CHARACTERISTICS OF GMEXP1 GENE RELATED TO PROLONGATION OF ROOTS ISOLATED FROM SOME SONLA SOYBEAN CULTIVARS (GLYCINE MAX (L.) MERRILL)

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TÓM TẮT:

Expansin play an important role in expansion of cell wall at growing domain in soybean roots, that has been regarded as a major protein affecting the prolongation of root cells of soybean. Two functional regions (DPBB and Pollen allerg) of expansin having capable of breaking effects associated with non-chemotherapy between polysaccharide and cellulose microfiber, helps to easily expanded cell wall (both horizontally and vertically) with impacts of water erection. Activity of GmEXP1 genes related to extend and prolongation of soybean roots, to enhance drought tolerance of soybean cultivars. In science this report, we present the results of amplified, cloning and determine the GmEXP1 gene sequence of three local Sonla soybean cultivars (SL1, SL3, SL4) and DT84 soybean cultivar. The coding region of GmEXP1 gene isolated from some soybean cultivar had the size of 768 nucleotides, encoding 255 amino acids. Compare amino acid sequence of the protein expansin inference of four soybean cultivars with amino acid sequences of expansin was codes AF516879 in GenBank showed similarity coefficient is 99.6%. cDNA sequences of GmEXP1 genes be used to design vector in transgenic technique to improve drought tolerance of soybean plants.