

## GENETICALLY MODIFIED ORGANISMS (GMOs)

Despite modern plant protection practices, it is estimated that around 40% of the world's harvest is still jeopardized by pests, weeds and diseases. With the world's population expected to increase to 8 billion by 2025, the rural world will be put under huge pressure to increase productivity. At the same time consumers are demanding higher and higher food quality. In addition, given the foreseeable exhaustion of fossil fuels and the resulting increase in demand for biofuels, a new generation of farmers in Europe is facing numerous challenges within the framework of a rapidly changing market. ELO believes that within the context of a balanced approach, biotechnologies, and especially GMOs, are a powerful tool that can be used to help meet these needs.

### Basic legislation:

**Directive 90/219/EC** on contained use activities with GMOs

**Directive 2001/18/EC** on the deliberate release of GMOs into the environment

**Regulation 1829/2003** on GM food/feed

**Regulation 1946/2003** on the transboundary movement of GMOs

**Regulation 1830/2003** traceability and labelling of GMOs

The EU Commission defines GMOs as « *organisms in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating or natural recombination* ». The most common types of GMOs that have been developed and commercialised are genetically modified crop plant species, such as genetically modified maize, soybean, oilseed rape and cotton varieties.

### ELO promotes the sustainable use of GMOs:

GMOs can provide clear benefits for agriculture and the society as a whole. They include economic benefits for farmers (in preventing insect feeding damage, improving weed control programs, preventing crop loss to plant disease), environmental advantages (mitigating loss of soil organic matter, sparing water), as well as direct benefits for consumers (improving the quality and nutritional benefits of food crops, i.e. « Golden Rice »). In addition, they allow a much more efficient production of "green fuel." It has been proven that transferring genes to a target crop plant can improve plant characteristics and help solve difficult agricultural problems.



ELO is also in favour of research which would produce genetically enhanced plants able to increase yields, make industrial processes more efficient and cleaner, while providing safer, healthier and better-tasting food for consumers. In addition, this new generation of « biotech products » could also be used to develop pharmaceutical products for human health or proteins for life-saving drugs.

The European Commission has developed a legislative framework based on the **precautionary principle** to ensure that GMOs that are grown, marketed and imported meet the highest standards of safety for the environment, and for human and animal health.

In 2006, the Austrian Presidency organised 2 topical Conferences on GMOs, in which ELO actively took part, one on the so called « **precautionary principle** » and the other one on « **co-existence** ».

**Directive 2001/18/EC covering the deliberate release into the environment of GMOs allows Member States (MS) to establish co-existence measures.** The concept of “co-existence” addresses the ability of farmers to choose between conventional, organic or GM-based crop production, in compliance with the relevant EU legislation on **traceability, labelling** and/or **purity standards**. EU regulations have introduced a 0.9% labelling threshold for the “adventitious” presence of GM material in non-GM products. The Commission is however considering proposing new lower thresholds. Co-existence measures should indeed make it possible for farmers growing non-GM crops to keep the adventitious presence of GM material in their harvest below the labelling thresholds established by EC law. Farming does not take place in a closed environment and perfect segregation of the different agricultural production types is not possible in practice, thus meaning that suitable technical and organisational measures during cultivation, harvest, transport and storage might be necessary to ensure coexistence. **ELO strongly believes that the coexistence of the 3 types of crops should be left open to the choice of producers and pave the way for more research.**

**Directive 2001/18 and Regulation 1829/2003 on GM food/feed also provide for environmental risk assessment.**

Specific principles are to be followed when conducting risk assessment, in order to ensure that all types of potential risks are addressed. The authorisation procedure ensures that only GMOs which are safe for human and animal consumption and for release into the environment can be placed on the European market.

The **risk assessment methodology** (Annex II to Directive 2001/18/EC):

- identification of any characteristics of the GMO(s) which may cause adverse effects
- evaluation of the potential consequences of each adverse effect
- evaluation of the likelihood of the occurrence of each identified potential adverse effect
- estimation of the risk posed by each identified characteristic of the GMO(s)
- application of management strategies for risks resulting from the deliberate release or placing on the market of GMO(s)
- determination of the overall risk of the GMO(s)



Moreover, on 24 September 2004, the Scientific Panel on Genetically Modified Organisms (GMO Panel) of the European Food Safety Agency (EFSA) adopted its **guidance document** for the risk assessment of genetically modified (GM) plants and derived food and feed. This document has been updated in 2005 modifying the chapter on “General Surveillance of unanticipated adverse effects of the GM Plant ».

**ELO welcomes the EU Commission’s decision to improve, within the existing legal framework and in compliance with EC and WTO law, the scientific consistency and transparency for decisions on GMOs, through developing consensus between all interested parties and avoiding undue delays in authorisation procedures. Meanwhile, the organisation underlines that it is important that EFSA's scientific safety assessment process doesn’t become too politicised and calls for more transparency when applicants and EFSA are addressing potential long-term effects and bio-diversity issues in their risk assessments for the placing on the market of GMOs .**