



Redefining Pest Management - a Holistic Approach

Practice Abstract N° 19

BMPs for Apple Scab control

Apple scab, caused by the fungus *Venturia inaequalis*, is a major disease in world-wide apple production. Apple growing environments usually characterized by cool and rainy summers, favor this disease, which requires intense chemical control measures. The disease affects leaves, buds, flowers and fruits and sometimes twigs. Symptoms include twisted and puckered leaves that have black, circular scabby spots on the underside. On the upper surface the spots look velvety and have an olive-green, sooty appearance. As the disease progresses, the leaves get yellow and drop. The fruit develops scabby spots that are tan and sunken.

OPTIMA project developed best management practices for controlling this disease, after investigating the efficacy of novel plant protection products. The control strategy is based on the use of a mixing route including bio-PPPs /PRIs (Laminarin, potassium bicarbonate) alternated with the new generation PPPs fluxapyroxad and then dithianon with a normal dose. It is recommended to avoid using lower of the recommended dose of synthetic PPPs to prevent the development of *Venturia inaequalis* fungicide resistant isolates and the curative use of bio-PPPs/PRIs under high disease pressure. In organic farming it is recommended to combine multiple doses of the bio-PPPs/PRIs laminarin and potassium bicarbonate and resistant varieties where available.



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