

Introduction

Good seed allows a lower seed rate, higher crop emergence (more than 70%), reduced replanting, more uniform plant stands and more vigorous early crop growth. Vigorous early growth reduces weed problems and increases crop resistance to insect pests and diseases. Together, these factors give a 5-20% increase in yield.

What is Good Seed?

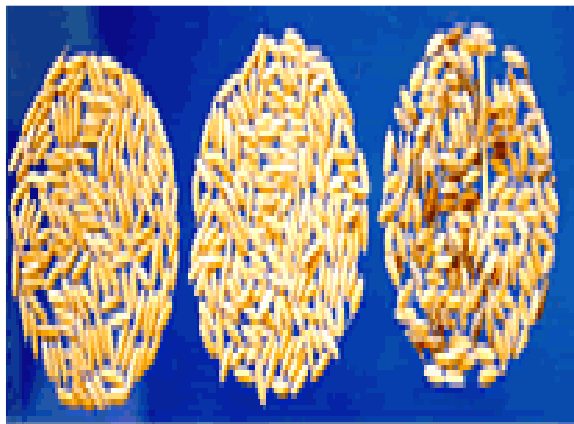
Good seed is pure (all seeds are of the chosen variety, and not mixed with other varieties), full and uniform in size, and viable (more than 80% germination with good seedling vigor). Good seed should be properly labeled and does not include weed seeds, seed-borne diseases, pathogens, insects or other matter.

Winnowing to get Good Seed

Harvested seed includes seed of varying sizes and non-seed matter (weeds and trash). Full (heavier) seed can be selected by winnowing with natural wind or an electric fan. Pour seed slowly from a height of 1-1.5 meters (see figure). Repeat if necessary. Select heavier seed closer to the side from which the wind blows. Winnowing will also remove lighter weed seed and non-seed matter.

Drying and Storing Good Seed

After harvest, clean seed. Select full, uniform seeds and dry to 12-14% moisture content. Store in sealed airtight containers until ready for planting (seed is good for up to one year if stored properly). Seed stored in non-airtight containers absorbs moisture and loses viability over time.



Good seed

Bad seed

Seed priming or direct seeding

Soak seeds in water for 12-24 hours before direct seeding in the field. If seeding is delayed, soaked seeds can be dried in shade and stored until they can be planted later that season. Several seed treatments are used occasionally in some countries to help protect seed against diseases and improve nitrogen fixation. Consult an expert if you want to learn more about these treatments.



How Can Farmers Produce Their Own Good Seed?

1. Select a fertile field.
2. Use clean, good quality seed.
3. Plow, puddle and level the field well to control weeds and improve water management.
4. If transplanting, plant young (15-20 day) seedlings from a healthy, weed-free nursery at 2 per hill, with 22.5 cm x 22.5 cm spacing.
5. Apply balanced nutrients (N, P, K, S, Zn) as required.
6. Keep the crop free of weeds, insect pests and diseases.
7. At maximum tillering and flowering, remove off-types (any plants of unusual height, appearance, flowering time etc.); poor, diseased or insect damaged plants; and plants with discolored panicles.
8. Harvest at full maturity (when 80-85% of the grains are straw-colored).
9. Thresh, clean, dry (12-14% moisture content), grade and label the harvested seed.
10. Store the labeled seed in sealed, clean containers in a cool, dry and clean area