

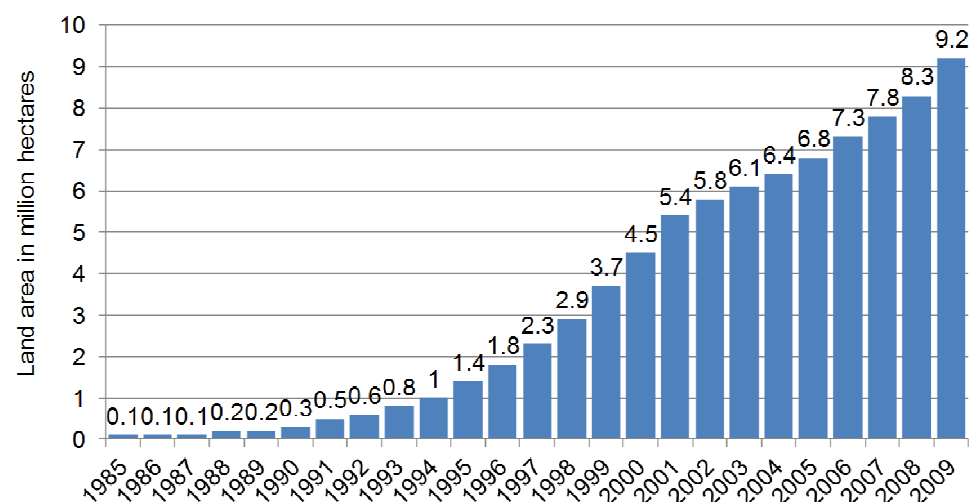
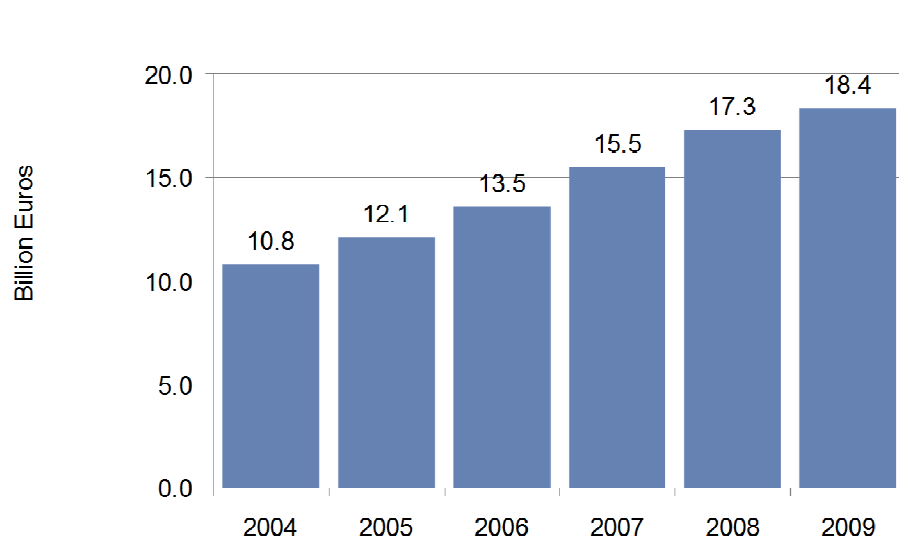
Hearing: Socio-economic dimensions of GMO cultivation, 18 October
2011, European Commission Brussels

Views of the Organic Sector

Marco Schlüter, Director IFOAM EU Group

The Organic sector in the EU and Europe

- 9.2 Mio ha in 2009 under organic certification in the Europe
- Ca. 5% managed organically (EU-27 UAA in 2009)
- Average annual growth rate 2000-2008:
6.7% in EU-15 and 20.0% in EU-12
- Organic sales in Europe approximately 20 Billion € in 2010;
experts estimate market will double till 2020



Graphs: Organic market and organic land area in Europe

Sources : EU Commission (2010) and data Compiled by FiBL, AMI and ORC 2011, based on national sources (2011)

Organic sector already faces higher costs due to GM contamination



Oilseed rape

- *2002+:* Canadian organic farmers sue over contamination of oilseed rape seed by cross-pollination. 73% of the oilseed rape area is GM, resulting in almost complete contamination of non-GM seed stocks. The lack of clean seed has forced farmers in Saskatchewan to all but **abandon organic oilseed rape production.**

