



AVRDC - The World Vegetable Center

Fact Sheet

Saving Seeds of Soybean

Production

Soybean (*Glycine max*) grows well in well-drained, loamy soils. The minimum soil temperature for germination is 13 °C. The optimum time for planting soybean for seed production is usually in the dry season (December) or late rainy season (August); however, please follow the recommended cultural practices in your own country.

Isolation

Soybean is self-pollinating; cross-pollination by insects is possible, but rare. No isolation is required.

Harvesting

When soybean matures, the leaves turn yellow and drop, pods become dry, and seeds lose moisture (Fig. 1). Harvesting should be done just before pods begin to shatter; the plants may be cut at the ground level, tied up to a bunch or put in a mesh bag, then dried in the sun for 3 days.



Fig. 1. Pods ready for harvesting

Processing

Threshing must be done as soon as the pods are dry. Beat pods with a stick (Fig. 2) until pods are opened, or put dry pods in a burlap bag, place the bag on the floor, and walk on it. Remove any foreign materials by winnowing (Figs. 3, 4). Dry in the sun for 3–5 days. Collect only good seeds (free from diseases, seed coat cracking, split, or immature). If using a threshing machine, adjust its speed to avoid seed damage.



Fig. 2. Threshing pods with a stick



Figs. 3, 4. Winnowing to remove chaff

Storage

Soybean seed does not keep well in storage compared to the other legumes. The germination rate drops rapidly under room temperature conditions, especially in the tropics. Place seeds in jars, manila envelopes, cloth or mesh bags, plastic containers, or foil envelopes. The best containers are air-tight, such as a sealed glass jar, metal can, or foil envelope. Protect seed from sunlight.

Store seeds in a cool (below 15 °C is ideal), dry location. Place the seeds in a refrigerator for long-term storage. For short-term storage, keep the seeds in a cool, shady and dry place. If cool storage is unavailable, place seed in an air-tight container and add burned lime (calcium oxide) at the rate of 20–30% (w/w). Keep seed at room temperature.

References

- Kelly, A.F. and R.A.T. George. 1998. Encyclopaedia of seed production of world crops. New York: John Wiley & Sons.
- Rashid, M.A. and D.P. Singh. 2000. A manual of seed production in Bangladesh. AVRDC-USAID-Bangladesh Project. Joydebpur, Gazipur, Bangladesh.