

Weevils

Biology

There are many different species of weevils (Curculionidae) all over the world, they count among the major plant pests. Special features are the head with a snout and mouthparts. On orchids, especially Phalaenopsis, one species of weevil is of major importance. Black vine weevil (*Otiorhynchus sulcatus* Fabr.): The beetle is about 9-12 mm long, black in colour with a brownish, metallic and hairy upper top. The snout is relatively short, thick and sulcate in the middle. The beetles are unable to fly, they lay their eggs in substrates. The white, footless maggots live in the ground or in substrates. They are about 12 mm long, characteristic is the reddish brown head capsule. The maggots are not often found in orchid substrates, however, accidental importation in humus or peaty products may occur. The beetles sometimes migrate into greenhouses and stay there all year.

Damage

Typical symptoms of damage done by black vine weevils are curved feeding traces on leaves or blossoms, the buds might be eaten. Maggots eat underground plant parts and as a consequence of this, the plant dies. However, maggots are rarely found in orchid substrates.

Control

Accidental importation of maggots in substrates must be avoided. When initial damage is visible, contact insecticides can be sprayed to kill the adult beetle.

Biological plant protection

Insect pathogenic nematodes (*Steinernema carpocapsae*, *Heterorhabditis bacteriophora*) in the water can be used to control the maggots. The plants are watered with the water containing the nematodes which are about 1 mm long and they penetrate the maggots in the ground. Once they are in the maggots, they release a bacterium that kills them. However, as the nematodes are only effective until they reach the 3rd larvae stage, repeated treatments have to be considered. To control this pest, biological pest control measures are far more effective than chemical methods.

Animal pests

Weevils



Black vine weevil (Otiorhynchus sulcatus)

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