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# Importance of Quality Seed in Crop Production

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## Abstract

The seeds play a vital role in agriculture and acts as a carrier of the genetic potential of varieties. Each and every farmer should able to acquire healthy seeds which are genetically pure, having high seed vigour and good germination percentage. Timely availability of good quality seeds at reasonable price ensures good yield and profit to the farmers. Quality seed is very important to enhance the production. It is necessary to maintain the varietal purity of seed, and control the seed borne disease for the production of high quality seed.

## Introduction

The first step to a successful crop production is the use of good quality planting seed. Seed quality is having the required genetic and physical purity that is accompanied with physiological soundness and health status of the seed. Seed which perform well at sowing are termed as quality seed (Sabry, 2018). The quality of seeds is considered as an important factor for yield enhancement. The use of quality seeds helps significantly in higher production per unit area to attain food security of the country. Quality seeds have the ability for efficient utilization of the inputs such as fertilizers and irrigation. Well thought policy, planning, congenial regulatory system, facilities for capacity and structural improvement both in public and private sectors are required for production, processing, preservation, and distribution of sufficient quantity of quality seeds in time to the farmers (Erker, B., 2014).

## What is Seed?

Seed is a material which is used for planting or regeneration purpose. However scientifically, Seed is a fertilized matured ovule, consisting of an embryonic plant, a store of food and a protective seed coat, a store of food consists of cotyledons and endosperm or it is a propagating material *i.e.*, tuber, bulbs, rhizome, roots, cuttings, setts, slips, all types of grafts and vegetatively propagating materials used for sowing or planting purpose (Hampton, 2002).

## Features of Quality Seed

The features of quality seed are as follows (Hampton, 2002).

- It should have genetic purity.

o Breeder/nucleus: 100%

o Foundation seeds: 99.5%

o Certified seeds varieties: 98%

o Certified hybrid seeds: 95%

o Certified hybrid cotton: 90%

o Certified hybrid castor: 85%

• It should have physical purity (no mix of other crop seed, weed seed and inert matter).

• It should have high germination vigor, germination rate and sprouting capacity.

• It should be free from seed borne disease and pests.

• It should have high growth and development capacity with germination capacity.

• It should be healthy and shining without any spot and weakness on looking.

• It should be in equal size and weight to produce healthy plants.

• It should have standard moisture level - with a maximum of 13% (as recommended by government) in paddy seed, which should clink while biting and shaking by hand.

## Importance of Good Quality Seed

The importance of good quality seeds are as follows (Bishaw *et al.,* 2007).

• The yield of quality seed is more compare to normal seed.

• Seed is an essential input in crop production.

o The type of seed materials used for sowing determines crop status.

o The reaction of other inputs in crop production system depends on the seed material used.

• The requirement of seed raising a crop is very little and its cost is also less compared to other inputs.

• Thus there is need to prioritize for increasing the areas under quality seed production.

• The use of good quality seed leads to increase of production and income of farmers.

• The produce from quality seed can be easily sold in the market.

• Good quality seeds of improved varieties estimate to contribute about 20-25% increase in yield.

• Quality seed production can also ensure food security through increasing productivity.

## Role of Improved Seeds

The role of improved seeds are as follows (Bishaw *et al*., 2007).

• Act as a carrier for new technology.

• A fundamental means for food security.

• An important basis to achieve crop yields in less suitable production area.

• An avenue for quick reclamation of agricultural land after natural disasters.

## Benefits of using Quality Seeds

The various benefits of using quality seeds are as follows (Kameswara *et al.,* 2017).

• They are genetically pure *i.e*., true to type.

• The good quality seed gives high return per unit area as the genetic potentiality of the crop can be fully exploited.

• Lesser amount of infestation with weed seed/ other crop seeds.

• Lesser disease and insect problem.

• Reduction of seed/ seedling rate *i.e*., fast and uniform emergence of seedling.

• They are vigorous, free from pests and disease.

• They can be adjusted themselves for extreme climatic condition and cropping system of the location.

• The quality seed counter well to the application of fertilizers and nutrients.

• They give uniformity in plant population and maturity.

• Good quality seed extends life of a variety.

• Prediction of yield is very easy.

• Easier in handling of post-harvest operation.

• Better composition of finished products.

• High value of produce and their marketability.

## Conclusion

It is very important to use quality seed in crop production. Using quality seed is a key factor to increase production in any agricultural system. Whereas, seed of lesser quality will introduce more weeds and off-types into your crop, make the crop more susceptible to disease, and produce plants that are weaker. Thus, it is resulting in low yield.

## References

Bishaw, Z., Abdul, A.N., Yantai, G., 2007. Quality seed production. Chapter 21 In: Yadav, S.S., McNeil, D.L., Stevenson, P.C. (eds.) Lentil: An Ancient Crop for Modern Times, pp. 349-383.

Erker, B., 2014. Improve yield with high quality seed. *Colorado State University Extension* 3(95), 1-2.

Hampton, J.G., 2002. What is seed quality? *Seed Science and Technology* 30, 1-10.

Kameswara, R.N., Mohammad, E.D., Johannes, M.M.E., 2017. A review of factors that influence the production of quality seed for long-term conservation in genebanks. *Genetic Resources and Crop Evolution* 64(5), 1061-1074.

Sabry, G.E., 2018. The importance of using high quality seeds in agriculture systems. *Agricultural Research & Technology: Open Access Journal* 15(4), 00100.