

Guidelines for Safety Assessment of Genome Edited Plants, 2022

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In news- The Department of Biotechnology (DBT) has issued 'Guidelines for Safety Assessment of Genome Edited Plants, 2022'.

About the Guidelines-

- These guidelines ease norms for research into genetically modified (GM) crops and circumvent challenges of using foreign genes to change crops profile.
- The GEAC usually evaluates research into GM plants and recommends, or disapproves, their release into farmer fields and the final call is taken by the Environment Minister as well as States where such plants could be cultivated.
- The Guidelines **exempt researchers who use gene-editing technology to modify the genome of the plant from seeking approvals from the Genetic Engineering Appraisal Committee (GEAC)** and the Environment Ministry too has sanctioned this exemption.
- The guidelines **define various categories of genome edited plants and determine regulatory requirements for appropriate categories** and provide the regulatory framework and scientific guidance on data requirement in context of development of these crops.
- The guidelines say that **all requirements that researchers must adhere to, to develop transgenic seeds will apply to gene-edited seeds** except clauses that require permission from the GEAC.
- Environmentalist groups have opposed this exception for

gene-edited crops as gene editing techniques, involves altering the function of genes and can cause “large and unintended consequences” that can change the “toxicity and allergenicity” of plants.

- Genome-edited plants are different from genetically-modified organisms (GMO) technology. Genome editing is a group of technologies that gives scientists the ability to change an organism’s DNA.
- The environment ministry, in a notification in March 2022, had exempted certain types of genome-edited crops from the stringent biosafety regulations applicable to genetically-modified (GM) crops.
- In the case of GM technology, applicants have to apply to the GEAC, which follows time-consuming testing methods along with states.
- Till now, cotton is the only GM crop that has been approved for commercial cultivation in the country.

The guidelines provide a road map for the sustainable use of genome editing technologies and **applicable to public and private sector research institutions** engaged in research and development and handling of genome edited plants.