

Topic on seed technology

What is seed?

Any part of plant, which is used for commercial production it called seed. But which used for consumption purpose, it does not seed it called grain.

- In other sense, Seed is mature embryo, which was produced through fertilized oval. It is consists
 - Better germination
 - Vigorous seedlings growth
 - Higher crop stand
 - Better Quality
 - Early maturity
 - Disease free
 - Insect free
 - Better adaptability
 - High yielding

Classes of Seed:

Mainly seed are found in the five types

- Nucleus seed
- Breeder seed
- Foundation seed
- Registered seed
- Certified seed

➤ **Nucleus Seed:** It is originate seed. It produced by only plant breeders. It has some important features.

- It is produced only at the Agriculture University or plant breeders, under the own supervision
- It is 100% cent physically and genetically pure
- It is not grow directly farmers

➤ **Breeder Seed:** It is progeny of nucleus seed. It is also produced by strict supervision of original or sponsoring plant breeder at the research farm/Agriculture Universities/State Farm or Institutes.

Breeder seed has physically and genetically purity 100 percent and certification is not required. The tag of color used yellow color.

➤ **Foundation Seed:** The foundation seed is the progeny of breeder seeds and main steps of production of foundation seed should be proper according to below points.

- **Where can produce:** It is produced under the supervision by NSC/SSCA. Foundation seed should be generating 100percent pure but physically purity should be 98%. The 2% inert matter is permissible. But in genetically, contamination is not permissible.
- **Certification:** If the production of seed for the purpose of marketing, it is must required which will be supervise by SSCA (State Seed Certification Agency). It used for certified seed production.

➤ **Registered Seed:**

- **Registered Seed:** Registered seed is the progeny of foundation seed. But in our Country It is not produced. The certified seed is produced by the foundation seed directly.

➤ **Certified Seed:**

Certified seed is the progeny of foundation seed. It is produced by the progressive formers under the strict supervision of SSCA (State Seed Certification Agency).

In this , all type of seed production, isolation distance should be maintained

Purity: Genetically purity should be 100% cent and physically purity should be 98%.

Certification: Seed certification required under the supervision of SSCA. Certified seed generally used for commercial cultivation.

➤ **Major Steps for Seed production:**

- There are some important point should be follow for the foundation seed production.

Agriculture practices:

- (i) Type of seed
- (ii) verity with tag
- (iii) Sowing time
- (iv) Spacing
- (v) Fertilizers dose
- (vi) Hoeing and weeding
- (vii) Irrigation etc.

- **Disease/ Inset Control:** It also very important point for seed production because due to this rescan can be reduced yield as well as reduced quality seed. Recommended dose should be adopted to raise halting yield.
- **Isolation distance:** Isolation means separation of the field of a avoid contamination. Proper isolation distance should be mentioned to avoid contamination the rough natural crossing. It is differs from crop to crop for the production of foundation in self pollinated crop i.e. Wheat , rice , oats, soybean , barley and groundnut required isolation distance should be 3.0 meters.
- **Rouging:** The process of removal of off type plants from the field before matured plants of weeds. It is objective only avoided of contamination due to crossing. Give rally it should be compact on three stage of crops
 - (i) Before flowering
 - (ii) After following
 - (iii) Before following
- **Harvesting:** After the process of SSCA. We can harvest from the field with preparation of any contamination.
- **Seed processing:** The technology which deals with cleaning of seed preparing it for the marketing.
- **Seed cleaning:** The process of removal of debris, physical contamination, inert material, damaged and infected seeds and seeds of other species.
- **Grading:** Separation of seeds into different classes or grades on the basis of length or weight etc.
- **Treating:** This process of treating seeds with suitable fungicides to avoid damages by the insects and pathogens.
- **Seed packing:** The process of preparing seed packets to prevent absorption of water from the atmosphere after drying, keep accessions separate and avoid mixing and prevent contamination from insects during stores.

References

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Prepared by
Dr. Partap Singh
Department of Agriculture
Monad University, Hapur-245101