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INVESTIGATION QUANTITY AND QUALITY CHARACTERISTICS OF SUGAR BEET ADVANCED CULTIVARS IN STRESS WATER, SALINE AND NON-STRESS CONDITIONS

Abstract

In this study quantity and quality of twelve advanced sugar beet breeding populations were investigated under non-stress, saline and water stress conditions at the experimental station of sugar beet seed institute (SBSI) in Karaj in 2003. The layout of field experiment was randomized complete block design with three replications. Several characteristics such as leaf length (LL), leaf width (LW), petiole length (PL), shoot fresh weight (SFW), shoot dry weight (SDW), root dry weight (RDW), root length (RL), root yield (RY), sugar yield (SY), white sugar yield (WSY), sugar content (SC), impurities (Na, k and N), purity (Pur), and Na/K ratio were determined in both stress and non stress conditions. The ANOVA showed that there significant differences between breeding materials for some characteristics. Both saline and water stress conditions influenced the quantity and quality of breeding materials. In general, saline and water stress conditions decreased RY, SDW, SFW, RDW, LL and LW however SC was increased in as comparison with non stress conditions.

Other languages: not available