Maize

- *2003 – 2005:* Several GM contamination cases in Spain with Bt176 and MON810 (up to 34%). **Organic certificates and premium prices lost.** Loss of local varieties of seeds
- *2001:* Across the USA, organic farmers were being affected by lower prices or loss of sales due to GM contamination from neighbouring farms estimated **to \$90 million/year.**
- *1998:* US food company Terra Prima had to **recall 87,000 bags of organic tortilla chips** found to be GM contaminated, at a **cost of \$150,000.**

Soya

- *2007:* Post-harvest GM contamination of organic soybean oil **cost US food company \$100,000 and closure of business for a month** following positive GMO test.
- *2006:* Tests show **57% of Japanese organic tofu is GM contaminated.**
- *2005:* GM contamination of South Korean organic **soya baby milk forced removal of brands' organic labels** without compensation.
- *2002:* GM contamination of organic soya animal feed causes losses to feed-mill and organic farmers in UK. **Removal of organic status from feed, and livestock** caused **major financial losses** to the feed-mill and organic farmers.

Consumer attitudes - GMOs



... not only in Europe....

EU consumers

- 66 % are worried about GMO in food (Eurobarometer 354; 2010)

EU Organic consumers

- name freedom of GMOs amongst important reasons to buy organic food



EU regulation for organic food and farming doesn't allow GMOs



EU Regulation 834/2007

- **Overall principles** (Art 4) exclude the use of GMOs and products produced from or by GMOs with the exception of veterinary medicinal products (\approx Codex Alimentarius Guidelines for organic food)
- **Prohibition on the use of GMOs** (Art 9): GMOs and products produced from or by GMOs shall not be used as food, feed, processing aids, plant protection products, fertilisers, soil conditioners, seeds, vegetative propagating material, micro-organisms and animals in organic production

In practice

- Food and feed containing GMO have to be labelled, with the exception of **adventitious and technically** unavoidable presence of below 0.9% (Reg. 1829/2003)
- Organic products are GMO free & **lose certificate if they must be labelled containing GMOs** (EC 834/2007)

Commodity	price €/ton organic	price €/ton conventional	Loss of organic premium in %
Soybean (1)	€ 680	€ 390	-43,00%
Maize (2)	€ 274	€ 190	-30,70%

Data from (1) Rapunzel, DE and (2) survey Italy (October 2011)

Costs on farm level – organic crops

Prevention: Untimely sowing, isolation distances, total change of crops, give up shared machinery/transport vehicles

In case of damage: loss of organic premium, sell food as feed quality, loss of reputation and markets

Maize case (Aragon, Spain) contamination of 16 organic farms (2003 - 2007); in all cases organic certification was withdrawn, livestock farmers needed to buy in maize feed from other regions. Example for financial loss: organic farmer Ballarin (2007)

Forced untimely sowing date	Lower yield as consequence	3t/ha x 7,7 ha x 360 €/t	8.316 €
Loss of organic status and sale in conventional market	-Price he would have received in the organic market: 360 €/t -Price in conventional market: 220€ /t	6 t/ha x 7,7 ha x 140€/t	6.440 €
Economic loss that can be directly attributed to problems caused by GM farming			14.756 €

Case study: Organic Farms in Poland

Co-existence is too expensive: A Polish animal feed processor (organic and conventional) shut down organic section in 2010 after contamination in organic feed (stemming from conventional feed) – despite proper cleaning and separation => Since 2010 Polish organic egg producers buy organic feed from Dutch and German companies

Transparency 1st pre-condition to protect organic markets: Rumours that GMO are grown in Poland with no official government objection.

