

SCREENING OF SOYBEAN VARIETIES FOR SEED STORABILITY USING ACCELERATED AGEING TEST

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ABSTRACT

Sowing of deteriorated seed leads to sub optimal plant stand and poor crop performance in the field. Hence, maintenance of seed viability and vigour from harvest till next sowing play a vital role in crop production. In soybean, wide variability has been observed for seed storability. Screening of varieties helps in identification of good storers and their inclusion in breeding programmes. Accelerated ageing test has good correlation to storage potential of the seed. In the present study, freshly harvested seeds of 30 varieties/genotypes of were subjected accelerated ageing for 7 days to screen the varieties/genotypes for seed storability. The results showed significant decline in seed germination in all the varieties/genotypes upon ageing. But, the degree of reduction in germination was varied significantly among varieties/genotypes. Seeds of JS 71-05 completely lost germination after 7 days of accelerated ageing while DS 228, MAUS 61 and NRC 93 recorded 96, 95 and 92 per cent reduction in germination, respectively compared to unaged. Whereas, lowest reduction was observed in Kalitur (44.7%) which is on par with MACS 1416 (52%) followed by DSB 21 (54%), EC 18761 (57.6%), RKS 18 (55.6%) and CO 1 (58.1%). Out of 30 varieties/genotypes tested, Kalitur, MACS 1416, DSB 21, EC 18761 and CO1 were found to maintain maximum seed germination and seedling vigour and considerably less electrical conductivity of seed leachate after accelerated ageing of 7 days. While, JS 71-05, DS 228, MAUS 61, NRC 93 and DSB 24 were maintained least seed quality attributes after ageing.

KEYWORDS: Accelerated Ageing, Seed Germination, Soybean, Storability, Vigour

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