



Plant Biotechnology Stewardship Life Cycle

Crop Production

CropLife International and its members are committed to providing high value products to farmers and consumers, and encourage the use of good agricultural practices for product performance and environmental sustainability. By promoting the adoption of sound management practices, farmers can maximise the benefits of plant biotechnology to improve crop production efficiency and increase the availability of high quality crops, and to coexist with other crop production practices. CropLife International member companies participate in stewardship programmes such as Integrated Pest Management (IPM), to provide the most cost effective and environmentally sound method of pest management and maximise use of the technology.

Crop Utilisation

CropLife International and its members promote the safe and responsible use of their products. As such, CropLife International and its member companies work with stakeholders in the commodity food and feed channels to support technology adoption and international trade. Areas of focus include working towards synchronous authorisations in trading countries, following best seed quality practices to verify that products are fit for their intended purpose, to minimise unintended low-level presence of biotech-derived material, and to appropriately provide reliable detection methods for identity verification (where required).

Product Discontinuation

A normal and predictable end to the product life cycle includes removing or replacing older products from production and trade. CropLife International and its members are committed to working with stakeholders and national governments to ensure transparent and predictable programmes for product discontinuation. These include communication of discontinuation plans to key stakeholders and application of appropriate quality management procedures.

Gene Discovery

The first stage in the development of a biotech-derived plant involves a beneficial trait(s) being identified and transferred to a host plant. All activities take place in the contained environment of a laboratory. In addition to contained laboratory practices, one example of a stewardship practice conducted during this stage is a safety assessment of the biological material(s) used. Researchers examine the source of each gene and the potential for allergenicity and toxicity of any expressed proteins by comparing it to known allergens and toxins.

Plant Development

During the plant development stage, screening, extensive agronomic testing and evaluation, compositional analyses and selection continues in a contained greenhouse and eventually in the field under strict confinement procedures set out by national governments around the world.

As part of the industry's initiatives to support responsible stewardship, CropLife International developed a Compliance Management for Confined Field Trials manual, which has been the basis of workshops conducted worldwide. These workshops provide training for research personnel conducting confined field research trials of biotech plants. This programme is used and adapted by organisations in countries around the world.

Once a biotech plant is authorised, varietal development continues so that the germplasm is locally adapted and meets market requirements. The phasing-in and -out of varieties is another important area to be stewarded by those developing and producing seeds of commercial benefit.

Seed Production

During seed production, seed companies increase seed volumes according to defined quality standards and requirements. Stewardship measures, such as the isolation of seed production fields, are in place to maintain industry seed quality and purity requirements.

In many countries, seed production is part of a legally sanctioned system for quality control which consists of seed quality tests. These form the minimum requirements for the plant science industry. Strict quality assurance and quality control measures are employed to maintain product quality, purity and integrity, so that seeds sold will yield harvests with the desired agronomic characteristics and traits.

Seed Marketing & Distribution

Prior to the commercial sale of any biotech-derived plant or seed, technology providers secure all appropriate regulatory authorisations in keeping with the CropLife International Product Launch Stewardship guideline as a prerequisite to introduce their product to the market.

Pre-commercial market and regulatory assessment is an important component in the development and commercialisation of any new product or technology. To this end, CropLife International recognises Product Launch Stewardship Policies, as well as considerations regarding any national labelling and traceability requirements. Once authorised for sale, technology providers work with seed retailers, growers, processors, food retailers and consumers to promote responsible product marketing, distribution and use.