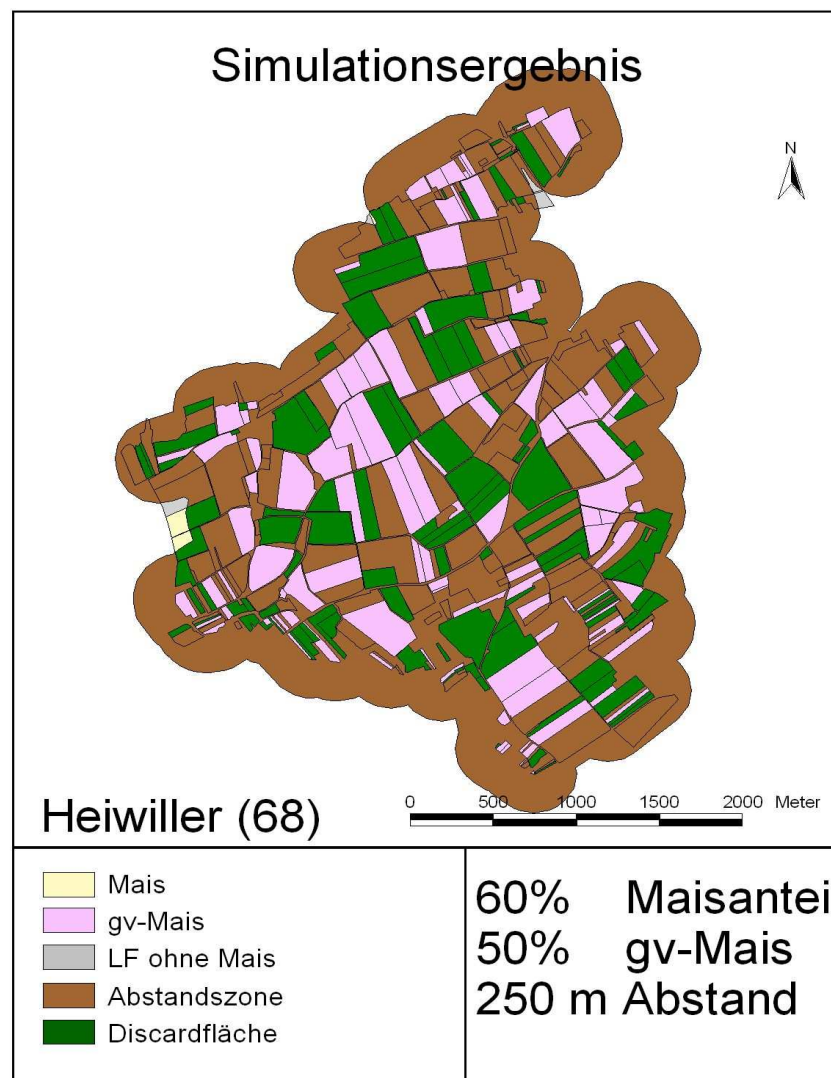
But: No legislation to rule co-existence, no GMO register
=> Organic farmers and certifiers cannot properly assess risk of GMO contamination in their area

Prevention costs on farm level

- If GMO maize would be cultivated in Alsace region the costs for non-GMO producers would increase between 7.1€/ha and 98.3€/ha
- Potential additional yield of Bt-maize (70€/ha) does not cover costs for co-existence, only beneficial with BT Maize >90%
- Cultivation of Bt maize would suppress cultivation of conventional and organic maize (SIGMEA 2009)

Other studies:

- Additional costs for farms calculated between 10-41% of the price of oilseed rape & 5-10% of the price for Maize (Bock/Rodriguez-Cerezo 2002)
- Co-existence costs of Bt Maize for GM farmer of 52-78€/ha (Schiefer et al. 2008; Consmüller et al. 2008; Messean et al. 2006)



Industry sets practical thresholds

- **0,9%** thresholds for calculation of economic costs **doesn't reflect industry** and farmers **reality**
- Organic food processors don't accept the presence of more than **≈0.01-0.1%** of GMOs in raw materials (own data)
- Food industry sets maximum thresholds of **0.1 -0.3%** presence in raw materials (Co-extra 2009)
- Industry buys preferable **from regions with no GM cultivation** at all to minimise costs and risks
- **Once contamination found** in product farmer risks to **lose market forever**

Seed & Breeders

- **Seed labelling thresholds** as proposed in 2005 do not comply with conventional food standard (Data: SCP 2001)
- Organic breeders underline that testing for overall presence is cheaper than testing for quantity
- New Technical detection limit is now 0.01%
- Prevention on seed level cheapest possibility to avoid contamination throughout food chain



