Studies on growth stages for different leaf abscission genotypes in adzuki bean varieties

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Abstract

The main purposes of this research are to investigate the relationship between the different growth stages and seed production for 12 varieties of three leaf abscission genotypes for adzuki bean, in order to select cross parent and develop selection. The results were summarized as follows:

According to the timing of leaf abscission, delay leaf abscission (DLA), normal leaf abscission (NLA), and early leaf abscission (ELA) were discriminated. The accumulation of pod weight per plant is similar among three types of adzuki bean mentioned above no matter of developing stage in spring crop except for two ELA varieties, Chugoku red (CR) and Akatsukidainagon (AD). However, it was affected by the timing of leaf abscission in NLA and ELA genotypes in fall crop. Besides, DLA genotype has the highest pod yield per plant than the others in both crop seasons. It might bring about the higher of filling rate and the longer of filling period. Furthermore, the accumulation of pod weight per plant of Early large seed (ELS), a NLA variety, was decreased by lower of filling rate and shorter of filling period. On the other hand, its accumulation in two ELA varieties, Round leaf 64 (RL64) and Akatsukidainagon (AD), was only resulted from lower of filling rate.

Key words: adzuki bean, delay leaf abscission, normal leaf abscission, early leaf abscission, pod filling rate, effective filling period

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