STUDY ON THE PHENOTYPIC ASSESSMENT OF CHANH TRUI TRANSGENIC GENE ENCODING TRANSCRIPTION FACTOR *MtOsDREB1A* INVOLVED IN DROUGHT TOLERANCE

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Summary

Gene encoding *DREB1A* transcription factors from other plants, including *Arabidopsis*, corn, canola, barley, rice, tomato and wheat have been cloned and many studies proved expression of DREB1A increasing drought tolerance in transgenic plants. In a previous study, *MtOsDREB1A* gene was isolated and inserted inplant expression vector under the control of the ubiquitin and Lip9 promoter and the OsDREB1A gene was successfully transformed into the Chanh Truy rice strain and analyzed Transmission allowed to identify 6 lines of homozygotes (5 và 6). In this study, Evaluation of growth and development of the results showed that the four lines of the transgenic gene were maintained to the T3 generation (L3 and L5, Lip9 structure: *OsDREB1A*, U1 and U4, Ubi structure: *OsDREB1A*) The phenotyping is similar to the control tree. In terms of drought tolerance after 3 weeks of stopping water supply, the rice lines have the ability to recover (surviving from 77.7 to 96.7%), granulating (the percentage of granules is 13.33 - 20%). Expression of results (sqRT-PCR and qRT-PCR) results also showed that OsDREB1A and some drought tolerant indicator genes (DIP, SALT) in transgenic plants were enhanced expression under drought conditions. The results of the study showed that enhancement of *OsDREB1A* expression correlated with enhanced expression of control genes and related drought tolerance of the transgenic lines.

Keywords: *Chanh Trui, MtOsDREB1A gen, quantitative RT-PCR, transcription factor.*