

DETECTIVE – Detection of NGT products to promote innovation in the European union



DETECTIVE, a four-year EU-funded research project was launched on 1 January 2024. It aims to **develop and validate innovative detection methods in plants and animals** of new genomic techniques (NGTs) and their derivative products.

The European and international food production and distribution systems are interlinked and the need to trace plants and animals and their food products is important for labelling, transparency, and consumer choice. This requires the development of cost-effective, easy-to-use and reliable detection and traceability approaches for NGT-derived plant and animal products.

Thus, **DETECTIVE works towards sustainable food systems** and the integrity and reliability of food products on the European market, actively contributing to the objectives of the European Green Deal and the Farm to Fork Strategy.

DETECTIVE will closely monitor legal developments in the field of NGTs in the EU and internationally and carry out legal and socio-economic impact analyses of various EU policy scenarios.

Recognising the shortcomings of existing analytical methods for detecting NGT products, DETECTIVE is enhancing its research and development efforts by also exploring alternative, non-technical approaches to identity preservation in the supply chain. It will involve key stakeholders – official and private laboratories, farmers, breeders, and agri-food supply chain stakeholders – to jointly identify detection needs and ways to improve knowledge and capabilities for reliable detection across EU.

The specific objectives of DETECTIVE are to:

- 1** Create a common understanding of the traceability, authenticity and transparency needs regarding NGT products by stakeholder type through the systems mapping approach (SMA) and the Responsible Research and Innovation (RRI RoadmapTM);
- 2** Develop analytical techniques capable of detecting, identifying and quantifying known and unknown mutations, multiple mutations, and cisgenic events and validate these methods in accredited laboratories;
- 3** Develop a data space as a cluster of databases covering a multitude of gene-edited and cisgenic organisms, gene sequences, natural and breeding-related variability (breeders' gene pool);
- 4** Analyse the socio-economic and regulatory implications of various technical and non-technical strategies for detection, traceability and authenticity of NGT plant and animal products;
- 5** Empower enforcement authorities, certified laboratories, private laboratories, developers and agrifood operators through a co-created empowerment plan with train-the-trainers and capacity-building programme by applying the RRI RoadmapTM;
- 6** Establish a community of practice (CoP) to facilitate knowledge sharing among laboratories across EU.

The consortium of DETECTIVE is led by the Swedish University of Agricultural Sciences (SLU). It includes a multi-disciplinary consortium of 20 partners from eight EU Member States, Switzerland, and China, including also the Joint Research Centre from the European Commission. Contact: Dennis Eriksson, Project Coordinator, dennis.eriksson@slu.se

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