

Sclerotinia attacks risk assessment on oilseed rape crops at field level

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Sclerotinia (*S. sclerotiorum*) is a fungi which attacks many field crops species. Among them, oilseed rape receives a preventive fungicide spray every season. The objective of the work is to design and evaluate a simple tool which could help farmers to assess the risk of sclerotinia stem rot on their crops. This tool, as a paper grid, allows to assess a level of risk depending on 4 types of factors which influence sclerotinia disease development: the field history (presence of sensitive crops in past and previous attacks), oilseed rape crop cover status during spring (crop density), weather before and during flowering (rainfall, temperature), and the effective presence of the fungi at the beginning of rapeseed flowering (quantities of apothecia, rate of contaminated flowers petals). The risk level calculated on the basis of these information can be used to determine if a fungicide spray against sclerotinia stem rot is needed or not. The performances of the risk assessment grid have been evaluated on a 3 years field network, of a hundred fields as a whole. The risk level obtained through the grid is compared to the petals contamination level at the beginning of flowering (evaluated by the Petal test) and to the observed final rate of attack. The results show that the grid is quite efficient to assess the high-risk situations, but overestimates the risk level in some cases. As a conclusion, the grid in its present order could help the farmers to take their decisions for fungicide sprays against stem rot. Several improvements are suggested, specially concerning a more precise evaluation of the risk related to sclerotia presence in soil (information which is potentially available at sowing time) and the potential part of agro-climatic models.