

Introduction

Seed is a living product that must be grown, harvested and processed correctly to maximize its viability and subsequent crop productivity. Seed quality can be considered as the summation of all factors that contribute to seed performance and depends upon the physical conditions that the mother plant is exposed to during growth, as well as harvesting, processing, storage and planting. Temperature, nutrients and other environmental factors also affect seed development and influence seed quality.

Importance of seed quality

Good quality seed can increase yields by 5-20% however the extent of this increase is directly proportional to the quality of seed that is being sown. High quality seed enables farmers to grow crops, which have:

- The most economical planting rate
- A higher percentage of seeds emerging in the field
- A minimum of re-planting
- A vigorous seedling establishment
- A uniform plant stand
- Faster growth rate and better resistance to stress and diseases
- Uniformity in ripening

Measurement of seed quality

While different countries have different standards for seed quality the following factors are used to classify rice seeds. Tests conducted include:

- Physical purity (inert matter, chaffs, half filled grain)
- Genetic purity (Varietal purity, ODV)
- Physiological purity (Germination, moisture content)
- Weed and other crop seeds
- Grain discoloration
- Seed health (seed borne diseases like, paddy bunt)



Seed Standards for Seed Certification in India

Factor	Foundation	Certified
Pure seed (minimum %)	98	98
Inert matter (maximum %)	2	2
Other crop seeds (maximum number/kg)	10	20
Other distinguishable varieties (maximum number/kg)	10	20
Weed seeds (maximum number/kg)	10	20
Germination (minimum %)	80	80
Moisture (maximum %)	12	12
For vapour-proof containers (maximum %)	8	8

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