

Brown leaf spots *Alternaria solani*

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The disease attacks tomatoes grown in protected cultivation facilities and in the open field. It affects all parts of the plant. Small, rapidly enlarging dark brown spots with a concentric structure are formed on the leaves, reaching a size of 1–1.5 cm. On the leaves, the formation of spots usually starts from the periphery and is often accompanied by the appearance of a yellow halo. The spots formed on the stems, leaf and fruit petioles are larger, also with a concentric structure. They enlarge rapidly, encompass the entire stem or petiole, and the vegetative part above them dries out. On the fruits, the spots are usually located around the fruit stalk, with a less pronounced concentric pattern.

The causal agent of the disease is the *fungus Alternaria solani*, which attacks a wide range of hosts belonging to the family Solanaceae. The pathogen overwinters on plant residues, where it develops

saprophytically and produces numerous conidia, which cause infections during the growing season. A favourable condition for its development is high relative air humidity and the presence of water droplets on the plant surface, which are necessary for the release of spores and their germination. Under moist conditions the spots become covered with a dark sporulating growth. The disease can also be transmitted by seeds.

Control

To obtain healthy plants, it is important to use treated (disinfected) seeds. In this way, damage to the youngest plants will be avoided.

Another important condition is that tomatoes should be grown in a crop rotation that does not include other hosts of the pathogen.

In protected cultivation facilities there should always be a good air and water regime, and excessive overwatering must be strictly avoided.

Under conditions favourable to the development of the disease, appropriate plant protection treatments must be carried out. Against early blight (brown leaf spots), the following can be used: Bordeaux mixture – 1%; Ridomil Gold MZ 68 WG (grace period for sale and distribution until 04.01.2022) – 0.25%; Score – 0.075%; Dithane M-45 – 200 g/da (grace period for sale and distribution until 04.01.2022); Polyram DF – 0.2%; Avtar 75 NT – 200 g/da (grace period for sale and distribution until 04.01.2022); Acrobat Plus WG – 200 g/da (grace period for sale and distribution until 04.01.2022);