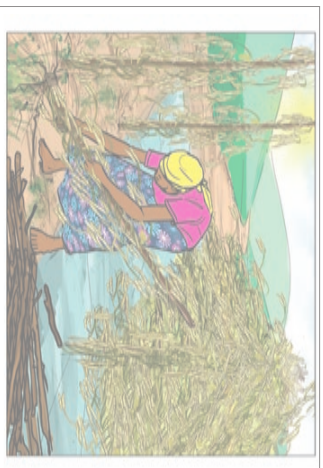


Post-harvest Practices for Climbing Beans





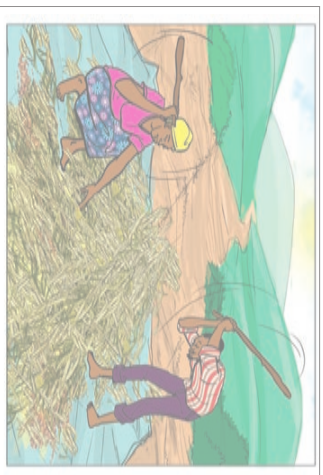
When and how to harvest beans

- For varieties such as NABE 12C that fetch good prices for fresh pods, harvest the pods when the crop begins maturing to a yellow-ripe stage.
- A crop being harvested for seed should be left to dry completely before harvesting.
- Beans should not over stay in the field after maturing, as pests such as bean bruchids may gain entry into the pods or pods may start shattering in the field.
- Harvests should be done when conditions are dry and cool.
- Harvesting in wet conditions may transfer disease pathogens to uninfested areas of a farm.
- Harvesting in hot conditions may increase the risk of pod shattering, leading to yield losses.



When and how to harvest beans





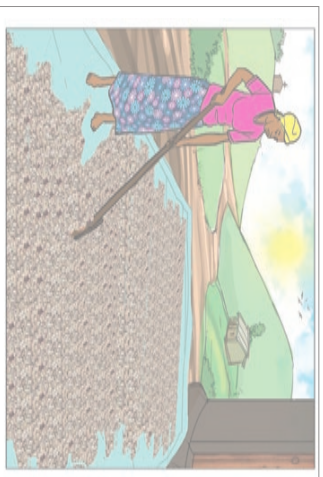
Threshing

- Harvested pods are dried before threshing to easily remove seed.
- The length of time to dry pods depends on the weather at the time of drying and the intensity of available sunlight. In general, pods are dried for 3-4 days.
- Properly dried pods should split open easily when they are hit.
- Bean harvests should be placed on a clean surface such as concrete or a tarpaulin and gently beaten with a stick to remove seed from the pods.
- Proper and timely threshing is important to minimize damage to seed. It reduces the chance for the seed to become broken or cracked.
- Seed that becomes broken or cracked is more likely to be attacked by insect pests such as bruchids and may become mouldy. This type of seed is not likely to germinate and will not be marketable.



Threshing





Drying

- After threshing, seed is further dried to ensure a longer storage life and to help reduce the chances of rotting and mould growth during storage.
- This stage of drying seed can be done for 1-2 days, depending on the initial drying of the bean harvest that took place.
- Seed needs to be kept clean, so it should be dried by placing the beans in a thin layer on a clean and dry surface. It may be necessary to turn the beans periodically to allow quick and even drying of the seed.
- Seed should be dried to a moisture content of no more than 13-15%.
- Beans can be tested for proper drying by biting them. When bitten, they should make a distinct cracking sound.



Drying





Cleaning and sorting

- Once properly dried, seed should be winnowed to remove chaff, stones, dust and other rubbish from harvests.
- After winnowing, seed should be sorted to obtain quality produce. Shriveled, diseased, broken or off-type seed should be removed to ensure cultivar purity.



Cleaning and sorting





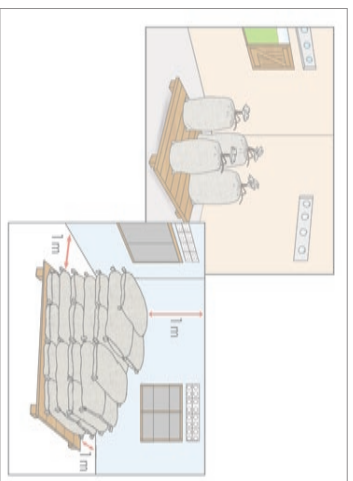
Keeping beans safe from pests

- Beans that will be stored for long periods of time need to be protected from damage by mould, insects, and pests such as rats.
- Storing beans in airtight containers and in proper storage facilities will reduce post-harvest damage.
- Chemicals can be used to treat bean seed for long term storage and can protect against diseases and field insects such as bean stem maggots.
- When using chemicals, powders such as Actellic or Malathion may be dusted on harvested seed.
- For easy and uniform application, treatment powders are applied when seed has been spread out on a clean surface and before placing it into storage containers.
- Consult agro dealers and read instructions that come with chemicals to find the correct dosage to use when treating seed. On average, 200 grams of insecticide can treat 100 kilograms of seed.