Input side: Possible AP of GE seed in non-GE seed*	Output side: three scenarios for maximum presence of GE components in agricultural raw materials accepted by food industry/processors E		
	0.10%	0.30%	0.50%
0.50%	Agricultural output falls industry standards (presence of GE components 0.77 %)	Agricultural output could pass industry standards only with special measures: (1) Use of special seed produced according to private standard with max. 0.1% GE seed traces and (2) Minimized cross pollination at 0.1% (presence of GE components 0.27%)	Agricultural output could pass industry standards only with special measures: (1) Use of special seed produced according to private standard with max. 0.1% GE seed traces (presence of GE components 0.37%)
0.30%	Agricultural output falls industry standards (presence of GE components 0.57 %)	Agricultural output could pass industry standards only with special measures: (1) Use of special seed produced according to private standard with max. 0.1% GE seed traces and (2) Minimized cross pollination at 0.1% (presence of GE components 0.27%)	Agricultural output could pass industry standards only with special measures (1) Use of special seed produced according to private standard with max. 0.1% GE seed traces and (achievable 0.37%) or (2) Minimized cross pollination at 0.1% (presence of GE components 0.47%)
0.10%	Agricultural output falls industry standards (presence of GE components 0.37 %)	Agricultural output could pass industry standards only with special measures: (1) Minimized cross pollination at 0.1% (presence of GE components 0.27%)	Agricultural output passes industry standards without extra measures: (presence of GE components 0.37%)

* Unlabelled AP at the described level could be due to a European labelling threshold or

Co-existence/prevention costs of food industry

- Food industry faces already today (almost no GMO growing in EU) costs for segregation, quality management, testing, training, investments etc.
- Survey among DE companies (10) organic/conventional found significant extra costs for prevention costs (**extra costs 3%-10%** of product), co-extra project estimates **up to 13% of** product turnover
- Stolze&Then 2009 (see below) find up to 86,20€/t prevention costs at company level which means **additional costs of 12,6%** on top of organic soybean price

	Milling company, DE	Processing company DE	Processing comp. FR
	Conventional Maize	Organic soybean	Organic soybean
Type of costs	€ per ton	€ per ton	€ per ton
Additional commodity costs (e.g. Contracting, seed certification and testing)	20.0 €	20,00 €	65,20 €
Quality Management (e.g. training, communication, updating checklists, manuals, tracability)		60,70 €	5,20 €
Testing costs	1.9 €	5,50 €	6,80 €
Total prevention costs per ton	21.9 €	86,20 €	77,20 €
Total prevention costs per year	876.800 €	155.230 €	269.398 €

Beekeepers (organic&conventional)

Why we need beekeepers

- 84% of crop species grown in Europe rely on insect pollination*
- pollinators contribute at least 22 billion Euros each year to European agriculture**

Honey

- Consumers perception of honey: pure, natural health product

Problems

- Bees fly up to 5 km, wide transports of bees (to avoid GMO fields) spread bee diseases
- Small lots (e.g.70 kg), analysis costs > 200€/sample, wholesale prices often only 2-3 €/kg honey

*Helmholtz Association 2008

** Gallai et al. 2009

www.mellifera.de

Benefits for society?

„The results show that the introduction of GM products in this context reduces welfare, as well as both consumers' and producers' surplus.“

(Moschini, Bulut, Cembalo 2005)

Benefits for society?

- **GM production only profitable if no traceability and segregation** – but **EU decided** that **consumers** have the **right to buy non GM products!**
- GMOs in food chain cause **segregation and traceability** costs: International Food & Agricultural Trade Policy Council estimates for non-LMO soybean and maize “**additional annual cost** to consumers in Japan and Europe of ca. **\$100 million.**”
- COM GREEN PAPER on agricultural product quality: **Europes weapon is quality production** – do GMOs fit into this strategy or risk future non GM markets in Japan/EU and North America? (turnover organic & PDO & PGI > 41 billion€)
- Benefits only for big seed companies, **GMO farmers benefits** often **eaten up** by **higher coexistence costs**
- Introduction of GMO in food chain **already causes high costs** for **non-GM-food sector** in EU on farming and industry level

Organic sector demands regarding socio-economic impacts



- **Socio-economic impacts** of placing on the market and the cultivation of GMOs for **the non-GMO sector** must be **considered before any authorisation**, societal benefits and costs must be considered
- **Precautionary principle** must apply, also regarding socio-economic impacts
- An **EU wide liability** system must ensure that costs for prevention of contamination, testing and social and economic damages in case of contamination are covered by those companies that benefit from GMOs placing on the market
- **EU wide legally binding rules** for co-existence have to be established that guarantee food and farming can stay GMO free

(The whole food production chain, different regional structures, costs for the prevention of contamination and mitigation measures in case of contamination in: seed production, on the field; cleaning of commonly used machinery, transport and storage facilities; sampling, testing, segregation systems, compensation for damage and loss of reputation must be considered.)