

Harvest-Inducible genes and promoters in alfalfa

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The harvesting and storing of alfalfa is a routine practice in the agricultural industry worldwide. A study of the physiological and biochemical changes that occur after harvesting may help to understand how plants respond to this process. To investigate gene expression in harvested alfalfa (*Medicago sativa*), cDNA from non-harvested and harvested plants in the field was subjected to subtractive hybridization to identify, in particular, those genes that are induced by the harvesting treatment. Three different genes, named, hi7, hi11 and hi12, were isolated and analyzed. Northern blot analysis confirmed that hi7, hi11 and hi12 are strongly induced during a post-harvest incubation period. The promoters of these genes were isolated and characterized. Reporter gene driven by the promoter has been transformed into transgenic plants.

Biography

Jian Zhang is a Research Scientist with the Alberta Innovates-Technology Futures. Jian Graduated from Beijing University of Agriculture, Beijing in 1991 with BSc. He completed his MSc from Weizmann Institute of Science, Rehovot in 1996. In 2004, Jian obtained his PhD from University of Guelph, Guelph. After finished his studies, he joined Alberta Research Council, now part of Alberta Innovates-Technology Futures. Jian is AOCS member since 2005. He is current working with bioproducts innovations and his researches are focused in environmental genomics, biotechnology and flax nutrient/material application.

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