

### Sampling Procedure • The Detection of LMO is usually carried out with a

- The Detection of LMO is usually carried out with a small portion of seed drawn from the seed lots. The objective of sampling is to ensure that the portion of the seed taken for testing is a true representative of the entire lot.
- A good sampling procedure is essential while dealing with bulk consignments to get a uniform and representative sample for testing from plant quarantine viewpoint.



- International Seed Testing Association (ISTA Rule, 1999)
- Bureau of Indian Standards (IS: 2814-1964)

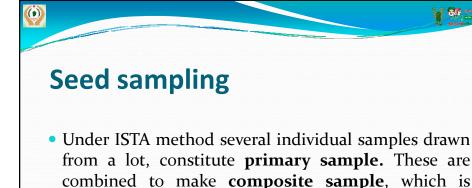


### ISTA guidelines for sampling

 The International Seed Testing Association (ISTA) has laid down the rules and defined units for the sampling purpose.

### **Seed lot**

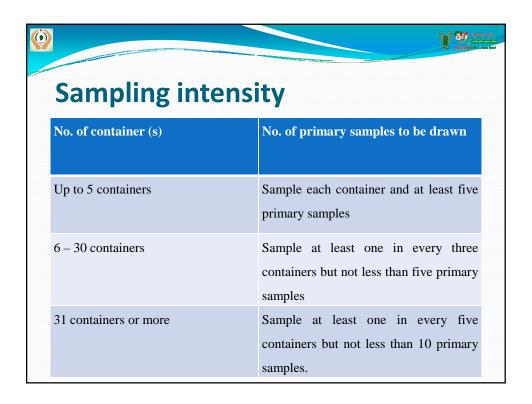
- 1) A seed lot is a specific, identified quantity of seed whose purity and quality is homogenous throughout entire lot.
- 2) The maximum size of seed lot prescribed for agricultural and horticultural seed is 20,000 kg.



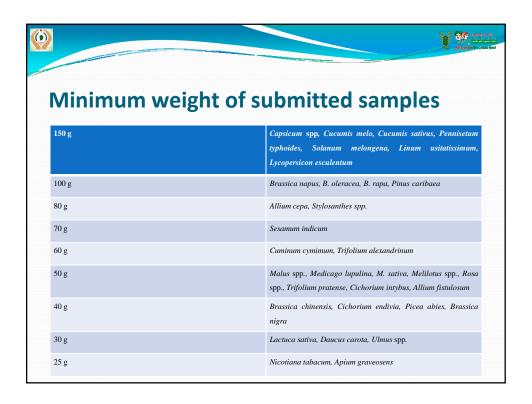
sample

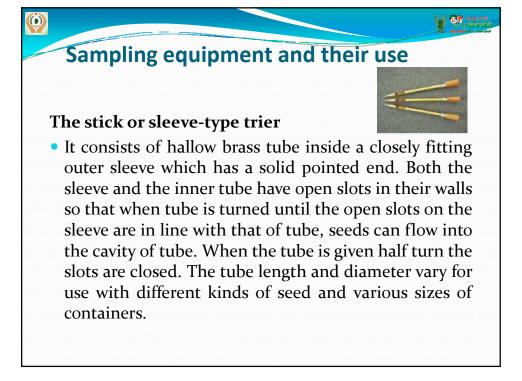
usually much larger than the required and must be reduced before submitting to the laboratory. These samples are known as **submitted sample**. From the submitted sample, a further reduced sample is obtained for actual testing, which is called as **working** 

# Sampling intensity No. of primary samples to be drawn Up to 500 kg At least five primary samples except for lots less then 50 kg but not less than three need to be taken. 501 to 3000 kg One primary sample for each 300 kg but not less than five 3001 to 20,000 kg One primary sample for each 500 kg but not less than 10 samples





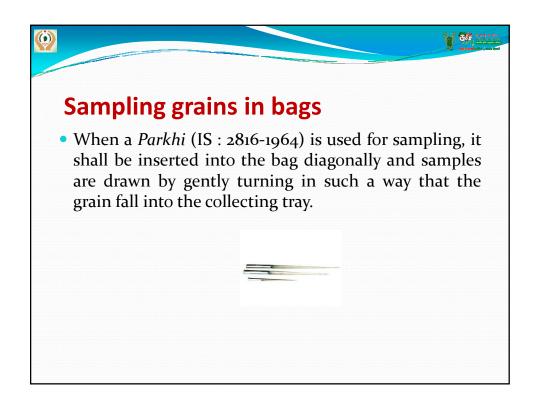


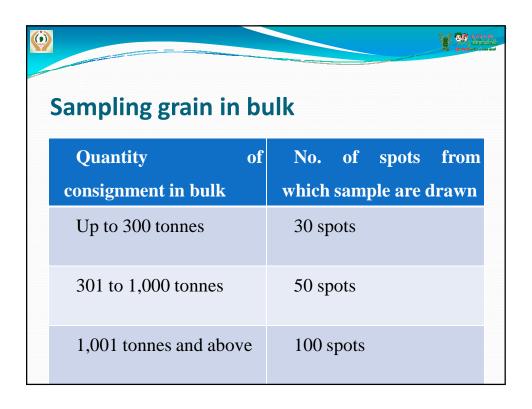




No. of bags in lot	No. of bags to be sampled
Up to 30 bags	All bags
31 to 300 bags	30 bags
301 to 1000 bags	50 bags
1001 to 2000 bags	100 bags
2001 and above	5% of bags to be sampled

## Sampling grains in bags • The primary samples are drawn by inserting slotted tube sampler (IS: 2815-1964) diagonally in about one third of the bag to be sampled. The sampler shall be inserted into the bag in the 'closed position' with opening slots facing downward position. When the sampler inserted to the desired position, it may be turned to 'open position' such that opening slot face up wards to allow grains filling into the cavities of inner tube. The sampler shall be turned back to close position before taking out of bag.







- Sampling may be done by selecting the spots at random and shall be done with bin sampler.
- The bin sampler can be used only to a depth of 1.5 meters. The sampler shall be inserted at an angle in closed position till desired depth is reached and then opened to collect the grains and pulled out after being closed.
- Sampling of the grains while in motion or from the conveyor belt shall be drawn with either scoop or a pelican type of sampler at timely intervals.

