

What is special about pear scab (*Venturia pirina*)?

Problem

Pear scab is the primary fungal disease in organic pear production affecting fruit quality and leading to significant yield losses. Contrary to apple, pear scab can also infect young shoots. From early spring conidia are spread from the scab lesions.

Solution

There are effective preventive measures to reduce the risk of pear scab infection, including promoting leaf decomposition, pruning, site and variety selection, and balanced fertilisation. Plant protection products are used for direct scab control from green tip in spring and during the growing season.

Benefits

The right knowledge and strategy will benefit growers specialised in pear, a minor crop compared to apple.

Practical recommendation

Although ascospores and conidia (twig scab) can be in the orchard, it is essential to reduce the amount of ascospores in spring. There is no specific decision support model for pear scab.

Preventive measures to reduce inoculum and the risk of infection (ascospores)

- Stimulate leaf decomposition using vinasse in autumn at leaf fall
- Reduce the amount of fallen leaves in autumn and winter by machinery for shredding or removing leaves
- Avoid overwintering leaves in neighbouring land, hedges or bushes
- Prune away shoots with twig-scab in winter

Preventive measures to reduce the risk of spore germination

- Proper pruning for an open and fast-drying tree, to prevent too long leaf wetness
- Avoid too much growth by root or stem pruning
- Proper fertilisation
- Choice of varieties. There is no resistance gene known for pear scab. Varieties with a low incidence of scab are Xenia, and Concorde. Varieties susceptible to scab are, for example Conference and Williams
- Use models to predict infections
- No overhead irrigation but drip irrigation

Direct control

- Before rain (preventive), during rain (stop-spray) or after rain (curative)
- Plant protection products: copper, sulphur, lime sulphur and bicarbonates (when allowed)

Applicability box

Theme

Crop production, Temperate fruits, Crop protection

Keywords

Diseases, Pear scab, Preventive measures, Direct control

Context

Europe

Application time

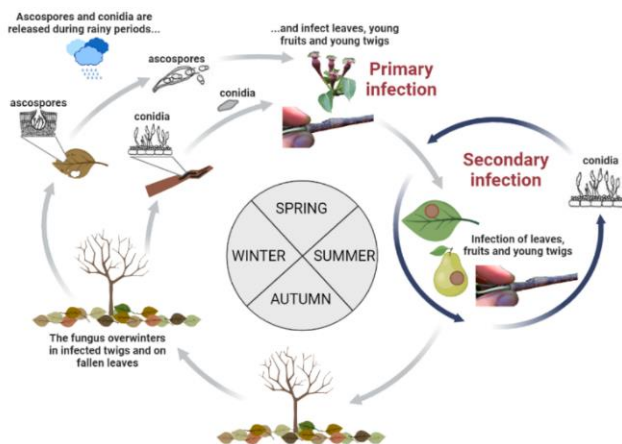
From green tip in spring during the growing season, in fall and winter

Period of impact

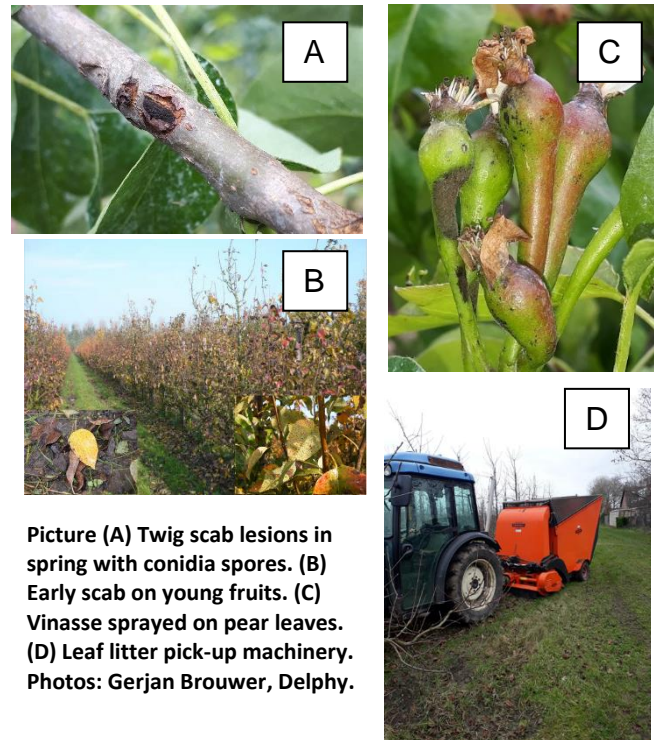
During the whole growing season and lifetime orchard

Equipment

Root pruning equipment, vinasse, machinery for shredding or removing leaves, weather station and models



Picture 1: Life cycle pear scab. Adapted from Gauthier, Nicole, 2018, Apple scab. *The Plant Health Instructor*. DOI: 10.1094/PHI-I-2000-1005-01



Picture (A) Twig scab lesions in spring with conidia spores. (B) Early scab on young fruits. (C) Vinasse sprayed on pear leaves. (D) Leaf litter pick-up machinery. Photos: Gerjan Brouwer, Delphy.

Further information

Further reading

- Timmermans, B.G.H. and Jansonius, P.J. 2014 Influence of infection parameters on pear scab dynamics in organic orchards in The Netherlands
- Timmermans, B.G.H. and Jansonius, P.J. 2012 Differences in leaf litter, ascospore production and infection of pear scab (*Venturia pirina*) in Dutch organic orchards

Weblinks

- Check the Organic Farm Knowledge platform for more practical recommendations.
- Mora Vargas, A., Kelderer, M. 2022. Practice abstract Apple scab: control strategy for organic pome production. Laimburg. BIOFRUITNET. (EN, DE, IT)
- Adolphi, C., Oeser, N. 2022. Practice abstract Apple scab: preventive measures in organic pome fruit production. FÖKO. BIOFRUITNET. (EN, DE)

About this practice abstract

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