

RNA Interference Technology as a Veritable Tool for Crop Improvement and Breeding for Biotic Stress Resistance

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Abstract : The recent discovery of the phenomenon of RNA interference has led to its application in various aspects of plant improvement. Crops can be modified by engineering novel RNA interference pathways that create small RNA molecules to alter gene expression in crops or plant pests. RNA interference can generate new crop quality traits or provide protection against insects, nematodes and pathogens without introducing new proteins into food and feed products. This is an advantage in contrast with conventional procedures of gene transfer. RNA interference has been used to develop crop varieties resistant to diseases, pathogens and insects. Male sterility has been engineered in plants using RNA interference. Better quality crops have been developed through the application of RNA interference etc. The objective of this paper is to highlight the application of RNA interference in crop improvement and to project its potential future use to solve problems of agricultural production in relation to plant breeding.

Keywords : RNA interference, application, crop Improvement, agricultural production

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