SHOULD WE BE CONCERNED ABOUT THE POSSIBLE DEVELOPMENT OF RESISTANCE TO BIOLOGICAL CONTROL AMONG PLANT PATHOGENS?

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The development of resistance to chemical pesticides in plant pathogens or pests has long been documented. In contrast, biological control has often been considered to hold a better potential for durability. However, over the years a few cases have been reported of pests becoming less susceptible or resistant to microbial biocontrol agents such as Bacillus thuringiensis and the Cydia pomonella granulovirus. The durability of biological control of plant diseases has hardly been studied and there are no published scientific reports on the loss of efficiency of biocontrol agents against plant pathogens in practice. The present talk will review risk factors that could foster the selection of strains with reduced susceptibility to biocontrol agents. On the basis of recently published studies, it will also address possible links between this risk and the modes of action of biocontrol agents. Implications for the design of screening strategies for new biocontrol agents will be discussed.