

# Diseases and pests in rapeseed in autumn

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## Pests

When pests reach a certain density in rapeseed in the autumn, they can cause significant economic losses. In order to preserve to the greatest extent possible the integrity of the leaf mass of the plants and ensure their successful overwintering, it is necessary to carry out an autumn treatment of rapeseed with insecticides. Seeds treated with insecticides should be sown and crops should be regularly monitored to determine pest density.

### Turnip sawfly – *Athalia rosae*

#### Damage

Young false caterpillars feed on the underside of the leaves, gnawing them in the form of small pits. As they grow, they chew holes in the leaf blades, which gradually enlarge, cause peripheral feeding, and at a later stage destroy the entire leaf blade, leaving only the main veins.

### *Development*

In the autumn, a third generation of the turnip sawfly develops. Adult sawflies fly until the end of October and lay their eggs on the cotyledons and the first true leaves. After completing their development, the false caterpillars burrow into the soil and remain there to overwinter.

### **Control**

Control of the turnip sawfly is carried out at an economic threshold of 2–3 larvae/m<sup>2</sup> or 2–3 damaged plants/m<sup>2</sup>.

### **Cabbage stem flea beetle – *Psylliodes chrysocephala***

### *Damage*

From the end of September, adults of the flea beetle begin to feed intensively and lay eggs until mid-December. The hatched larvae bore into the epidermis of the stems and later into the petioles and midribs of the leaves. Part of the larvae hatch in the spring.

### *Development*

The pest is widespread and at high density causes enormous damage. It develops one generation per year and overwinters as egg, larva and adult insect. A similar species to the cabbage stem flea beetle is the small cabbage stem flea beetle. Other harmful flea beetle species on rapeseed are the *black, light-legged, wavy-striped, flax, hemp and other species of ground flea beetles*.

### **Control**

Control of the pest is carried out at the following damage thresholds: 2 adults/m<sup>2</sup> at emergence; 4 adults/m<sup>2</sup> after appearance of the 3rd leaf; 3–5 larvae per plant.

### **Rapeseed leaf beetle – *Entomoscelis adonidis***

### *Damage*

The beetles attack early-sown rapeseed and feed on the leaves.

At high density they can thin the stand.

They feed on the leaf mass of rapeseed, destroying it completely and leaving only the veins.

### *Development*

The pest is widespread and at high density causes enormous damage to the crop. The larvae are harmful in a long and warm autumn with little rainfall.

### **Control**

Chemical control against the rapeseed leaf beetle is justified at a damage threshold of 2–3 beetles/m<sup>2</sup> at rapeseed emergence.

## **Turnip gall weevil – *Ceuthorrhynchus picitarsis***

### *Damage*

The larvae of the pest make galleries in the petioles of the leaves, after which they move into the stem. In weak plants with thin and short petioles, they reach the central part of the stem and bore into the vegetative apex already in the autumn. The plants die or do not form central stems, but only lateral ones.

### **Control**

Chemical control should be carried out at a density of 2–4 beetles/m<sup>2</sup>.

## **Diseases**

### **Phoma stem canker (Phoma) – *Leptosphaeria maculans* - fungus**

### *Symptoms*

It appears in the period from plant emergence to growth stage “6th leaf”.

On the lowest leaves irregular, rounded, grey-greenish spots are formed, with small black dots on them (pycnidia of the causal agent). The spots gradually become necrotic and cover the petioles and the stem.

Infection of the stem occurs directly at or above soil level. Phoma also attacks the root neck, with the appearance of dark spots that lead to drying out and death of the plants.

### *Life cycle*

The causal agent is preserved in plant residues and partly in rapeseed. Development of Phoma stem canker is favoured by rainy and humid weather and an optimal daytime temperature of 22–24 degrees. The disease develops in patches in the crop and under favourable conditions very quickly covers the entire field.

### **Control**

To control the disease, balanced fertilization should be applied and pest control in rapeseed should be carried out, since their damage serves as an entry point for infection. Fungicides should be applied in the autumn, which will significantly reduce the frequency and severity of infection, as well as the risk of plant winterkill.