Seed pathology definition and importance.

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Editorial

Seeds are used to propagate about 90% of all food crops on the planet, and they have a considerable impact on crop output potential. Seeds are also harmed by a variety of causes, including postharvest and storage disease viruses, as well as unfavourable environmental circumstances. Pathogens that infect seeds pose a serious hazard to crop establishment and productivity. Seeds exposed to disease pathogens and other harsh conditions have their normal physiology and metabolism disrupted, which has an impact on productivity. Seeds exposed to disease pathogens and other harsh conditions have their normal physiology and metabolism disrupted, which has an impact on productivity. It is consequently critical to diagnose, treat, prevent, and manage seed-borne illnesses as soon as possible.

Seed pathology, like every other field of science, has grown greatly over time; thus, the evolution and developing views of this vital discipline were discussed in this work. It is consequently critical to diagnose, treat, prevent, and manage seed-borne illnesses as soon as possible. Seed Pathology is a science that studies the 'biological entity' known as seed. Grasp Seed Pathology in the context of plant pathology requires an understanding of its structure, development, and function. In general, the term "seed" refers to anything that is planted in the ground and grows into a plant. However, because not everything that can be seeded is actually a seed, this wide definition is vague and deceptive. Several authors have defined seed in different ways, although they all essentially mean the same thing. Some people define a seed as a matured ovule produced by fertilisation in plants like gymnosperms and angiosperms that grows within the mother plant. A seed is an ovule that has matured, including the young embryo, nutrition for the embryo, and a protective coat. In other words, seeds are ovules that have been fertilised and contain embryos that are surrounded by an integument.

A seed is a developed ovule having an embryo, durable seed coat, and endosperm, according to all of these multiple variations of definitions proposed by different workers. A seed is a little embryonic plant encased in a seed coat, which normally contains some stored food in the cotyledon. And viable sources of cooking oils, drinks, spices, and other key food additions. Some are even used as rosary beads and necklace beads. Children also utilise seeds as toys, such as in the game conkers. Maize and other plant seeds are used as industrial raw materials in the fermentation of industrial chemicals such as grain alcohol (ethanol). Seeds, as crucial as they are to human survival, are exposed to microorganisms, some of which are pathogenic and negatively affect seed physiology and metabolism, resulting in low yield and/or quality.

As a result, seed health testing is a must before sowing in order to maximise output. Insect infestation, microbial infection, unfavourable temperature conditions, and other factors make seeds in storage vulnerable. Seed degeneration during storage difficulties is affected by the type of storage equipment and circumstances used, as well as biotic variables. Seed pests and microbial pathogens thrive in high-temperature, high-humidity storage environments, and their activities play a big role in seed deterioration and loss. Some fungal pathogens, including as Aspergillus, Penicillium, and Fuasrium species, create toxic chemicals or mycotoxins when they attack seeds, which can be dangerous to humans and animals that eat them.

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