

Gene silencing could control disease, contamination in wheat and other crops

Fusarium graminearum is a major fungal pathogen of cereals worldwide, causing seedling, stem base and floral diseases, including Fusarium Head Blight (FHB). In addition to yield and quality losses, FHB contaminates cereal grain with mycotoxins, including deoxynivalenol (DON), which are harmful to human, animal and ecosystem health. Currently, FHB control is only partially effective due to several intractable problems.

RNA interference (RNAi) is a natural mechanism that regulates gene expression. RNAi has been exploited in the development of new genomic tools, which allow the targeted silencing of genes of interest in many eukaryotes. Host-Induced Gene Silencing (HIGS) is a transgenic technology used to silence fungal genes in planta during attempted infection and thereby to reduce disease levels.

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An alternative non-transgenic RNAi approach is spray-induced gene silencing (SIGS)....

The use of both SIGS and HIGS on a commercial scale appears possible in the near future. Similar HIGS-based approaches developed to control FHB in wheat may be developed and assessed for their efficacy to control other *Fusarium* incited diseases of other important crops, e.g. banana, tomato, lettuce and oil palm, or to control other problematic fungal diseases of wheat....

The GLP aggregated and excerpted this article to reflect the diversity of news, opinion and analysis. Read full, original post: [RNAi as an emerging approach to control Fusarium Head Blight disease and mycotoxin contamination in cereals](#)