

Oribatids

Biology

Usually dark coloured, shining globose mites. Skin markedly chitinised, hard or leathery. They live on the ground and eat moss, algae, fungal threads or dead plant parts, they are often found in bark substrates. In general, they do not count among the pests. They usually get into the glasshouses in bark substrates and in some cases their dense population may exceed the damage threshold.

Damage

Damage usually only on young leaves of Phalaenopsis plants. The infestation mainly depends on the species. Deformation of younger leaves with slight leaf edge necroses are formed. When the plants grow, the damaged areas restrict the growth and the developing leaves are markedly curved. The young soft leaves of Phalaenopsis seem to be supplementary food for oribatids. Small spots of necroses and slight deformation is found on blossoms. Monitoring should normally be done in the morning and/or after watering because this is when most of the animals are on the plants.

Control

Accidental importation is done in substrates. Careful initial control prevents damage. Reduce high air humidity when mites occur. Spraying with chemical products has to be carried out repeatedly.

Biological plant protection

The use of predatory mites (*Hypoaspis miles*, *H. aculeifer*) is a good plant protective method. These beneficial mites are very polyphagous and live on other ground mites, Collembolen (springtails) and many different maggots. They also eat the maggots of the wood mites. When used regularly and prophylactically on orchids, *Hypoaspis* can help to reduce many potential pests and to stop them from building a population. However, *Hypoaspis* are only suitable for direct control to a certain extent, i.e. large amounts of them would have to be spread. Predatory mites are especially efficient when orchid substrates mixed with Sphagnum are available. The living conditions in such substrates seem to literally animate *Hypoaspis* to multiply. In these conditions, predatory mites will multiply quickly in the greenhouse and even after a few months, there will still be enough of them in the stands. As predatory mites have a considerable and varied bait spectrum in the upper ground layer, they can live in the greenhouses for a long time and be active up to six months with a high population density. The following strategy can be used when problems with oribatids occur on orchids: at first repeated chemical treatment with integratable insecticides. Subsequent use of *Hypoaspis* predatory mites 2-3 times a year (150-250 animals/m²) to prevent new populations to grow.

Animal pests

Oribatids



Phalaenopsis: damages caused by moss mites



Phalaenopsis: damages caused by moss mites



Phalaenopsis: damages caused by moss mites

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