Pest Control Newsletter

Published by the
Pest Control Advisory Section

Issue No. 7 July 2007

INSIDE THIS ISSUE

Differences Between Wasps and Bees

Wasps and bees are generally considered as beneficial insects in most circumstances. Wasps catch many flies, aphids, caterpillars and spider to feed their larvae, and in so doing can reduce the populations of agricultural and horticultural pests. In addition, wasps and bees often visit flowers and act as pollinators. The only reason for people to control social wasps and social bees is their painful sting. The stinging process includes injection of a rather potent venom. The venom of the social wasps and the social bees is a defensive material used to drive off intruders when the nest is threatened. The venom contains proteinaceous materials that may cause severe allergic reactions in some individuals. Control measures are then justified only when a nest is located in a poor location relative to the safety, comfort, or other interests of people. In general, the need to control a social wasp nest high in a shade tree is little, because the activities of the wasps high up on a tree are unlikely to cause much nuisance to us.

Wasps differ from bees in that most feed their larvae on animal matter, such as insects, spiders, or meat particles, and not on pollen. Bees also have hairy bodies, while wasps tend to have smooth and apparently hairless bodies. Social wasps build nests of a paper like material which is a mixture of wood fibres and the salivary secretions of the female wasps. On the contrary, social bees build nests of a wax like material. The differences between wasps and bees are listed in table 1.

Table 1 : Differences between wasp and bees

	Wasps	Bees
Appearance		
Body hairs	Simple, unbranched	Plumose, branched
Mouth part	Biting and chewing type 	Sucking type
Pollen baskets	Absent	Present on hind leg
Body size	Relatively bigger	Relatively smaller
Sting	Without barb	Barbed

More informaiton on pest prevention and control can be obtained from other pages of our website

The Role of Chemicals in Pest Control

Chemicals are often used as pesticides to destroy, repel or lower pest infestations to protect human health from vector-borne diseases, building structures from wood damaging pests, crops from plant damaging pests etc. With the advent of many chemicals used as insecticides since the World War II, many biologists believed that human war on insect crop pests and disease vectors would be coming to an end. However, today more than 500 insect species have been documented to have evolved resistance to one or more pesticides.

There are both benefits and risks in the use of pesticides. Pesticides are readily available from the market and usually can be easily applied by the users. Pesticide treatments can be rapidly implemented, where necessary, with minimal lag time to give an impressive reduction in the number of the target pest. Pesticides can be used over large areas to control large populations of pests through space-spray treatments.

Although pesticides do provide some benefits, they also pose many risks to humans and the environment. The use of pesticides would cause contamination of ground water and produce toxicity to fish, wildlife, beneficial natural enemies of pests and other non-target organisms. Pesticide is not a panacea for controlling pests. Pests will evolve resistance to the effects of pesticides over time.

Resistance problems have increased because pesticides are applied more frequently and at a higher dosage rate. To lessen pest resistance and overuse of chemicals, the most effective tactic is to reduce the number of treatments. Fewer or less frequent application, which reduces the selection pressure over time on the pests, should reduce the rate and probability of resistance development. In this way, the pest population, which is mainly the susceptible pests, could be kept under control. Repetitive spraying according to a fixed schedule without further assessing the pest problem which results in overdose is not only a waste of insecticide but may also speed up resistance development. Calendar-based spraying tactic should not be used.

Environmental management, such as source reduction (picture), is the fundamental and more lasting method of pest control. It is always target specific and can reduce the impact of human intervention on the ecological system. Besides, biological control, physical control and even legislative control can be considered in our choice of pest control methods. These methods can help reduce the reliance on pesticides, and hence avoiding the overuse of pesticides. Stop relying solely on the use of chemicals in solving pest problems!

Discarded containers/refuse should be removed to eliminate mosquito breeding places