**GMO-free areas, nature conservation and organic farming - results of a survey of experts' opinion**

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Abstract

The paper describes results of a survey among persons in administration and politics in Austria, who are confronted professionally with problems and possible environmental effects of releases of GMOs (experts in a broader sense). They were in majority of the opinion that the relationship between protected areas and the application of genetic engineering in agriculture needs to be clarified. They see great deficits in relation to the needs of organic farming and in GMO-free on-farm management of Plant Genetic Resources and prefer a concept of defining "large, GMO-free ecologically sensitive areas". As a result of this survey the paper provides some perspectives concerning GMO-free areas and reflects on the problem of thresholds and liability for GMO-pollution.

Introduction

Since in Austria organic farming is practised in a relatively high density (about 10% of farms and/or 10% of UUA is organic) and since the public discussion on releases and marketing of GMO intensified in the late 90ies, the adventitious presence of GM crops in organic agriculture was soon anticipated as one of the main future problems. In order to assess the chances for a social consensus on the idea of GMO free areas and to evaluate the problems concerning organic agriculture we conducted in 1999 a survey among persons (n=150), who are confronted professionally with problems and possible environmental effects of the release of GMOs (experts in a broader sense - administrative personnel, politicians, scientists, and NGOs in agriculture, nature and environmental protection) (Hoppichler, 1999).

Main results

- The relationship between protected areas and the application of genetic engineering in agriculture needs to be clarified. 75% of the responding experts think that the use of GMOs causes a significant disturbance in areas of nature protection.
- The concept of defining "large, GMO-free ecologically sensitive areas (e.g. the size of an Austrian Federal Province)" was supported by the majority of the experts (73%).
- There are great deficits in relation to the needs of organic farming. 89% of the respondents called for GMO-free areas for breeding and propagating organic seeds.
- As main strategies for assisting organic farming in coping with the problems of genetic engineering, the experts recommend to support GMO-free production through agricultural environmental programs (60%) and through regional food processing and marketing structures (60%), followed by defining GMO-free areas for seed breeding and multiplying (57%) and demarcation of "large, GMO-free ecologically sensitive areas" (also 57%). In response to the question as to who should bear the additional costs of analyses to ensure freedom from GMOs, 42% of the experts tend towards the "polluter pays" principle and claiming compensation from the seed industry (all percentages multiple responses).
- The great majority of experts are of the opinion that the in-situ conservation and on-farm management of Plant Genetic Resources should be GMO-free.

Perspectives

Despite the fact that the actual research on co-existence of GM, conventional and organic crops mainly focuses on small scale management solutions (e.g. isolation distances or buffer zones), there is a need to introduce GMO-free areas especially in regions of small-scale agriculture and/or in regions with higher densities of organic farming (Müller, 2003). All proposed technical solutions for co-existence and their applicability depend very much on the level of thresholds accepted in organic and GMO-free agriculture as well as on the regime of enforcement of measures including the rules of liability for direct and indirect economic loss (AEBC, 2003). The introduction of co-existence measures

is also a question of economic incentives. As long as organic producers, but also conventional producers, are responding to consumer demand for as little GM material as possible in their food (freedom of choice), the threshold should not exceed the 0,1% level. This for sure would create big problems with separation distances and other on-farm management measures.

Additionally co-existence has also a social dimension, which includes social acceptability within the farming community and in relation to consumers. As a result GMO-free areas, without regard to whether introduced by voluntary or mandatory means, could be one of the main solutions to reach a certain kind of co-existence. As a counterpart some sort of GMO areas may be created. Depending on the EU-seed-thresholds there will also be a need to define closed areas for seed propagating including seeds for organic agriculture. And if the current results of the British Farm Scale Evaluation concerning impacts on biodiversity are taken serious, GMO-free environmentally sensitive areas for nature protection or even large GMO-free biosphere reserves could be a possible perspective (Hoppichler, 2000).

References

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