

## *Executive summary*

This document constitutes the third volume of the OECD Series on Novel Food and Feed Safety. It is a compendium collating in a single publication the individual “consensus documents” on the composition of crops published by the OECD Working Group for the Safety of Novel Foods and Feeds from 2015 to 2019. The plant species covered by this Volume 3, presented in the order of their initial publication, are common bean, rice, cowpea and apple. The four crops are of highly significant importance in global agricultural production and the human diet.

The consensus documents on common bean, cowpea and apple composition are new to the series, while the publication on rice composition revises and updates the original issue of 2004, therefore replacing the rice chapter previously included in Volume 1.

The consensus documents prepared by the working group focus on compositional considerations for plants that can be subject to genetic engineering and development of “transgenic” crop varieties. Each chapter opens with background information on the species under consideration: its production, transformation process and uses for foods and feeds, followed by a brief summary on appropriate comparators for testing new varieties and screening characteristics used by breeders. Then the core of the chapter collates detailed information and solid data on compositional elements: key nutrients and anti-nutrients, toxicants, other metabolites and allergens where applicable. The main nutrients identified for each crop include usually proximate elements, carbohydrates, fibres, proteins, lipids, minerals and vitamins. Depending on the considered species, the important anti-nutrients and other constituents might be for instance phytic acids, tannins, saccharides, alkaloids, polyphenols or inhibitors, including allergenic elements in some cases. The final section of each chapter suggests key products and constituents for analysis of new varieties for food use and feed use, these analyses being conducted in a comparative approach as part of a safety assessment.

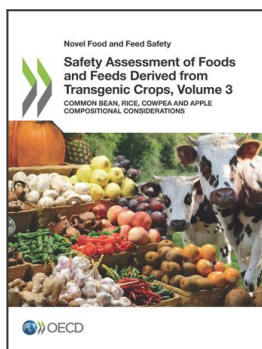
Modern biotechnologies are applied to plants, and also trees, animals and microorganisms. The safety of the resulting products represents a challenging issue, in particular for genetically engineered crops that are increasingly cultivated and foods or feeds derived from them marketed worldwide. The novel products should be rigorously assessed by governments to ensure high safety standards for the environment, human food and animal feed. Such assessments are considered essential for healthy and sustainable agriculture, industry and trade.

Since 1999, the OECD Working Group for the Safety of Novel Foods and Feeds assist countries in evaluating the potential risks of transgenic products, foster communication and mutual understanding of relevant regulations in countries, and facilitate harmonisation in risk/safety assessment of products from modern biotechnology. This is intended to encourage information sharing, promote harmonised practices and prevent duplication of efforts among countries. Therefore, the working group’s programme contributes to reducing costs and potential for non-tariff barriers to trade, while consolidating high food and feed safety standards. Focused on novel foods and feeds derived from genetically engineered organisms, the working group’s activities and outputs are directly

complementary to those of the Working Group on Harmonisation of Regulatory Oversight in Biotechnology, which deals with environmental safety.

OECD member countries, other economies, international bodies and observer organisations from all regions of the world take part in the working group. National participants and experts come from the ministries and agencies responsible for the risk and safety assessment of novel foods and feeds. Delegates exchange experience and information, identify new needs and develop practical tools for helping the assessment. The main outputs are the “consensus documents”, which compile science-based information and data relevant to this task. The key composition elements that they contain can be used to compare novel foods and feeds with conventional ones.

These documents, agreed by consensus among countries and published by the OECD, constitute a solid reference recognised internationally. They are widely used in comparative approach as part of the risk/safety assessment of transgenic products. As such, this publication should be of value to applicants for commercial uses of genetically engineered crops, to regulators and risk assessors in national authorities in charge of granting approvals to transgenic plant products for their use as foods or feeds, as well as to the wider scientific community.



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