

The Genome

THE NEWSLETTER

Pakistan, as a Party to the Cartagena Protocol on Biosafety, remains committed to ensuring the safe use of modern biotechnology through the establishment and operation of its Biosafety Clearing House (BCH). The BCH serves as a vital platform for transparency, providing access to national biosafety laws, risk assessment reports, and decisions regarding genetically modified organisms (GMOs).

The BCH empowers regulators, researchers, industry stakeholders, and the public by offering reliable information to make informed decisions about the import, export, and release of GMOs. It plays a key role in strengthening Pakistan's capacity to assess and manage potential risks to biodiversity and human health, while also facilitating responsible innovation in agriculture and biotechnology.

As we continue to navigate the benefits and challenges of GMOs, the Pak-BCH remains a cornerstone of our national biosafety framework, promoting transparency, scientific integrity, and public trust.

Ms. Nazia Zeb Ali
Director-General,
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Pak-EPA

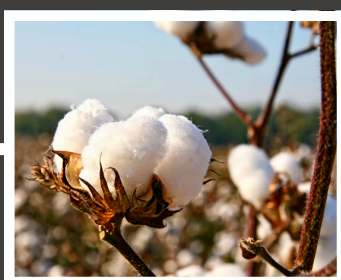
Inside the Issue



Capacity Building

Pak-BCH successfully conducted training sessions of Pak-BCH online portal for the notified Institutional Biosafety Committees (IBCs).

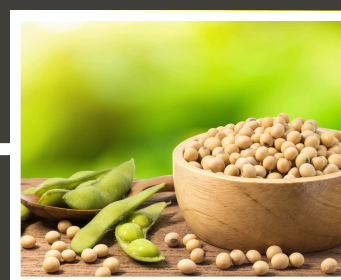
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SOPs for GM Bred

SOPs for cross bred GM variety were approved and published, marking a key decision for cotton landscape in Pakistan.

[Read more](#)



Key Discussions

Deliberations on import of GM soybean meal and GM canola for Food, Feed & Processing (FFP) have been made.

[Read more](#)



What Is GM Canola?

A Primer

Canola oil is one of the healthiest cooking oils and feed for livestock. The plant was named in 1978 combining "Canada" and "ola" meaning oil. Today, Canada is the biggest producer of canola in the world. Canada exports canola seed, oil, and meal to more than 50 countries. Major importers of canola enlists Japan, Mexico, and Europe.

Did you know?

Canola was created through plant breeding in the 1970s and it belongs to the same botanical family as cauliflower and cabbage.

Less Tillage, Lower Emissions

In 1990s, plant scientists created genetically modified canola varieties that are resistant to herbicides. It was a huge step for farmers because it helped in controlling the weeds. It eventually reduced carbon footprint by minimizing the need of tillage.



Rethinking Feed

GM Soybean Meal

Genetically modified (GM) soybean meal is a key component in the global agricultural supply chain, primarily used as a high-protein feed for livestock such as poultry, swine, and cattle. It is the solid residue left after oil extraction from GM soybean, which have been engineered for traits such as herbicide tolerance and, in some varieties, insect resistance.

The Benefits of GM Soybean Meal

It offers a consistent, affordable, and nutritionally rich source of protein, supporting efficient meat, egg, and dairy production on a global scale.

The consistent composition of GM soybean meal makes it particularly well-suited for

large-scale feed production, where uniformity is essential for nutrition planning.



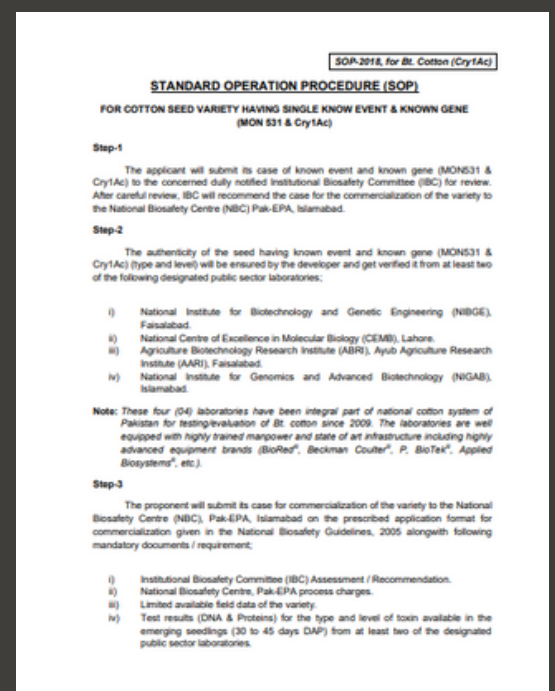
SOPs for Crossbred GM Varitey

Legal Pathway Cleared for Cross-Bred GM Variety

During the 33rd NBC, a landmark decision was taken as the Standard Operating Procedures (SOPs) for cross-bred genetically modified (GM) variety were finalized through unanimous consensus.

The committee conducted a thorough review of member inputs and engaged in detailed deliberations before formally approving the SOPs. The updated guidelines enhance regulation, biosafety, and agricultural innovation.

Importantly, the SOPs also outline the legal framework governing the cross-breeding of GM varieties and establish clear protocols for authorized technology transfer, ensuring transparency, accountability, and safe deployment of biotech innovations in Pakistan's cotton sector. You can download the SOPs [here](#)



National Biosafety Committee

Since the last edition of The Genome, three high-level meetings of the NBC; the 31st, 32nd, and 33rd, have been convened under the chairmanship of the Secretary, Ministry of Climate Change and Environmental Coordination (MoCC & EC). These meetings marked significant milestones in Pakistan's biosafety landscape.

