

## Changes of Germination Rate of Pulses Seed Germplasm after Long-term Conservation

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The seeds of soybean (*Glycine max*), adzuki bean (*Vigna angularis*), mung bean (*Vigna radiata*), and kidney bean (*Phaseolus vulgaris* L.) were examined the germination rate after 10 years of long-term storage (-18°C) conservation. For soybean seeds, 2,313 accessions were examined and germination rate of 1,082 accessions was decreased with below 15% of initial germination rate. For 227 accessions of soybean, germination rate was decreased with above 15% of initial germination rate after 10 years of long-term storage, which is needed to be rejuvenated. Germination rate of 589 accessions was increased and showed no change for 415 accessions after 10 years of long-term storage. For adzuki bean seeds, 2,058 accessions were examined and germination rate of 739 accessions was decreased with below 15% of initial germination rate. For 63 accessions of adzuki bean, germination rate was decreased with above 15% of initial germination rate after 10 years of long-term storage, which is needed to be rejuvenated. Germination rate of 535 accessions was increased and showed no change for 721 accessions after 10 years of long-term storage. For mung bean seeds, 438 accessions were examined and germination rate of 139 accessions was decreased with below 15% of initial germination rate. For 5 accessions of mung bean, germination rate was decreased with above 15% of initial germination rate after 10 years of long-term storage, which is needed to be rejuvenated. Germination rate of 155 accessions was increased and showed no change for 139 accessions after 10 years of long-term storage. For kidney bean seeds, 366 accessions were examined and germination rate of 7 accessions was decreased with below 15% of initial germination rate. For 65 accessions of kidney bean, germination rate was decreased with above 15% of initial germination rate after 10 years of long-term storage, which is needed to be rejuvenated. Germination rate of 201 accessions was increased and showed no change for 93 accessions after 10 years of long-term storage.

**Key words:** Seed, Banking, Germination, Storage

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