

CLIMATE CHANGE AND SEED QUALITY

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ABSTRACT

With the introduction of quality seed of high-yielding varieties, Indian agriculture has witnessed a paradigm shift in the agricultural productivity from the 1960s onward, which was regarded as major impact of green revolution. It is universal that without high-quality seed, utilization of other resources and better technologies remain ineffective. Hence, seed being the crucial and foremost requirement, with its quality and availability, plays the most critical role in realizing the targeted crop production. The burning issue of climate change and its apparent consequences on seed quality as well as on seed production has not received importance till recent past, but the problem is very real. Seed quality comprises of several parameters, viz., physical and genetic purity of seed, seed germination, viability, vigor, seed health, and appearance like size, weight, shape, color, etc. These quality parameters depend on climatic variables prevailing during the entire crop growth period, harvest, subsequent seed processing, and storage. The weather aberrations like extremes of temperature, erratic rainfall, particularly during seed setting lead to severe fluctuations in overall seed production and therefore on its quality. The adverse climatic factors results in loss of quality as well as quantity of seeds, which will upshot to lower market value and non-availability followed by decreased crop area and poor crop harvest. This in turn severely affects both food and nutritional security of the nation as well as the economy of farmers. Therefore, owing to the importance of quality seeds, the potential impacts of climate change on seed production and quality parameters are needed to be studied in a holistic way.

Keywords- *Quality Seed, Climate change, seed production*