

# Apple scab (*Venturia inaequalis*): Robust cultivars for Central Europe

## Problem

Apple scab (*V. inaequalis*) is the main disease in organic apple production. Availability of varieties is a major problem as only a few robust varieties are available on the market.

## Solution

We propose a list of currently well-known robust varieties that are suitable for large scale production. Current breeding of new cultivars is crucial for the future of organic growing, stay tuned.

## Benefits

Using robust cultivars reduces the need for external and high cost inputs, reduces the workload on farmers (less applications are needed) and enhances the sustainability of the fruit production.

## Practical recommendations

- The choice of scab resistant/tolerant varieties depends on the climatic and site related conditions as well as the farm-specific marketing requirements. Discuss with farmer colleagues and the regional or national consulting services for organic fruit growing about the best scab resistant/tolerant varieties in your area.
- Check the FiBL list of varieties for organic cultivation for an overview on available cultivars and some of their production characteristics in the link section.
- The most common scab-tolerant cultivars in central Europe are:  
*Story/Inored, Topaz, Opal, Ladina, Santana, Antonovka and Idared.*
- Resistant varieties do not overcome apple scab completely. Treatments with plant protection products are still needed but choosing the right variety significantly reduces dependency on external inputs. (Figure 1)

## Applicability box

### Theme

Crop production, Horticulture, Temperate Fruits

### Keywords

Plant protection, apple, apple scab

### Context

Central Europe

### Application time

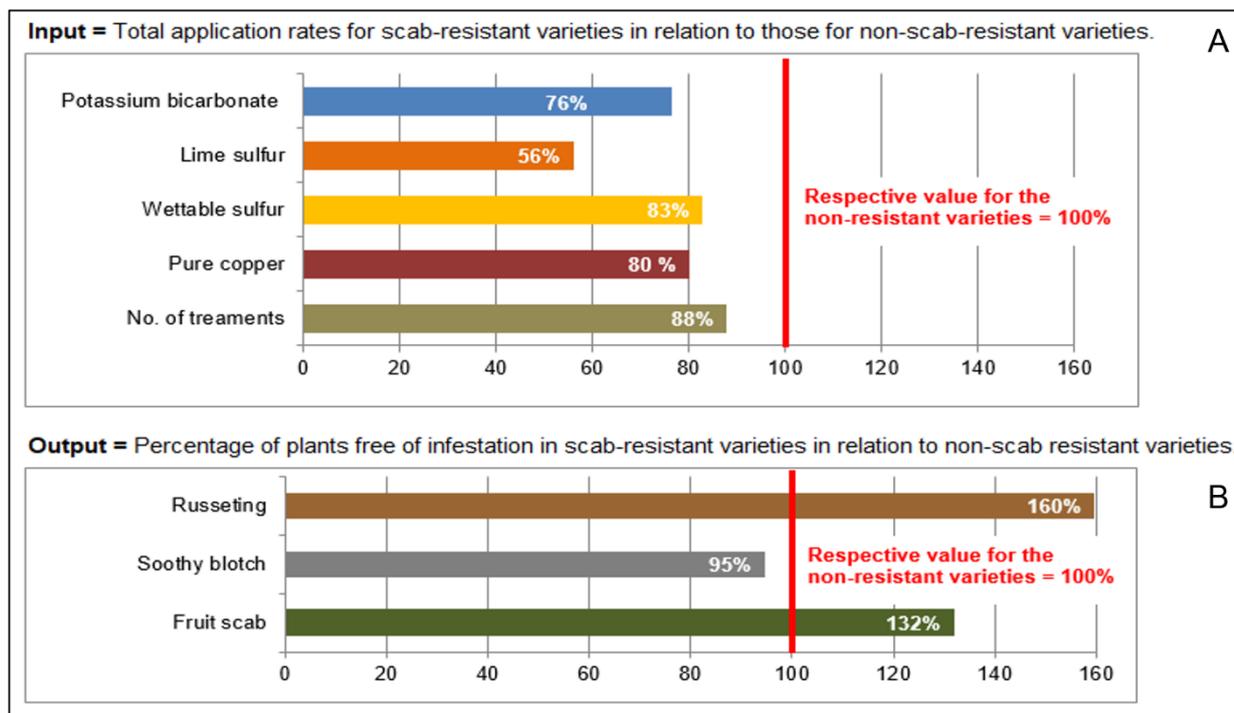
During planting season (Nov-Apr) and any time planning is possible

### Period of impact

5 years until new orchards comes into full yield

### Best in

Organic farms



**Figure 1: Plant protection products application rates and percentage of plants free of infestation in scab-resistant varieties compared to non-scab resistant varieties. The data shows farms with both resistant and non-resistant varieties in Germany in 2018. Means=30 out of 34 farms evaluated (see links below).**

A. Ratio of plant protection products sprayed in scab resistant and non-scab resistant varieties (Input). The input of pure copper for the scab-resistant varieties in 2018 decreased to about 80% of the application rate used for the non-resistant varieties. A similar reduction is shown for sulphur. Complete elimination of direct regulatory measures was not possible with the scab-resistant varieties. However, the input of fungicides is significantly reduced, and, relatively, the number of sprays was little reduced.

B. Percentage of infestation-free (infested fruit < 5%) plants in scab resistant and non-scab resistant varieties (Output). Fruit scab infestation in resistant varieties is reduced about 1/3 when compared to non-resistant varieties. A significant reduction of infestation is shown also for Russeting while no significant changes were recorded for Sooty blotch.

### Further information

#### Weblinks

- [Varieties recommended for organic fruit growing in the FiBL shop](#) (in German and French).
- Article on [keeping plants healthy in organic apple production](#) from FÖKO (in German).
- Check the [Organic Farm Knowledge platform](#) for more practical recommendations.

### About this practice abstract

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