

# Apple scab (*Venturia inaequalis*): Preventive measures in organic pome fruit production

## Problem

Apple scab (*V. inaequalis*) is the main fungal disease in organic pome production. It affects apple quality and leads to significant yield losses.

## Solution

There are effective preventive measures to reduce the risk of apple scab infection, including promoting leaf decomposition, pruning, site and variety selection, and balanced fertilization.

## Benefits

Applying a combination of preventive, protective and curative measures during the ascospores phase in spring efficiently decreases the risk of infection.

## Practical recommendations

### Preventive measures to avoid risk of infection:

- **Varieties:** Use scab-resistant/tolerant apple varieties, such as e.g. *Story/Inored*, *Topaz*, *Opal*, *Ladina*, or *Santana*<sup>1,2</sup>
- **Good plant aeration/site selection:** Apple scab depends on leaf moisture for successful infection. Therefore, it is important to allow quick drying of the plants with well-lit and air-permeable canopies and planting systems. To do so:
  - Align rows towards the main wind direction;
  - Space plants widely;
  - Prune trees and roots to achieve steady growth and a loose canopy.

### Preventive measures to reduce inoculum and reduce the risk of infection:

Promotion of foliage decomposition in autumn/spring reduces the ascospores potential for the upcoming season. You can promote this via:

- Mechanical shredding of infected plant parts (fallen leaves) by tillage;
- Use of Vinasse in autumn at leaf fall (single application);
- Use a leaf vacuum cleaner to actively remove infested leaves (Picture 1) from the tree strips within the orchards (Picture 2).

## Applicability box

### Theme

Crop production, Horticulture, Temperate Fruits

### Keywords

Biological disease control, plant protection, apples, apple scab

### Context

Temperate regions, can be applied wherever apple scab is an issue

### Application time

Throughout all year

### Period of impact

Up to one year

### Equipment

Vinasse (Status of approval for organic production must be checked in respective country)

Leaf vacuum cleaner (if applicable; temporary rental can be considered)



Picture 1: Scab infection on apple leaf (Photo: C. Adolphi, June 2019)



Picture 2: Leaf vacuum cleaner (Company PERFECT) used to remove fallen leaves from the tree strips in autumn (Photo: B. Benduhn, February 2014)

## Further information

### Video

- [“Perfect” Mow Load Combination MLC-150](#) (Van Wamel BV)

### Weblinks

1. Oeser, N. 2022. Practices abstract [Apple scab: Robust cultivars for Central Europe](#). FÖKO, BIOFRUITNET.
  2. Lindhard-Pedersen, H. and Bojesen, M. 2022. Practice abstract [Apple scab: Robust cultivars for Northern Europe](#). Hortiadvise, BIOFRUITNET.
- Fliessbach, A., Schmidt, C., Bruns, C., Palmer, M., Nietlispach, B., Leifert, C., Tamm L. 2007. [Soil biological quality in short- and long-term field trials with conventional and organic fertility input types](#). University of Hohenheim, Germany.

## About this practice abstract

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