



## STORAGE OF RANGE GRASS SEEDS FOR IMPROVED PASTURES IN THE ASALS



### Introduction

Seed is stored after harvesting for use in the next planting season, which may be in the immediate next season or after several seasons. A number of factors influence the viability and maintenance of seed quality during storage. The most important factors considered in seed storage are temperature, humidity (moisture), pests (insects and rodents) and moulds.

### Temperature

Cold storage is the best for long-term seed storage as this slows down the rate of biological activity within the seed. High temperatures are not desired because they destroy viability of seeds. Seed stores should be well ventilated and located in dry conditions.

### Humidity

Seed tend to absorb moisture from the air under high relative humidity. This mainly occurs with packaged seeds where storage materials are not water-proofed. Relative humidity has the most influence on seed longevity because it affects the moisture content and may trigger germination or rotting. Further high moisture contents allow insects, pest and disease and microbial activity.

For safe seed storage conditions, they should be dried to 8-12% moisture content. Storage facilities should, therefore, be located in areas where relative humidity is low or have artificial humidity.

### Pests and moulds

Pests and moulds that affect stored seeds in other plant materials also affect stored grass seed. These include rats, mice, ants and termites. Moulds can occur due to humid/moist conditions in the store. These make seed susceptible to disease and rotting resulting into losses. Every effort should be made to dry seeds sufficiently and keep them dry all the time.

### Packaging and storage containers

Packaging is important because it protects the seed from physical, climate and also biological damage. Ensure seeds are well dried. Air tight containers are the best for long term storage.

The Package should have a label indicating species, cultivar, date harvested and other details as may be required by the law.



*Examples of metal containers with tightly fitting lids for storing pasture seed*

Packaging involves sealing of seed in containers ready for storage transport and (or) sale. Suitability of packaging material dependent on:

- Quantity of seed
- Quality of seed and desired protection





- Cost of the package
- Value of the seed
- Condition of the containers

Examples of package and storage containers include: -

- Tailor-made white woollen /cotton bags
- Woven or synthetic sacks
- Prefabricated aluminium tins
- Brown paper bags
- High-density polythene paper bags
- Metallic containers



### *Traditional seed store*

The most affordable method of storage is open naturally ventilated storage (unconditioned). This involves keeping seeds in traditional stores or rooms for a short period. This is satisfactory for keeping seed of some grass species up to three (3) years. A cool and dry well-ventilated store is ideal.

### *Conditioned storage*

Temperature is controlled through refrigeration while seed moisture is controlled using dehumidifiers. Used mainly for large scale storage of high value seeds. High costs are involved for controlling the environment.

*Seed storage containers that small scale farmers/producers could use appropriate for storing range pasture seeds*

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