

IMBIBITION, GERMINATION AND COOKING TIME OF SEEDS OF DRY BEANS
(PHASEOLUS VULGARIS L.) STORED IN DIFFERENT CONTAINERS.

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Deterioration of bean seed quality in storage is a problem for consumers, seed producers and growers. This experiment was conducted to evaluate imbibition and germination of dry bean seed cultivars and lines stored under conditions similar to those used by small farmers in the Dominican Republic (DR).

Eight dry bean cultivars/lines were grown at 3 locations in the DR and seed samples were stored in jute sacks, plastic containers and metallic cans, under uncontrolled conditions in a small wooden building with slatted shelves. Sub-samples of seeds were taken at 2, 4 and 6 months to determine changes in seed moisture, imbibition value and germination. Seeds of 4 cultivars, stored in the 3 types of containers for 6 months, were evaluated for cooking time.

Seed moisture decreased from 11% to 7%, during 2 to 6 months of storage for 'Venezuela 44' and 'ICA-Pijao', respectively. Seeds of 'Constanza' had the lowest imbibition value, particularly for beans grown at Higüey and stored for 2 months. Imbibition value of seeds differed among cultivars for seeds stored in different containers. Germination of 'Venezuela 44' was above 90%, but was 66% for 'Jose Beta'. At 6 months of seed storage in jute sacks and plastic containers the germination was 78% and 83%, respectively, while seed stored in metallic containers had 92% germination. Seeds of 'Venezuela 44' cooked sooner than other cultivars. Cooking time differed among seeds stored in the different containers. Thus growing location, cultivars, containers and duration of seed storage affected seed quality of beans in the DR.