

## GREEN BIOTECHNOLOGIES

The dramatic consequences of climate change and loss of biodiversity, when combined with the rising demand in food following the steepening of the population curve above all in developing countries, and with a global energy demand forecast to increase by 50% by 2025, imply that the demand in natural resources will put the rural world under huge pressure to increase productivity while sparing natural resources, notably water. At the same time, consumers are demanding higher and higher food quality. **ELO believes that within the context of a balanced approach, green biotechnologies, and especially GMOs, are a powerful tool that can be used to help meeting these needs.**

The number of Member States (MS) cultivating GM crops and their total area of cultivation is increasing. It's visible: in 2007, GM crops represented 110000 hectares in 8 EU MS: Portugal, Spain, Germany, France, Czech Republic, Slovakia, Poland and Romania.

As a matter of fact, biotechnology is being exploited at an accelerating rate by Europe's competitors. Planting in Europe has however been much slower, but is increasing as farmers further realize the benefits of biotech crops.



GMOs can provide clear benefits for agriculture and the society as a whole. They include sustainable benefits for farmers as they increase global crop productivity in improving food feed, fibre, environmental and energy security.

Some concrete non-exhaustive examples: preventing insect feeding damage, improving weed control programs, preventing crop loss to plant disease, using less pesticides, mitigating loss of soil organic matter, fighting erosion and compaction through less ploughing, and a crucial sparing of water resources, as well as direct benefits for consumers such as improving the quality and nutritional benefits of food crops, hence contributing to the alleviation of poverty and hunger.

In addition, they allow a much more efficient production of "green fuel." Besides, green biotechnologies have already reduced the global environmental footprint of production agriculture by 14% including reductions of CO<sub>2</sub> emissions equivalent to taking 5 million cars off the road for one year.

ELO is 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, subject to risk assessment.

**In 2007 a special focus was dedicated to the concept of coexistence.**

### What does mean coexistence?

Directive 2001/18/EC covering the deliberate release into the environment of GMOs allows MS to establish coexistence measures.

The coexistence refers to the ability of farmers to choose between conventional, organic or GM-based crop production, in compliance with EU legislation on labelling and-or purity standards to avoid commingling and cross-pollination, and relates to the economic consequences of farmers complying with the coexistence measures as well as dealing with adventitious presence (AP) of GM trait in non-GM crops.

A major concern when adopting GM crops in agricultural systems relates to the possibility of unwanted GM inputs into non GM crops.

The EU regulations have introduced a 0.9% labelling threshold for the AP of GM material in non-GM products. ELO participated in the 3rd edition of the conference in coexistence between GMOs and non GM agricultural supply chain (GMCC07) that took place in Seville, on 20-21 November 2007.

The upshot of the Conference showed that coexistence raises question such as harvest purity, crop transformation, transport and segregation efficiency.

## National measures adopted or proposed in the MS regarding coexistence:

Draft coexistence legislation has to be notified to the EU Commission. In August 2007, 15 MS notified theirs. In some cases, the competence for coexistence measures lies at regional level.

In 2007, the legislation had already been adopted after notification in 7 MS: Austria, Czech Republic, Germany, Denmark, Portugal, Hungary and Slovakia.

Romania adopted coexistence legislation before its accession to the EU. In some cases, framework legislation was adopted or proposed, with detailed good agricultural practices still to be developed.

Technical strict coexistence measures include isolation distances between GM and non-GM fields, in some specific cases for crop and seed productions. They are key segregation measures.

It is up to MS to provide for flexible measures such as buffer zones, which can be additional or substituting isolation distances, temporal isolation measures (cultivation intervals), volunteer control, cleaning of equipment (harvest, transport, storage), etc.

In addition, some MS oblige GM crop growers to undergo specific training. Specific information procedures have been established to ensure a flow of information to public authorities, and in many cases, neighbours.

The EU coexistence bureau is in charge of elaborating crop specific guidance for coexistence measures. It aims to have EU-wide application while taking into account the diversity of agricultural systems.

**ELO strongly believes that the coexistence should be left open to the choice of producers and pave the way for more research.** The European Commission should ensure that, for biotech products authorized in the EU, Member States do not restrict farmers' access to such products through the use of arbitrary and illegal bans or through the adoption of discriminatory national or local coexistence rules.

In 2008 a study from the ISAA (International Service for the Acquisition of Agri-biotech Applications) showed that in 2007 GM crops increased by 12% i.e 12.3 millions hectares, hence amounting 114 millions hectares in the world. This increase has been followed by 2 million more GM farmers. However, at EU level, clear political decisions are still expected as regards authorisation of new plants... Some MS are very hostile to GMOs, as illustrated by the brand new German law allowing certain products such as meat, eggs and milk to be labelled « GM free ». This label should appear in a near future in the food department store.

It is crucial to demonstrate to the public opinion as well as to the decision makers the difficult situation in which land managers and farmers will be (and to some extent, already are), in a globalized economy not really favourable to EU farmers, if the EU doesn't get to grips with adopting a more courageous attitude towards biotechnologies.

The EU is indeed already far behind its competitors who could increase their yields thanks to biotechs.

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.

### BASIC LEGISLATION/USEFUL DOCUMENTS:

**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

Second Report from the Commission to the Council and the European Parliament on the experience of Member States with GMOs placed on the market under Directive 2001/18/EC. **(COM(2007) 81 final)-Annexes to the Report SEC (2007) 274**

### AUTHORISATIONS

**List of products authorised** under Directive 90/220/EEC

**List of products authorised** under Directive 2001/18/EC

**List of pending products** under Directive 2001/18/EC

**List of safeguard clauses**

