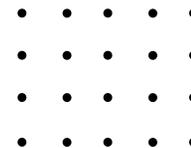


Seed/Plant Treatment with Panchagavya

3% solution of Panchagavya can be used for soaking seeds or dipping plants before planting. Soaking for 20 minutes is enough. Turmeric, ginger, and sugarcane sets can be soaked for 30 minutes before planting.



Turmeric Powder:

Turmeric known as the golden spice has natural bactericidal and antifungal properties. Mix 25gm of powder in 1 liter of water with 10kg seeds. The treatment protects against fungal rot and wilt disease.



Garlic Extract:

Garlic extract showed fungicidal activity on the endogenous fungal contamination of the wheat seeds. Allicin in garlic juice enhances the germination of wheat seeds disrupted by the natural mycoflora of grain. For application crush 250gm of garlic cloves in 1 lit of mineral oil. Keep it overnight and collect filtrate. About 20 kg of seeds can be treated with this extract.



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ORGANIC SEED TREATMENT TECHNIQUES



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What Is Seed Treatment?

Specific processing of the planting material to make it more resilient to harsh conditions is known as a seed treatment (or dressing). The benefit of seed treatment leads to increased germination and ensures uniform seedling emergence. As already seen, it protects seeds and seedlings from early-season diseases and insect pests thereby improving crop emergence and growth. Seed treatment also gives protection to the emerged seedlings from sucking insect pests.

Advantages of Seed Treatment:

- It protects germinating seeds and seedlings against soil and seed-borne pests and diseases.
- It improves the germination process and increases the germination percentage.
- It enhances the seed viability & vigour which are the two most important factors in agriculture or cultivation practices.
- It results in the early and uniform establishment and growth of the crop or plants.
- It enhances nodulation in legume crops.
- It results in uniform crop stand especially in adverse situations like low moist and high most conditions.



Organic Formulations

Some of the popular and well-tested methods of organic seed treatment are given below:

Seed Priming: In seed priming, seeds are soaked in water for 4–8 hours and dry before sowing. Seeds must be sown within 1-2 days after priming.

Pre-germination: Pre-germination is also considered good to make seeds free of diseases. For pre-germination soak the seeds in water for 12–24 hours or until small shoots appear in the seeds.

Seed solarization: Seed solarization is considered a very effective method for seed treatment. In summer months soak the seeds in cold water in the morning and expose them to strong sunlight from 8 am to 12 noon and then dry them in the afternoon. This kills the fungus inside the seed and provides a good disease control measure without using fungicides.

Biofertilizers: Rhizobium, Azospirillum, Azotobacter and Phosphobacteria are used for seed treatment. For inoculation of 10-12 kg seeds, 200 g of nitrogenous bio-fertilizer (Rhizobium) and 200 g of Phosphotica are used.

Method

Keep the seeds required for sowing in heaps on a clean floor, cemented floor, or in gunny bags. Prepare a thick solution of the culture by adding about 200 grams of bio-fertilizer in 400 ml water (@1:2 ratio). Sprinkle the culture solution over the seed pile and mix it with your hands so that the seeds are coated with a thin layer of solution. Spread the seeds in the shade and allow them to dry before sowing. It is also observed that rice starch gives better results instead of water. Treated seeds should be sown as soon as possible.

Beejamrutha

It is a fermented microbial solution, with loads of plant-beneficial microbes, and is applied as a seed treatment. It is expected that the beneficial microbes would colonize the roots and leaves of the germinating seeds and help in the healthy growth of the plants. The Beejamrutha is mainly used for seed treatment. The seeds soaked with Beejamrutha are controlling the seed's disease, which increases seed germination. It is effective in protecting young roots from fungus.

Inputs needed (for 10 kg seed):



Panchagavya

It is rich in growth enhancing substances like organic compounds, hormones, micro and macro nutrients and minerals besides having antibacterial and insecticidal properties. Panchagavya enhances the productivity by increasing the growth of roots, stems, branches and leaves and related parameters like root length, stem length, number of branches, number of leaves, leaf area index, chlorophyll content, oil content, protein content and other quality parameters contributing to the overall high yield.

Inputs needed (for 10 kg seed):



Method of preparation

Mix all the ingredients in a plastic or cement tank with the help of a wooden stick. Make sure that there is no lump in the cow's dung. The mixture should be rotated in a clockwise direction. Keep this solution under shade for 24 hours. Preparation time is 12-24 hours. Use it to disinfect the seeds within 48 hours. However, it can be kept for 7 days.

Treatment with Beejamrutha

Seed treatment: Collect seeds to be treated in a cotton cloth. Stir the solution once again clockwise before using it for seed treatment. Dip the bundle of seeds in Beejamrutha solution and place it there upto it gets completely soaked in the solution. After that remove the bundle of seeds and dry them in a shady area. Avoid direct sunlight and rainfall over it. After air drying of seeds sow them in the early mornings or evenings

For roots: Dip the plant roots in Beejamrutha solution for 2-3 minutes and after that you can use it for sowing.