TẠO DONG LẠC BĂNG CÔNG NGHỆ TẾ BAO THỰC VẬT

Vũ Thị Thu Thủy, Nguyễn Thị Tâm, Chu Hoàng Mậu

TÓM TẮT:

Scar tissue of peanut cultivar L18was processed by dry blower during 9 hours and in combination with gamma ray irradiation with dose of 2 krad and results showed that 198 peanut lines have been generated. By evaluation of drought tolerance of selected peanut lines at the fifth generation, 3 peanut lines RM48, RM47 and R46 with highly drought tolerance were chosen, of which RM48 line derived from callus dehydration tolerance and radiation tolerance proved to be the best drought tolerance. Cystatin gene sequence of the RM48 peanut line had 19 different nucleotide positions compared with that of the L18 cultivar (original cultivar with low drought tolerance) and had 23 different nucleotide positions compared with that of the L23 cultivar (high drought tolerance). Cystatin of the RM48 line had amino acid sequence which was different at 6 and 7 positions compared with that of the cultivars L23 and L18, respectively. Based on evaluation of drought tolerance and analysis of cystatin gene sequence, the peanut line RM48 was selected. This line derived from dehydrated callus of L18 peanut cultivar by 9 hour dry blow and gamma ray irradiation at the dose of 2 krad. The line RM48 with highly drought tolerance could be introduced to participate in field trial test to generate a new droughtresistant cultivar.Keywords: Cystatin gene, drought resistance, irradiation resistance, peanut, scar tissue, water loss resistance.