

## **Guidelines on the prevention and control of biting midges**

### **Biology and Characteristics of Biting Midges**

Biting midges are tiny and dark-coloured flies belonging to the family Ceratopogonidae. They cause nuisance to human beings in both rural and urban areas. Only females bite but they rarely do it indoors. Since they have short mouthparts, they cannot bite through clothing and so exposed body parts are more often attacked. Examples of local species of biting midges attack humans are *Culicoides circumscriptus* and *Lasiohelea taiwana*.

Biting midges rest in dense vegetation and sometimes shady places. They fly in zigzag patterns and usually no more than 100 meters from their breeding grounds; however, dispersal by wind is possible. Nevertheless, wind over 5.6 kilometers/hour and temperatures below 10°C inhibit flying. In fact, they are so fragile that cool and dry weather will shorten their life. Larvae are aquatic or semi-aquatic, and are usually found in damp places or in mud.

### **Hazards Caused by Biting Midges**

Irritation and discomfort caused by their bites can last for days, or even weeks. Scratching aggravates the pruritus and may lead to bacterial infection and slow-healing sores. However, biting midges are not considered important vectors of human diseases.

### **Control and Prevention of Biting Midges**

Breeding places for biting midges can be extensive, unobvious and indiscernible. Complete disinfestation of larvae is difficult. Reduction of breeding could be achieved by:

- keeping the moisture content of soil surface low by techniques like plough or draining.
- removing refuse, fallen leaves and other decaying vegetation on slopes or on the flower beds as well as choking matters (e.g. muddy soil) in sand-traps/surface drainage channels.
- trimming, on a regular basis, densely grown vegetation to increase the exposure of soil surface to sunlight and air.
- applying insecticide if necessary.

For temporary control, adult midges can be controlled by fogging of knockdown

insecticide directly to their resting places.

The nuisance caused by the insect could be reduced by installation of insect traps at appropriate sites to protect the venues from invasion by the insect.

Pest control company could be appointed to provide insect control services if necessary.

Personal protection measures against biting midges include installation of screens (mesh size <0.75 mm), wearing long-sleeved clothing and applying insect repellents according to label instructions.

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