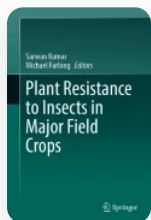


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Unraveling the Coevolutionary Arms Race: Insights into the Dynamic Interplay of Plants, Insects and Associated Organisms

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[Plant Resistance to Insects in Major Field Crops](#)

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Abstract

Insect–plant interactions are complex and dynamic relationships that have evolved over millions of years. Plants have developed various adaptations to deter insect herbivores, including physical, chemical, and induced defences. In response, insects have evolved detoxification mechanisms, behavioural adaptations, and physiological adaptations to overcome these defences. This coevolutionary arms race has shaped the interactions between plants and insects, leading to a diverse array of strategies and counter-strategies. Additionally, other associated organisms such as endosymbionts and rhizosphere microbes have been shown to play a critical role in these interactions.