



### ***Schizaphis graminum* and *Rhopalosiphum maydis* control in maize by RNAi**

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Infestation of insect pests on crops can cause great losses of the potential production. Many technologies have been presented to combat these insects ranging from biological control, chemical insecticides to production of transgenic plants. Over the past decades, we have witnessed development of genetic engineering Bt crops. However, reduced efficacy of Bt crops caused by field-evolved resistance has been reported in the last years. RNA interference (RNAi) is a biological process that occurs in all eukaryotic cells that enables gene silencing at post-transcriptional level by turning down, or suppressing the activity of specific genes. Recently, researches have shown great potential for its use in pest control. dsRNA directed against suitable insect target genes in plants has been shown to give protection against pest, and opening the way for a new generation of insect-resistant crops. Latest studies have shown that dsRNA fed as a diet component can be effective in down regulating targeted gene. In this study a diet for aphids (*Schizaphis graminum* and *Rhopalosiphum maydis*) and candidate genes have been tested to improve results with dsRNAs. The dsRNA delivery was performed by feeding assays with different time exposure and concentrations of dsRNA of GFP and the target genes. The suppression of the target genes was determined by qPCR using a pair of primer flanking the dsRNA region. Aphid pest controlled by RNAi will be an important tool to crop management.

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