

## Current status of GMOs in the Czech Republic in 2011

### I. Legislative Framework

The legislative framework of the Czech Republic has been harmonised with the EU legislation. The basic national legal instrument concerning use of GMOs is the Act No. 78/2004 Coll., on the Use of Genetically Modified Organisms and Genetic Products, as amended, with an implementing Decree No. 209/2004. The Act transposes EU Directives 2001/18/EC and 2009/41/EC, therefore it covers the contained use, deliberate release of GMOs into the environment and placing on the market of GMOs as or in products. It has been in force since February 2004.

The EC Regulations 1829/2003, 1830/2003 concerning authorisation of GM food and feed, traceability and labelling of GMOs and GM food and feed and Regulation 1946/2003 implementing the Cartagena Protocol have been directly applicable in the Czech Republic since its accession to the EU in May 2004.

General rules on the co-existence of genetically modified crops with conventional and organic farming are set by the amendment to the Act on Agriculture and are complemented by case-specific measures for each GM crop by the implementing Decree (so far for maize, potatoes and soybeans).

### II. State Administration

The Competent Authority handling the notifications and regulating the use of GMOs in the Czech Republic is the Ministry of the Environment of the Czech Republic (Competent Authority under EU Directives 2001/18/EC and 2009/41/EC). It co-operates with the Ministry of Health as regards risks for human health and with the Ministry of Agriculture as the agricultural risk, animal health, crops and feeds are concerned.

An expert advisory body to the Ministry of the Environment is the Czech Commission for the Use of GMOs and Genetic Products that consists of scientists, representatives of administrative authorities and NGOs.

The Ministry of the Environment is the Competent Authority and the focal point for the Cartagena Protocol on Biosafety and for the EC Regulation No 1946/2003 as well.

The Competent Authority on state supervision of the use of GMOs is the Czech Environmental Inspectorate. It co-operates with other state supervision bodies in fulfilling this task.

The Ministry of the Agriculture of the Czech Republic is the Competent Authority under EC Regulation 1829/2003 on genetically modified food and feed. It also sets down the rules of coexistence.

### III. Notifications – contained use

More than 90 institutions are authorised for the contained use of GMOs in the Czech Republic. All contained use notifications so far have concerned class 1 and 2, there are no cases of class 3 nor 4 contained use.

Organisms commonly used in the tests are as follows:

- Microorganisms - viruses, bacteria, yeasts
- Plants – *Arabidopsis*, brassica, campion (*Silene*), carrot, chrysanthemum, flax, goosefoot (*Chenopodium*), hop, lettuce, maize, pea, petunia, potato, oak embryos,

rhododendrum, soya, spruce, strawberry, tobacco, tomato, vine, vetch (*Vicia*), oil seed rape

- Animals – drosophila, fly, nematode (*Caenorhabditis*), hen, moth (*Bombyx*), laboratory mouse, laboratory rat, rabbit, pig.

#### IV. Approvals – field trials

In the growing season 2011 following field trials with GM crops are conducted:

Potatoes:

1. Potatoes with modified sugar content notified by the Institute of Experimental Botany, Czech Academy of Science
2. Potatoes with improved resistance to late blight (*Phytophthora infestans*) notified by the Institute of Experimental Botany, Czech Academy of Science
3. Potatoes AV43-6-G7 with an altered starch composition, notified by BASF
  - a new field trial conducted from the growing season 2011

Maize:

4. Maize NK 603 and hybrid NK603 x MON 810 conferring tolerance to glyphosate and resistance to a corn borer; notified by Monsanto
5. Maize 88017 conferring tolerance to glyphosate and resistance to selected coleopteran pests, notified by Monsanto and The Biology Centre of Czech Academy of Science
  - study for monitoring the potential impact of non-target organisms
6. Maize VCO-Ø1853-3, VCO-Ø1896-1, VCO-Ø1902-7, VCO-Ø1936-5, VCO-Ø1981-5 conferring tolerance to glyphosate; notified by Limagrain Central Europe

Others:

7. Flax with various modifications notified by the Czech company Agritec (a small trial for research purposes)
8. Tobacco notified by Charles University (a small trial for research of plant physiology)
9. Plum tree with a modification conferring virus-resistance (resistance to plum pox) notified by the Crop Research Institute (a small trial for research purposes)
10. Pea with various modifications (resistance to fungal pathogens, selected viruses or insect pests, enhanced accumulation of seed proteins, earlier development of seed embryo); notified by the company Agritec Plant Research (a small trial for research purposes)
11. Sugar beet H7-1 conferring tolerance to glyphosate, notified by SESVanderHave
  - a new field trial conducted from the growing season 2011
12. Rhizomania resistant SBVR111 sugar beet, glyphosate tolerant H7-1 sugar beet and stacked SBVR111 x H7-1 hybrid, notified by Syngenta
  - a new field trial conducted from the growing season 2011
13. Barley producing enzyme phytase, notified by the Institute of Experimental Botany, Czech Academy of Science
  - a new small-scaled field trial for research purposes conducted from the growing season 2011

A notification for field trial with sugar beet H7-1 tolerant to the herbicide glyphosate (notified by KWS) was withdrawn on request of a notifier in early 2011.

