THE CHARACTERISTICS OF CHAPERONIN GENE ISOLATED LOCAL SOYBEAN CULTIVARS (GLYCINE MAX L. MERRILL) GROWN IN TAY NGUYEN REGION, VIET NAM

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TÓM TẮT:

Soybean (Glycine max (L.) Merrill) is one of the most widely-known and grown food crops in the worldbecause of its economic and high nutritious value. In Vietnam more specifically, the local cultivars play animportant role in the lives of the people living in the regions with water stringency. In this research, we havestudied the response of local soybean cultivars in Tay Nguyen (DL, ST, CNg, AZP) and control one (NH9) todrought and to the cloning of a chaperonin gene. Surprisingly, the response of local cultivars with drought conditionwas different. DL cultivar had the level of drought tolerance higher than ST, CNg, AZT and NH9 with NH9 as thelowest. Therefore, DL and NH9 were chosen for cloning the chaperonin gene. Using molecular cloning method,we had two sequences of chaperonin gene in DL (DL- Chap1, DL- Chap2) and one in NH9. These sequencesconsisted of 1602 nucleotide that encoded a propolypeptide with 533 amine acids. Gene DL- Chap2 is similar tothe chaperonin gene in Cuc Vang (98.74% of similar coefficients) but different from Bonminori of Japan in sixamine acid positions. Among them are the two sites: (Ser99 Thr, Ser 280 Gly) that confirmed the changinglaw of temperature tolerance enzymes