

Introduction

Seed is a basic input in agriculture, So it must be grown, harvested and processed correctly to maximize its viability and subsequent crop productivity. Seed quality is a summation of all factors which contribute to seed performance. It depends upon the environmental conditions during growth, harvesting, processing, storage and planting. Both biotic and abiotic factors affect seed development and quality.

Importance of seed quality

Good quality seed of improved variety/hybrid ensures a yield gain ranging from 5-20% however, the extent of this increase is directly proportional to other associated factors as well. Improved 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/gap filling
- a vigorous seedling establishment
- a uniform plant stand
- faster growth rate and better resistance to biotic and abiotic stresses
- synchronized maturity



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:

- Varietal purity
- Admixture of other varieties
- Weed and other crop seeds
- Inert material
- Germination
- Moisture content



Official Standards for Seed Certification in Assam, India

Factor	Foundation	Certified
Genetic purity (% minimum)	98	98
Other varieties (grains/kg) (maximum)	10	20
Total weed & other crop seed (grains/kg) (maximum)	10	20
Inert matter (%) (maximum)	2	2
Germination (% minimum)	80	80
Moisture content (% maximum)	13	13
Moisture content for vapor-proof containers (maximum)	8	8