Expected **area of above-mentioned field trials is ca 8.8 ha.**

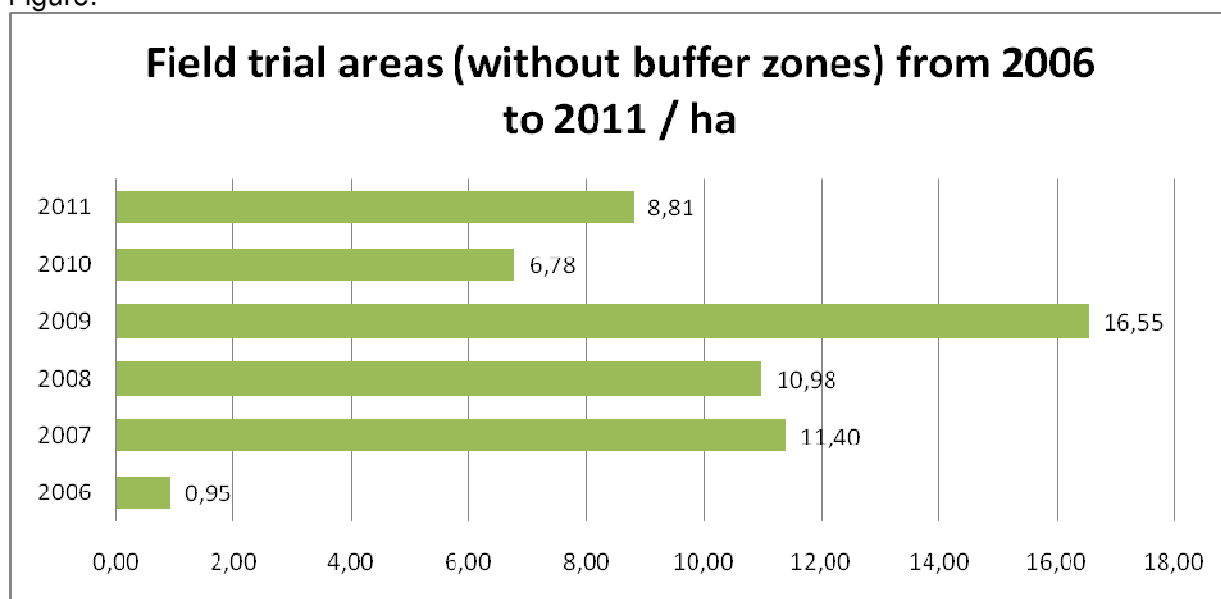
Following authorised field trials were suspended by the consent holders for the growing season 2011:

1. Maize 98140 (herbicide tolerant) notified by Pioneer,
2. Maize with stacked genes – (i) MON89034 x NK 603 conferring tolerance to glyphosate and resistance to selected lepidopteran pests including a corn borer, and (ii) MON 89034 x 88017 conferring tolerance to herbicide and resistance to a corn borer and selected coleopteran pests, notified by Monsanto
3. Maize with stacked genes – Bt11 x MIR162 x MIR604 x GA21; Bt11 x MIR604 x GA21; Bt11 x GA21, MIR162; MIR604 – these hybrids confer different combinations of tolerance to herbicides containing glyphosate and glufosinate ammonium and resistance to selected lepidopteran and coleopteran pests, notified by Syngenta
4. Maize GA21, herbicide tolerant, notified by Syngenta

Two field trials with GM potatoes with (i) altered starch composition and (ii) increased resistance to late blight (both notified by BASF) were terminated.

Generally said, field trials for research purposes conducted in cooperation with research institutes and / or universities continue in 2011 whereas most field trials managed by main seed companies to test agronomical performance are suspended.

Figure:



## V. Commercial cultivation

Maize:

Following the registration of MON 810 varieties into the European seed catalogue this maize was commercially cultivated for the first time on 270 ha in 2005. In following three years the field area for GM maize increased up to 8380 ha in 2008. In 2009, the area sown with the GM maize decreased for the first time by ca 22 % to 6480 ha. This trend continued in 2010, when MON

810 was cultivated on 4680 ha. Data on area sown with GM maize in the season 2011 are still being gathered, however, similar or slightly reduced area is expected.

Potatoes:

GM potato EH92-527-1 with increased accumulation of amylopectin starch in tubers (Amflora) was cultivated on 150 ha in the Czech Republic in the season 2010. The tubers have been processed to starch for industrial use. Due to problems with purity of seed tubers the consent holder (BASF) does not plan any cultivation of Amflora in the Czech Republic in the season 2011.

The Competent Authorities keep lists of the locations where GM maize is grown. Maps of the fields are available to the Authorities, Regional Agricultural Agencies and to farmers in the Land Parcel Identification System (LPIS).

The list of the authorised users and the issued approvals together with the relevant legislation and other information are made available to the public and updated on the website of the Ministry of the Environment, Czech Republic, at the addresses [www.mzp.cz](http://www.mzp.cz) and in English at <http://www.mzp.cz/biosafety> .

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