

Introduction

Seed is a living product that must be grown, harvested and processed correctly to maximize its viability and subsequent crop productivity. Good quality seed can increase yields by 5-20 %.

Seed production systems

There are two different systems required for producing ordinary or inbred high yielding seed and hybrid seed.

Inbred rice seed

Ordinary or inbred rice seed is produced when the egg inside the ovary is fertilized by pollen grains shed from:

- Anthers borne in the same spikelet.
- Anthers from other spikelet of the same plant.
- Anthers from the spikelet of another plant of the same variety.

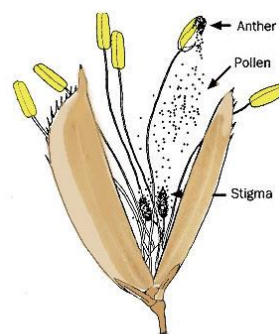
When farmers plant an entire field to a single variety, they are producing inbred seed.

Hybrid rice seed

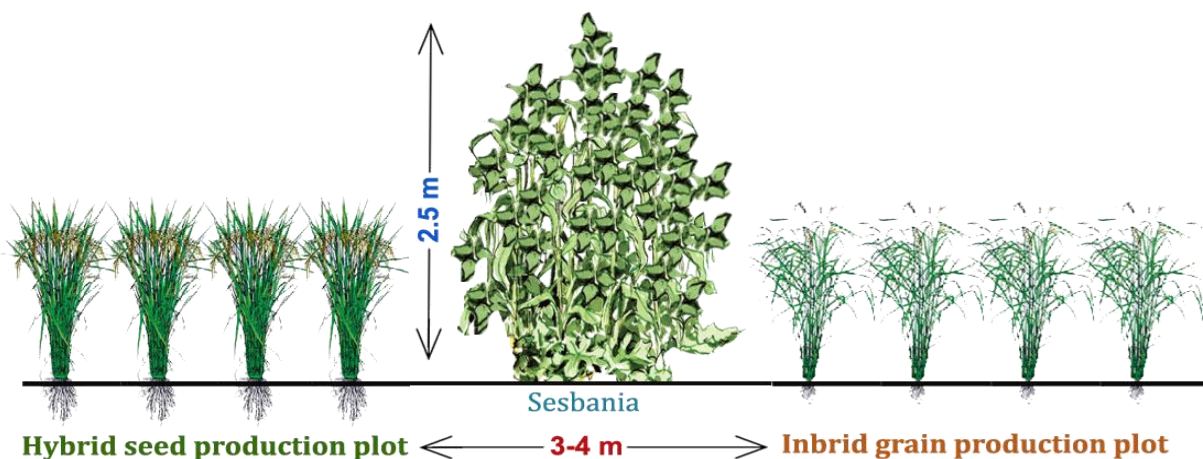
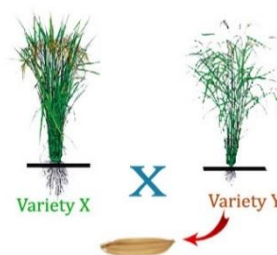
Hybrid rice seed is produced when the egg is fertilized by pollen from the anthers of a rice plant from a different variety or line. Hybrid rice seed is the first filial (F1) generation of a cross of two rice varieties that are genetically different.

Fields for hybrid seed production must be well separated, or isolated, from other rice fields to ensure genetic purity of the seed.

Protecting genetic purity requires that the seed parent (or A line) is only pollinated by the male parent chosen as the B line or the R line.



Pollen from the same spikelet



Hybrid seed production requires very good knowledge and control through the whole system and must be managed by skilled seed technologists. Most hybrid seed production is done by large commercial seed companies.