A total of 32 cases were reviewed and approved, 4 related to laboratory manipulation work, 4 field trial applications, 1 commercialization request, and submissions from 21 importers seeking approval for the import of GM soybean grain for Food, Feed, or Processing (FFP). Among the key outcomes was the finalization and publication of SOPs for cross-bred GM variety, a pivotal step toward strengthening the regulatory framework, ensuring biosafety, and advancing agricultural biotechnology in the country.



TAC



Technical Advisory Committee

Pak-EPA convened the 38th, 39th, and 40th meetings of the Technical Advisory Committee (TAC), chaired by the Director General, to advance biosafety regulation and review key cases.

In the **38th meeting**, the Chair emphasized finalizing SOPs for cross-bred GM varieties, regulating illegal triple-gene cotton, and developing a concept paper on GM adoption in rice, wheat, and maize. TAC reviewed 1 field trial case, 1 commercialization case, and 16 import applications for GM soybean grain intended for FFP.

The **39th meeting** reviewed 6 laboratory manipulation cases, 4 field trial proposals, 1 commercialization case, and 5 FFP import applications for GM soybean grain. The Chair commended the committee's role in expediting the import process.

In the **40th meeting**, TAC reviewed import cases for GM Canola and GM Soybean Meal, 1 field trial, and 1 GM soybean grain import application.

Recommendations from all meetings was forwarded to the National Biosafety Committee (NBC) to support science-based decision-making and strengthen Pakistan's biosafety framework.

Import Permits Issued

345

Amount Imported

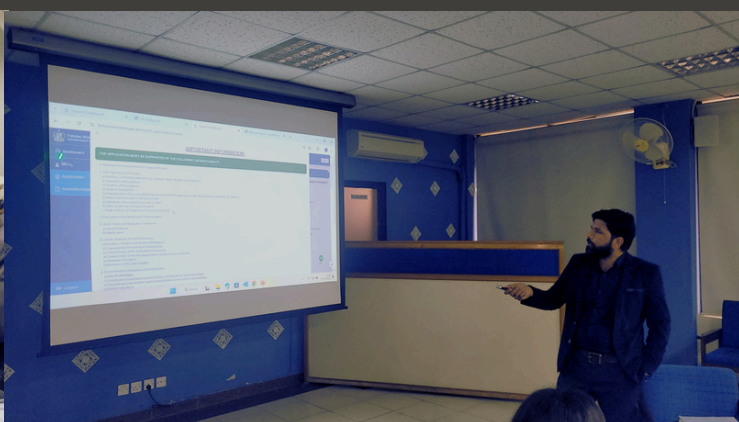
1,430,634 MT

IBC Trainings

Capacity Building

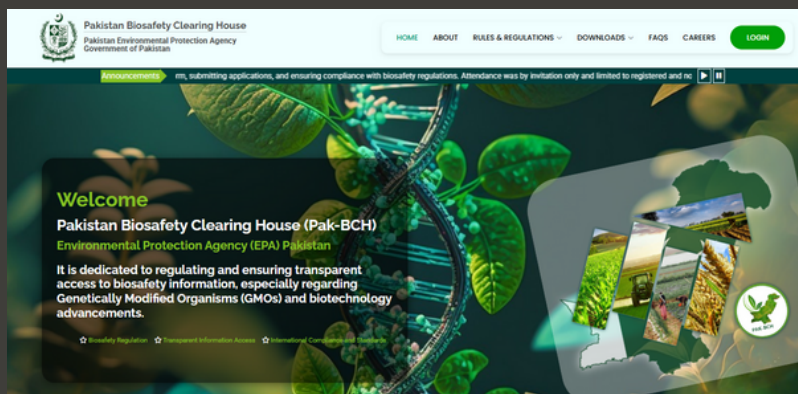
To strengthen biosafety governance and support the transition toward digital regulatory processes, Pak-EPA conducted a series of capacity-building sessions for Institutional Biosafety Committees (IBCs). These training sessions are designed to equip IBCs with the necessary skills and knowledge to submit applications through the newly developed Pak-BCH portal.

The portal is launched in alignment with Pakistan's obligations under Article 20 of the Cartagena Protocol on Biosafety, and serves as a one-stop platform for submitting and processing applications related to GM work. It aims to streamline application procedures, reduce paperwork, ensure regulatory transparency, and keep institutions updated on the latest biosafety rules and guidelines.



The Participants engaged in interactive discussions on documentation requirements, procedural steps, and regulatory compliance. Pak-EPA's technical team addressed queries in real-time, ensuring clarity and hands-on familiarity with the portal's functionalities.

Pak-EPA remains committed to rolling out additional training sessions in major cities, enabling IBCs nationwide to adopt and effectively use the Pak-BCH portal for online submission and monitoring of GM-related cases.



CASES

Category	Cases Approved / Under Review	Time Period
Lab Work	180 cases approved	2008-2025
Field Trial	303 cases approved	2008-2025
Commercialization	91 cases approved	2009-2025
FFP	47 events approved	2024

Way Forward

Pak-BCH is now expecting applications as part of the next phase in regulating work related to GMOs. The application process is officially open through the online Pak-BCH portal. All re-notified IBCs are encouraged to submit their applications via the portal. The Pak-BCH platform is designed to enhance both technological capability and human interface, improving efficiency and accessibility in biosafety regulation.

Editors

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