


Storage of seed ginger rhizomes



 Availability of healthy seed rhizomes is an essential prerequisite for optimum production in ginger. Since there is a gap of 4 to 5 months from the time of harvest (December/January) to the next sowing season (April/May), it is necessary to preserve seed rhizomes in a good condition during this period so as to ensure maximum recovery and germination subsequently.

How are seed rhizomes stored?

Farmers generally heap seed rhizomes in a corner of a room or thatched shed on a thin layer of sand covered with dry leaves. Some farmers store seed rhizomes in pits in the shade underneath trees by alternating ginger and dried leaves of either *Glycosmis pentaphylla* (*panal*) or *Olea dioica* (*vetti*). The practice of leaving a portion of the crop in the field and harvesting the rhizomes just before sowing is also practised in some regions. Some farmers dip the rhizomes in cow dung slurry and then treat with fungicides and insecticides before storage.

Storage losses

Seed rhizomes are prone to attack by pathogenic fungi, nematodes and insects. The rhizome scale *Aspidiella hartii* encrusts seed rhizomes and feed on sap resulting in its shrivelling and affecting its germination. Fungi like *Acremonium* sp., *Aspergillus* sp., and *Fusarium* sp. infest seed rhizomes and cause storage rot. Soil borne pathogens like *Pythium* sp. and *Pseudomonas* sp. are also carried through seed rhizomes. The root lesion nematode, *Pratylenchus* sp. is a common storage pest of ginger, especially in north eastern states. The storage loss can often be as high as 50%.

How to minimize storage losses?

The institute has developed a simple and inexpensive method for storage of seed rhizomes which ensures about 95% recovery of rhizomes.

Selection and treatment of seed rhizomes

- ◆ Select fully mature seed rhizomes from plots free from diseases.
- ◆ Dip the selected seed rhizomes in a solution of quinalphos 0.075% and Dithane M-45 0.3% for 30 minutes. Dry the rhizomes under shade.
- ◆ Where bacterial wilt is a problem, treat seed rhizomes with streptomycin 200 ppm (6 grams in 30 litres water).
- ◆ Where root lesion nematodes are a problem, treat seed rhizomes with hot water (55–60°C) for 10 minutes.

Storage of seed rhizomes

Make a storage pit of about 60 cm depth and convenient length and width. A pit of 45 cm x 45 cm x 60 cm can hold about 20–25 kg of seed rhizomes. Plaster the inner sides and bottom with mud and cowdung. Allow it to dry for 10–15 days and dust with carbaryl. Spread a 2 cm layer of well dried sand or sawdust at the bottom. Place the treated seed rhizomes over it to form a 10 cm layer and cover the rhizomes with sand or coir dust. Repeat it till the alternating layers of rhizomes and sand or sawdust reach to a height of 45–50 cm in the pit. Cover the pit with a wooden plank, leaving a gap of about 10 cm between the seed rhizomes and the plank. Provide a small hole in the centre of the plank to ensure better aeration. Provide a thatched roof over the storage pits to maintain the temperature in the pits below 30°C and to avoid excessive dehydration.

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