Keeping beans safe from pests



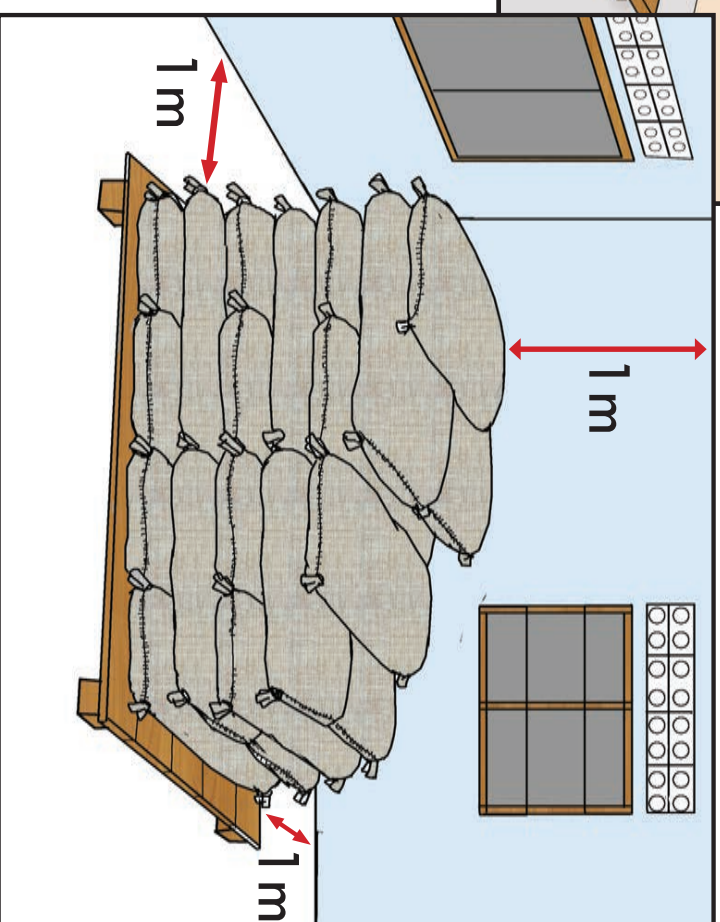
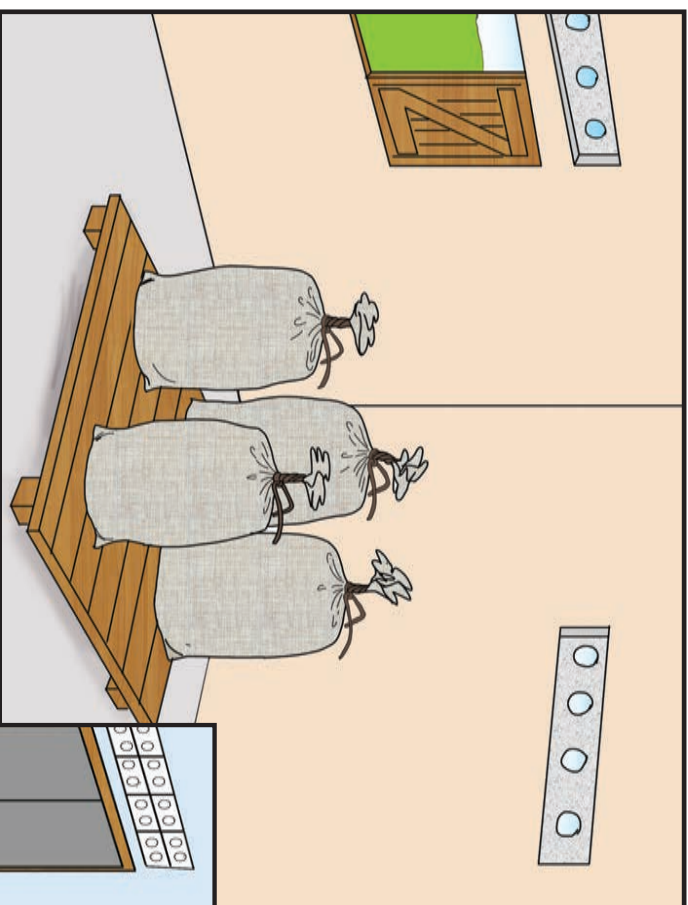


Proper storage

- Seed must be stored properly to avoid damage and improve longevity.
- Beans kept in airtight containers such as a silo or hermetic storage bag are able to resist post-harvest damage for long periods of time.
- Containers of dried beans should be stored in a clean, dry and well ventilated place.
- During storage, storage facilities should be checked for leaks to ensure that rain and other water does not enter the storage facility and get near the seed.
- Seed should be kept at least 1 metre away from walls and containers should be placed on platforms to lift them above the ground to maintain ventilation and dry conditions within the storage facility.



Proper storage



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