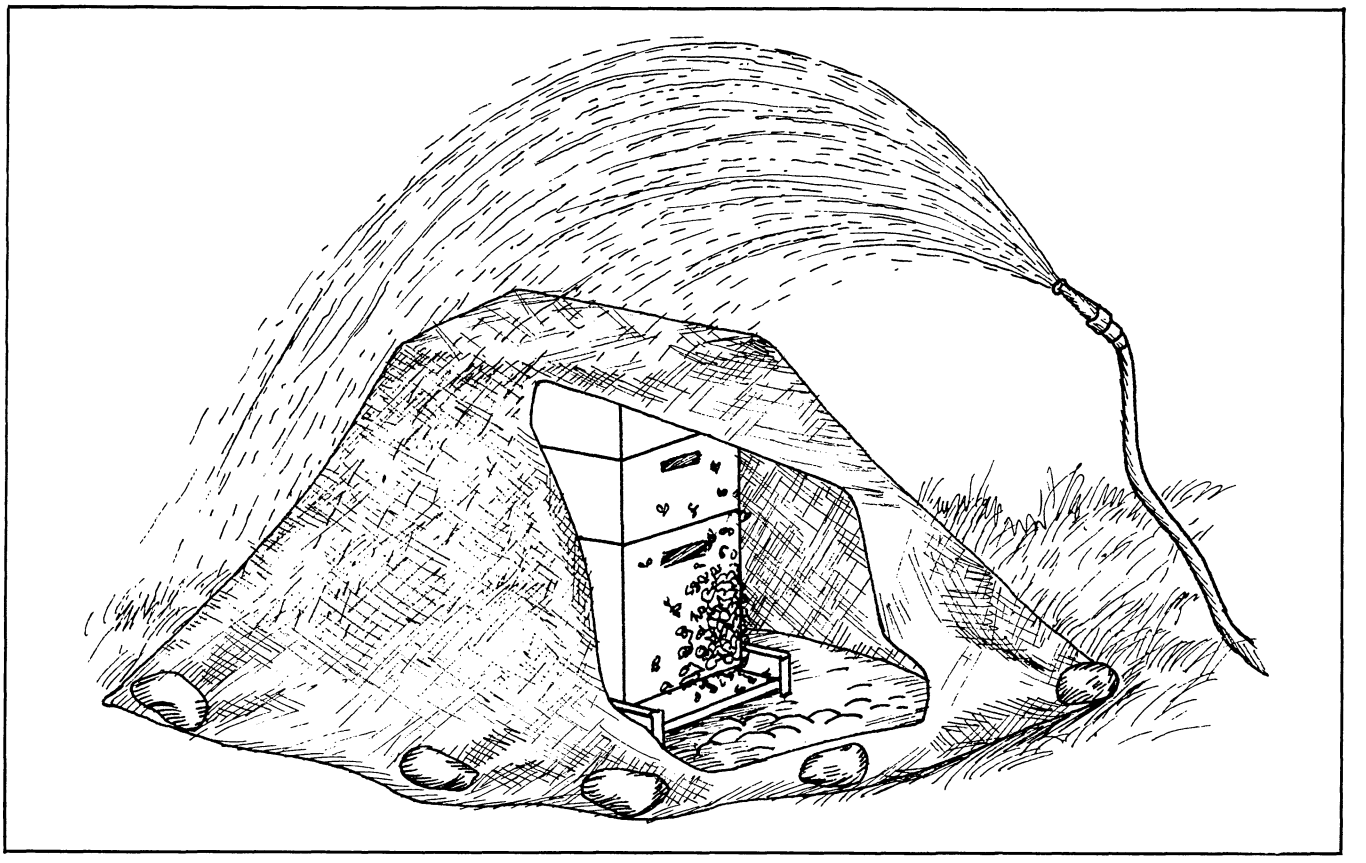

Figure 3: Cover colonies with burlap or coarse cloth and keep cover soaked. A tent-like arrangement allows the bees to cluster outside the hive but inside the tent. Repeated waterings with sprinkler prevents bees from becomming overheated.

Malathion for insect control: The use of malathion for mosquito and other insect control has sometimes resulted in many dead or weakened bee colonies. Losses usually have resulted from:

1. Daytime air applications of ULV malathion at times when large numbers of bees are flying.
2. Failure to provide adequate warning to beekeepers.
3. Failure to follow a publicized spray schedule.

Although substantial amounts of malathion have been and are being used around the United States, if applied and publicized properly, few honey bees are usually affected.

Carbaryl (Sevin®) for insect control: Often Sevin® does not kill field bees immediately, but allows them time to take contaminated nectar and pollen back to the colony. Some crops treated with Sevin® under the wrong conditions (i.e., in bloom using a dust formulation with large numbers of bees in the field) have been responsible for disastrous kills.

Sevin® is one of the nation's most widely used insecticides for a wide variety of insect pests. It is also one of the most toxic to honey bees in certain formulations. There are formulations, however, which are determined to be less toxic (see tables). Usually, applicator-beekeeper communication can effectively be used to adequately protect bees from Sevin® poisoning.

Encapsulated methyl parathion (PennCap M®): By far the most potentially damaging pesticides for honey bees are those packaged in tiny capsules (microencapsulated). Microencapsulated methyl parathion (PennCap M®), for example, is a liquid formulation containing capsules approximately the size of pollen grains which contain the active ingredient. When bees are out in the field, these capsules can become attached electrostatically to the pollen-collecting hairs of the insects and at times are collected by design. When stored in pollen, the slow-release feature of the capsules allows the methyl parathion to be a potential killer for several months.

At the present time, there is no way to detect whether bees are indeed posioned by microencapsulated methyl parathion, so a beekeeper potentially could lose replacement bees for those already poisoned by the pesticide. It is, therefore, strongly recommended that this formulation be used only when honey bee exposure is not a possibility.