

Pest control system for greenhouse vegetable crops – Seedling production

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Seedling Production

Pest – Damping-off of seedlings *Rhizoctonia solani, Pythium de Baryanum etc.*

Damage

Watery spots appear on the stems at the base of the plants. The spots rapidly encircle the stem like a ring and it softens, rots and the plant falls over as if cut.

Control

Raising seedlings in a sterile substrate at an optimal seed sowing density, maintaining optimal temperature (18-22°C) and soil moisture, regular ventilation and irrigation only with tempered water.

Pest – Dry damping-off of seedlings

Damage

In the area of the root collar and slightly above it, the stem becomes thinner and the plant falls over. The damaged area is dry, in contrast to the damage caused by true damping-off.

Control

The difference between soil and air temperature should not exceed 6-8°C. Frequent irrigations with smaller amounts of water should be carried out, as well as regular ventilation of the seedling compartments.

Pest – Early blight (brown leaf spots) *Alternaria solani*

Damage

Small watery spots appear on the lowest leaves, which rapidly enlarge, acquire the concentric structure characteristic of the disease and, at higher humidity, become covered with a dark coating of the fungal sporulation.

Control

The pathogen attacks plants at high air humidity and is not demanding in terms of temperature. A good air and water regime should be ensured, avoiding excessive waterlogging. When infection is established, two to three treatments should be carried out with registered plant protection products.

Pest – Grey mould *Botrytis cinerea*

Damage

The disease develops rapidly in dense stands, at increased air humidity or on heavily moistened plants. A grey mouldy coating develops on the affected parts.

Control

A good air and water regime must be strictly maintained. At the appearance of symptoms and favourable conditions for disease development, treatment should be carried out with registered plant protection products.

Pest – Root-knot nematodes class *Nematoda*

Damage

Swellings and deformations, called galls, form on the bark of the roots of the plants, which hinder the uptake of water and mineral salts. In cases of severe infestation, delayed plant development, yellowing of the leaves and wilting are observed.

Control

A soil analysis should be carried out on the areas intended for seedling and vegetable production.

The areas intended for seedling production and the working equipment should be disinfected with appropriate products. Systematic treatment with nematicides is justified only in the plots for seedling production.

Pest – Mole cricket *Gryllotalpa gryllotalpa*

Damage

It overwinters as an adult insect and larva in the soil, mainly in places with decaying organic matter. It feeds on the underground parts of plants, gnawing the root system and eating the young sprouts. The damaged plants dry out.

Control

Due to its hidden way of life, the control of this pest is difficult. Soil cultivation helps to destroy the tunnels and nests of the mole cricket, as well as to destroy its various developmental stages.

The use of registered ready-made baits is the most convenient and easily applicable method.

Pest – Slugs fam. *Limacidae*, fam. *Ariomidae*.

Damage

Slugs are highly polyphagous pests. They prefer plant food and damage young plants in seedbeds and early vegetables. They are particularly dangerous when plants are grown under conditions of high humidity.

During feeding and moving on plants and soil, slugs leave a trail of silvery-white slimy material, which is indicative of their presence.

Control

Weed destruction and regular soil cultivation. In small areas, piles of moist newspapers may be placed and the pests hidden in them destroyed. Burying containers filled with bran soaked in beer between the plants, which are checked every morning and the catch destroyed. Dusting with wood ash. Dusting the paths with quicklime or potassium nitrate. Scattering baits made from solid fuel and bran. Use of registered molluscicides.