



Aggressiveness of eight *Venturia inaequalis* isolates virulent or avirulent to the major resistance gene Rvi6 on a non-Rvi6 apple cultivar

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| Résumé en anglais | <p>For sustainable management of scab-resistant apple cultivars, it is necessary to understand the role of aggressiveness in the adaptation of <i>Venturia inaequalis</i> populations and particularly the costs to the organism of acquiring additional virulence. The aims of the present study were (i) to identify the quantitative variables that are most important in determining the differences in aggressiveness among groups of <i>V. inaequalis</i> isolates, and (ii) to ascertain whether virulent and avirulent isolates of <i>V. inaequalis</i> differ significantly in aggressiveness. The aggressiveness of eight isolates that differed in their virulence to the major resistance gene Rvi6 was compared on the non-Rvi6 apple cv. Gala. Three components of aggressiveness, namely lesion density, the number of spores per square centimetre of leaf area, and the number of spores per lesion, were evaluated 21 days after inoculation, and the kinetics of lesion density over time were analysed in terms of maximum lesion density, length of latent period and rate of lesion appearance. On the second youngest but fully developed leaf at the time of inoculation, maximum lesion density in the virulent group was 20% lower and the latent period 7% longer, than in the avirulent group. However, the alternative hypothesis, namely that isolates had adapted to quantitative resistance present in cv. Gala depending on their cultivar of origin, could not be rejected. The analysis of the kinetics of lesion density by a non-linear mixed-effect model proved useful in the assessment of aggressiveness.</p> |

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