



## A Seed Treatment Campaign Needs to Improve the Potential and Quality of Seed

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### Introduction:

Seed quality plays a crucial role in realizing the full genetic potential of varieties as well as benefits of other agricultural inputs (Gupta and Kamble 2022). The use of quality seeds alone increases the productivity to the extent of 15-20 per cent (Dahiya *et al.* 1997). Only seeds with established genetic and physical purity may be expected to respond to other agricultural inputs. The least expensive input used by farmers for agricultural output is seed, which accounts for a small portion of cultivation costs. If the farmer does not obtain high quality seeds, all of his or her labor and investments would be fruitless. A good stand of the crop can only be produced by seed that has strong germination and vigor; otherwise, there will be insufficient plant population and low yields. A simple increase in seed rate may compensate for poor germination, but it does not guarantee that the crop will grow rapidly and regularly. Food security of India is of utmost importance, as growth achieved in other different fields is primarily depends on this single most important factor.

A main soil and seed borne infestation of insects and diseases that impair crop yield

and crop output is what the notion of seed treatment refers to as. This infestation is controlled with the use of biological or chemical agents. Currently, farmers' own stock, which is used for sowing without seed treatment, supplies 70% of the required seed.

Seed treatment is critical for protecting seeds and seedlings against soil- and seed-borne diseases, as well as insect pests that can impede crop emergence and growth. However, many farmers across the country are either unaware of the practice or do not employ it. Seed treatment is also acceptable under IPM. To encourage farmers across the country to adopt this practice, effective extension strategies must be implemented to make appropriate chemical pesticides/bio-pesticides and equipment available at farmers' doorsteps, as well as educating them on seed treatment techniques, post-treatment seed handling, and planting materials.

This calls for starting the Seed Treatment Campaign on an operational level. This effort aims to prevent farmers from sowing main agricultural seeds without first treating the seeds. The agencies who's responsible for the distribution and sell of

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seeds should allow for treated seed in market. The Commissioners/Directors of the State Agriculture Departments are required to establish campaign coordination and monitoring committees at the State, District, and Block levels in order to coordinate the work of the many agencies involved in the program. The many entities involved in the initiative must create and distribute awareness-raising materials to the farmers.

States and UTs are advised to identify the main *Kharif* crops sown in their States, the amount of seed needed for each crop and the amount to be treated at the farmer level (aside from seed sold by companies with seed treatment), the amount of chemical pesticides (insecticides & fungicides) and bio-pesticides needed and their availability, the number of seed dressing equipment needed and their availability, etc.

### **In what ways are seed treatments used?**

The term "seed treatment" encompasses both processes and merchandise. The environment in which seeds, seedlings, and young plants grow can be improved by utilizing specific products and procedures. From simple dressing to coating and pelleting, seed treatment varies in complexity.

❖ The most popular technique for treating seeds is seed dressing. The seed is treated with a dry formulation or a wet formulation such as slurry or liquid.

Dressings are applicable in both agriculture and industry. The required amount of chemical can be sprinkled over the seed lot and mixed mechanically by the farmers, or the seed can be spread out on a polythene sheet and the pesticides added to it that way.

- ❖ **Seed Coating:** To improve adhesion to the seed, a specific binder is combined with a formulation. The coating business needs sophisticated treatment technology.
- ❖ **Seed pelleting,** the most advanced seed treatment technology, improves seed palatability and handling by altering its physical structure. The priciest application is pelleting, which necessitates specialized equipment and methods.

### **References**

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