

Norms eased for GM crop research

The guidelines exempt researchers from seeking appraisal committee nod

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The Department of Biotechnology (DBT) has issued guidelines easing norms for research into genetically modified (GM) crops and circumventing challenges of using foreign genes to change crops profile.

The 'Guidelines for Safety Assessment of Genome Edited Plants, 2022' exempt researchers who use gene-editing technology to modify the genome of the plant from seeking approvals from the Genetic Engineering Appraisal Committee (GEAC), an expert body of the Environment Ministry. The GEAC evaluates research into GM plants and recommends, or disapproves, their release into farmer fields. The final call, however, is taken by the Environment Minister as well as States where such plants could be cultivated. The Environment Ministry too has sanctioned this exemption.

The GM plants that usual-



Modifying crops: Transgenic technology involves introducing a gene from a different species into a plant. • REUTERS

ly come for such scrutiny are those that involve transgenic technology or introducing a gene from a different species into a plant, for instance BT-cotton, where a gene from soil bacterium is used to protect a plant from pest attack.

The worry around this method is that these genes may spread to neighbouring plants, where such effects are not intended and so their applications have been controversial.

The DBT says the document is a "... road map for

the development and sustainable use of genome editing technologies in India, specifying the biosafety and/or environmental safety concerns, and describing the regulatory pathways to be adopted while undertaking the genome editing of plants."

Several approaches

Genome editing involves the use of technologies that allow genetic material to be added, removed, or altered at particular locations in the

genome. Several approaches to genome editing have been developed.

A well-known one is called CRISPR-Cas9, which is short for clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9.

Gene editing can be used to make plants express properties not native to them.

Environmentalist groups have opposed this exception for gene-edited crops.

"Gene editing is included in genetic engineering. Therefore, there is no question of giving exemptions to particular kinds of genome edited plants from the regulatory purview," said a letter from Coalition for a GM-free India to Environment Minister Bupender Yadav.

Gene editing techniques, the letter alleges, involves altering the function of genes and can cause "large and unintended consequences" that can change the "toxicity and allergenicity" of plants.