/anthome1.htm>

It is important to understand that it is not currently possible to completely eliminate European fire ants from areas that they have invaded. If you already have an infestation of European fire ants on your property, there are some management strategies that may reduce the number of ants or the density of nests.

BEWARE

Most new infestations are caused by people unknowingly introducing these ants to new areas via potted plants, soil, compost or other organic materials. DO NOT move plants or soil from properties infested with European fire ants to uninfested properties. Clients should also be advised against moving plants or soil from infested properties.

Prevention

Be aware that infestations currently occur in many coastal communities and some inland sites. If you do not already have the European fire ants on your property, you can help prevent future infestations by carefully inspecting all plant and nursery materials (potted plants*, tree balls, soil, compost, wood chips and logs) prior to installing them. If you find ants infesting potted plants, contact your nursery provider and do not plant them until you can **confirm from a reliable source** (entomologist, local extension service, or University of Maine Entomology program) that they are not European red ants.

Management with chemicals

If you choose to use pesticides, always **follow the label directions**. Currently, the most effective way to suppress ant populations is to use bait-formulated insecticides. Baits consist of an insecticide blended with a sugar, oil or protein food. They are more effective than contact insecticides because they are carried back to the nest and fed to queens and brood. They also target ants more specifically than broadcast insecticides or sprays, and thus have less impact on beneficial insects and other wildlife.

The European fire ant is generally not well controlled by most commercially available insecticides. Our experiments demonstrated that two applications of Amdro® (Hydramethylnon) or one

* To inspect potted plants it is necessary to take the plant out to examine the soil. Ants can be difficult to locate using just visual inspection. Disturbing the soil, mulches or rocks will facilitate their observation.

application of Extinguish® (methoprene) followed by one application of Amdro® result in the greatest reduction of ant activity. Some people have reported good control using liquid sugar bait containing a low concentration of boric acid (less than 1%). Although we have had positive results with this in laboratory trials, our field results have not been as successful. If you choose to utilize boric acid, it is essential that the concentration is 1% or less. Higher concentrations repel the ants or will kill workers before they can feed the rest of the colony. We are continuing to evaluate new bait formulations, active ingredients and methods of delivery.

Since the efficacy of baits is dependent upon feeding, these materials should be used during early to mid summer, the period during which the queens and ant brood are consuming the most food.

Remember that no strategy can completely eliminate the ants. There is some evidence that repeat applications may just cause the ants to move into adjacent areas.

Most ant baits are not approved for use directly within vegetable gardens, however, baits can be applied outside the perimeter. For raised beds, the perimeter is the outside edge of the landscape timbers or railroad ties used to make the raised garden beds. Pesticide baits can be used within ornamental gardens and butterfly gardens containing plants not intended for consumption by humans or livestock. . However, on school properties or other properties regularly used for school activities, pesticides may only be applied by a commercial applicator and only with prior approval of the school's IPM Coordinator,

Category of license needed to treat for European red ants

Maine Board of Pesticides Control (BPC) regulations require commercial applicators to be licensed in specific categories or sub-categories to perform treatments to control pests at different sites. To control European red ants or other pest ants that are in or around structures, applicators must be licensed in the sub-category 7A, General Pest Control. If the ants are in wetland areas or sites that are not associated with structures, applicators should be licensed in the sub-category 7E, Biting Fly & other Arthropod Vectors. Applicators that are licensed in the 3B, Turf, subcategory are **not** licensed to treat for ants, unless the ants create obstructions on golf greens, athletic fields or croquet courts. Whenever there is any question about the license sub-category required to do a specific treatment, applicators should contact Gary Fish at the BPC, 207-287-7545 or gary.fish@maine.gov

Management without chemicals

European fire ants generally nest under stones, boards, leaves, logs and other debris. If you remove these nest sites from your yard or garden, you may reduce the density of nests and thus the number of ants.

These ants also require moist habitats. Reducing irrigation or increasing solar exposure (by mowing tall grass or pruning overhanging shrubbery) may make parts of your property less hospitable to the ants, causing them to move elsewhere.

Pouring boiling water directly on nests may be effective at destroying individual surface nests. However, European fire ant nests are often cryptic and located in protected locations, so this technique is not generally effective.

We hope that this information will be helpful to you. For more information on ant management in lawns of the Northeast U.S please contact us to ants.ipm@maine.edu