

Screening of pea genotypes for seed longevity

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Seed longevity varies widely both among species and among different genotypes of one species. Not all the genotypes survive for the same life span under specified environmental conditions (2). The present study was undertaken to determine the seed storage potential of eleven diverse pea genotypes.

Seeds of the eleven genotypes, procured from the Department of Vegetable Crops, Landscaping and Floriculture, Punjab Agric. Univ., were multiplied at the experimental area of the Department under identical, agrometrological conditions. On harvest, the seeds were stored in cloth bags under ambient room temperature and relative humidity. The average yearly temperature was 29.4°C (max) and 17.3°C (min); average relative humidity was 65.4%. Germination data were collected at monthly intervals using 400 seeds in replicates of 100 seeds each.

Seed storability/longevity is the duration for which the seeds retained their capacity to germinate up to a minimum prescribed level (80% in peas). Based on the seed storage potential, the eleven cultivars could be divided into three groups as follows:

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| Poor storage potential: | included cv. P 88 with a life span of 7 months only. |
| Intermediate storage potential: | included cvs Arkel, P 87, PH 1, LDF 50, HPF 4, and Bonneville. |
| Good storage potential: | included cvs PH 2, LDF 48, PG 3, and P 23 with a life span of 20 months or above. |

Only a limited number of works are available on the inheritance of long storage life among genotypes and most of these studies pertain to maize seeds (1). Therefore, the present material might be useful for study of the mechanism of seed deterioration involving a comparison of pea genotypes with good and poor seed longevity.

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1. Anonymous. 1985. International Seed Testing Association Rules and Annexes. Seed Science and Technol. 13: 299-354.
 2. Justice, O.L. and Bass, L.N. 1979. Principles and practices of seed storage. Castle House Publications Ltd. pp. 289.