

White Book on Genetically Modified Crops

High production of the first-rate food depends largely on efficient cultivars that have traditionally been obtained by random mutations followed by hybridization of selected plants. This approach builds on the limited endogenous genetic resources of each species. Modern science developed sophisticated genetic modifications (GM) by which the innate resources can be enriched by genes taken from other organisms. Transferred genes confer a new useful trait, for example resistance to insect pests.

As any other agricultural technology (soil tilling, herbicide application, biological control of insect pests, etc.), the production of GM crops is a human interference with nature and must be deployed with care. The risks and benefits of the GM crops must be compared with other techniques serving the same purpose, for example insecticide application in insect pest control. Scientific evidence as well as practical experience demonstrated that the GM crops commercialized so far bring considerable economic benefits to the farmers and are environment-friendly. In spite of the favorable experience overseas, the deployment of GM crops in EU is a subject of disputes. The opponents argue that GM crops would endanger the environment, while the proponents caution that condemnation of a modern technology endangers EU competitiveness. EC is aware of the problem and requested EFSA to review current EU legislation on the GM crops. The Council of the Ministers of Environment that convened on December 4, 2008, invited *Member States to ensure full participation of their competent scientific bodies in the consultation the EFSA will undertake during the revision process, by offering their contribution on the project within the required time frame.*

Many European scientists are disturbed by the fact that political factors and ideology prevent unbiased assessment of the GM technology in some EU countries, with a negative effect on the whole Community. Being aware of the responsibility their country bears during the EU Presidency, Czech scientists working with GM crops prepared a White Book summarizing their experience and analyzing relevant EU legislation. The book has been prepared in frame of EU project called MOBITAG and published by the Biology Centre ASCR. It is available as a pdf file on <http://www.bc.cas.cz/en/MOBITAG.html>.

White Book is concluded with the following recommendations to the policy makers:

1. Decisions concerning genetic modifications should not contradict scientific evidence.
2. Breeding techniques, including GM, should primarily be evaluated in respect to the outcome rather than the process itself.
3. Precautionary principle should be replaced by serious and robust risk/benefit assessment applied to all innovations in agriculture.
4. Risk assessments should always include the benefits and comparison of parallel technologies with all their components (e.g. GM crop deployment, standard agriculture with pesticides, and organic farming with permitted plant protection measures).
5. Economic assessment should also be done by comparison with parallel technologies.
6. If Member states are allowed to ban technology permitted elsewhere in the EU, they should also be allowed to use a technology that has not yet been approved by the EU, provided that it does not impinge on the other Member states.

František Sehnal
Director of the Biology Centre ASCR