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GMO IN CROP AND FEEDSTUFF PRODUCTION IN THE CZECH REPUBLIC

GMO U PROIZVODNJI ŽITARICA I STOČNE HRANE U ČEŠKOJ REPUBLICI

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The world production of plant raw material on transgenic variety base (varieties containing GM organisms) is steadily increasing and by now has exceeded the production area of 150 mil. ha. Especially the areas of the most important corn and oil plants in America and Asia are seeded with GMO varieties of maize, soya and rice in a great and still increasing share. The world trade with GMO seed increased from as good as zero volume in 1996 to 8 bil. EUR in 2007.

The EC Member states are very careful in this matter and the system of allowance of new transgens and products made on their base is difficult and time-consuming. The opinion of Member states citizens, especially in some of the Member states, is very critical and GMO products are often fundamentally refused on the market.

However, globalization of food, feedstuff and raw material trading and economic disadvantages of such attitude lead to gradual deregulation and discussions on further steps.

The Czech Republic is one of the Member states, where the attitude of the responsible authorities, the food and feedstuff producers and also the Czech citizens is very tolerant compared with the rest of the EU. Today the GM varieties (mainly maze varieties) are grown on app. 6-8 thousand ha of arable land (second place among Member states) and the production is mainly used for feedstuff production.

Legislation setting rules for marketing feedstuffs containing GMO or produced from raw materials on GMO base is based on regulations setting requirements for food and feedstuff safety (so called “hygiene package”).

Basic regulations concerning this topic are Regulation (EC) No 1829/2003 of the European Parliament and of the Council on genetically modified food and feed and Regulation (EC) No 1830/2003 of the European Parliament and of the Council concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms.

Regulation No 1829/2003 assumes, that before a GMO or GMO based product is launched, there must be done a scientific risk assessment provided by centrally established European Food Safety Authority (EFSA). On the basis of risk assessment the European Commission decides according to the prescribed procedure whether the product is allowed and is put in the central register or not. Feedingstuff containing GM components must have unified labeling, so the consumer has a choice and the official control can be done.

EC reference laboratory cooperating with EFSA and Member states national reference laboratories was established to guarantee objective control.

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Regulation No 1830/2003 supplements rules on securing traceability of products containing genetically modified organisms, particularizes the labeling of marketing products, monitors effects of GM products on environment and public as well as animal health and also defines the implementing rules on risk management remedies.

It is explicitly stated that products containing GMO must have a label stating „*this product contains genetically modified organisms"*. Furthermore, the unambiguous identification codes are being set up.

The regulation also specifies the liability of each authority both at the EU level as well as the member state level.

On the national level the Act No 78/2004 Coll., on GMO treatment is the jurisdictional legal rule.

The important rules, which allow the farmers a free choice between the conventional production and GM production, are principles of coexistence of both above mentioned systems. Furthermore, it is important to distinguish them from systems of organic farming, seed production or technical crops.

The Czech Republic has implemented these rules to the Act No 252/1997 Coll., on Agriculture, as amended.

Table 1. GMO the content in controlled parts of feedstuffs

Corn	6,7% GMO findings
Rice	0
Soya	90%
Rape	92%

The control, organised by the Czech Republic, as well as by other Member states, demonstrates a higher proportion of GM products than comply with the national production as well as products or materials declared as GM products.

That shows the small effect of set up controlled and permitted mechanisms and practical attainability of separation GM materials at globalize market.

Conventional soya varieties from sources coming from the EC are practically unattainable.

It is often said that risk analyses will not cover all products produced by GM technologies but they will point to risks of each product without reference to its technological origin. The registration of a transgen combination should be replaced by the registration based on a characteristic of the final product.

Tolerant attitude of the Czech Republic results in a relatively high number of registered varieties containing GM. Nowadays, twenty 23 GM corn hybrids are recorded in the national register of the Czech Republic and another 41 hybrids are under administrative procedure. Most of them are a modification of MON 810 – resistance against corn pyralid.

The experience from various trials shows that the resistance against corn pyralid secondarily decreases the possibility of plant to be affected by fungus diseases and thereby the lower level of mycotoxin in production.

Furthermore, GM hybrids achieve higher crops yield of grain (up to 30 % GM in comparison with conventional varieties) and there are also savings in plant protection.

The negative effects are later ripening of GM hybrids, administration and technical demands in breeding and possible marketing problems with production.

Within the global climate changes the plant diseases as well as pests are being spread and that is why new breeding technologies are important.

CONCLUSION

Cultivating areas of GM crops are still increasing in the world. Aved the contamination by non-authorised modifications is growing.

The advantage of GM hybrids breeding is the reduction of pesticides usage and thereby subsequent increase of quality and safety of production.

Compliance with reasonable rules of coexistence of conventional and GM production can assure the achievement of the satisfactory limit of GM up to 0.9%.