

DSS VirtualFarm

Recognising the enormous difficulties in empirically finding the locally optimal combination and timing of IPM treatments, the FF-IPM project developed VirtualFarm Toolbox. The VirtualFarm Decision Support and Service Toolbox is a specialized software for designing locally adapted and optimized IPM strategies and farm specific IPM scenarios. It emulates a local Pest-Terrain-Weather-IPM system and enables the simulation of complex pest management scenarios and adapting them to the local conditions BEFORE empirically testing and implementing them on the farm.

The development of novel IPM solutions adapted to the local conditions can be carried out at acceptable risk, cost and time. It is expected that consistent implementation of the developed IPM scenarios will bring satisfactory or optimal results in most growing seasons, with significantly reduced or even no use of pesticides. Only occasionally, as with calendar-based blanket pesticide spraying, the occurrence of unusual seasons can sometimes result in poorer IPM performance.

Due to the complexity of pest biology and target production systems, the VirtualFarm DSS has to be operated by an IPM expert who interprets the simulation results, formulates the optimal IPM strategy and provides advice.

Target stakeholders and end-users include IPM professionals, researchers, plant protection extension staff, managers of producer associations and individual medium- and small-scale fruit growers.