



Impact of LLP of unauthorised GMOs in the food sector

IFOAM EU workshop in the GM free region conference; Berlin, 6-8 May

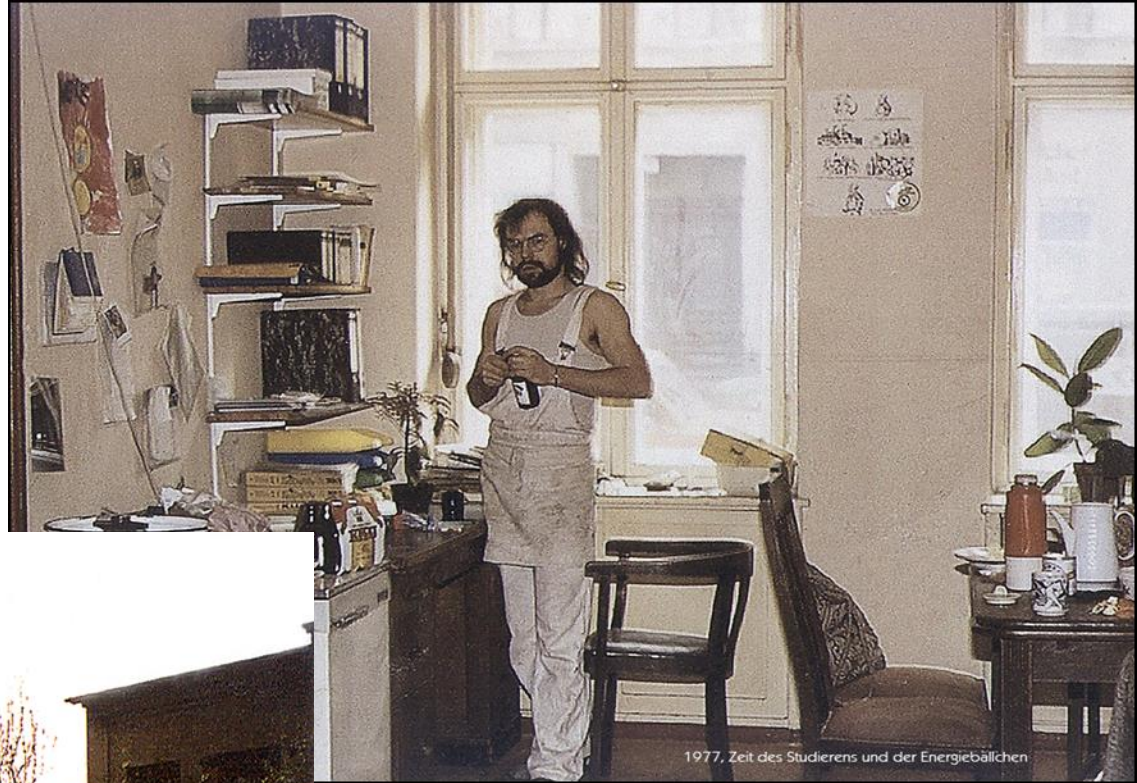
Speaker: Joachim Weckmann - CEO of MÄRKISCHES LANDBROT,
board of directors AöL

[Sitemap](#) | [Impressum](#) | [Kontakt](#) | [Drucken](#)

ES GIBT IMMER EINEN ANFANG FÜR DAS BESSERE.

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

Brotgarten 1977



1977. Zeit des Studierens und der Energiebällchen



Märkisches
Landbrot 1981



ant
stads

8 36





HOLZOFENBÄCKEREI
PANKOWER
MUSEUM
BROT
SEIT 2006
MÄRKISCHES LANDBROT

facts & figures



MÄRKISCHES LANDBROT GmbH

- ecological supply bakery in Berlin-Neukölln
- sales 7.4 Mio. Euro
- 49 full and part-time employees
- processing of approx. 1.700 t grain per year
- manufacturing of about 8.000 kg of bread daily
- 37 types of bread, 13 varieties of bread rolls, 5 small breads, such as baguette and ciabatta
- delivery to organic shops and – super-markets, schools, children nurseries



ES GIBT IMMER EINEN ANFANG FÜR DAS BESSERE.

www.landbrot.de

facts & figures



➤ **fair & regional**

- charta and round tables
- entire value-added-chain and regional economic cycles
- rural farming



➤ **Eco-Management Audit Scheme (EMAS)**

- continuously certified since 1995



➤ **Reporting**

- Global Reporting Initiative (GRI)
- Sustainability Code (Deutscher Nachhaltigkeitskodex DNK)



➤ **Balance of common welfare (GWÖ)**

- continuously certified since 2011



facts & figures



➤ **Demeter farming**

- 100 % demeter certified products
- highest ecological standards
- no partial company adjustment
- regulation for appropriate animal husbandry for compost generation and compliance in keeping with the cycle thinking

➤ **nourishment competence**

- wholemeal products 80 %
- stoneground daily milling
- as staple diet high fibre, amino-acids from sprouted grains
- vitamins, minerals



















Demeter farming

WERT SCHÖPFUNG

demeter

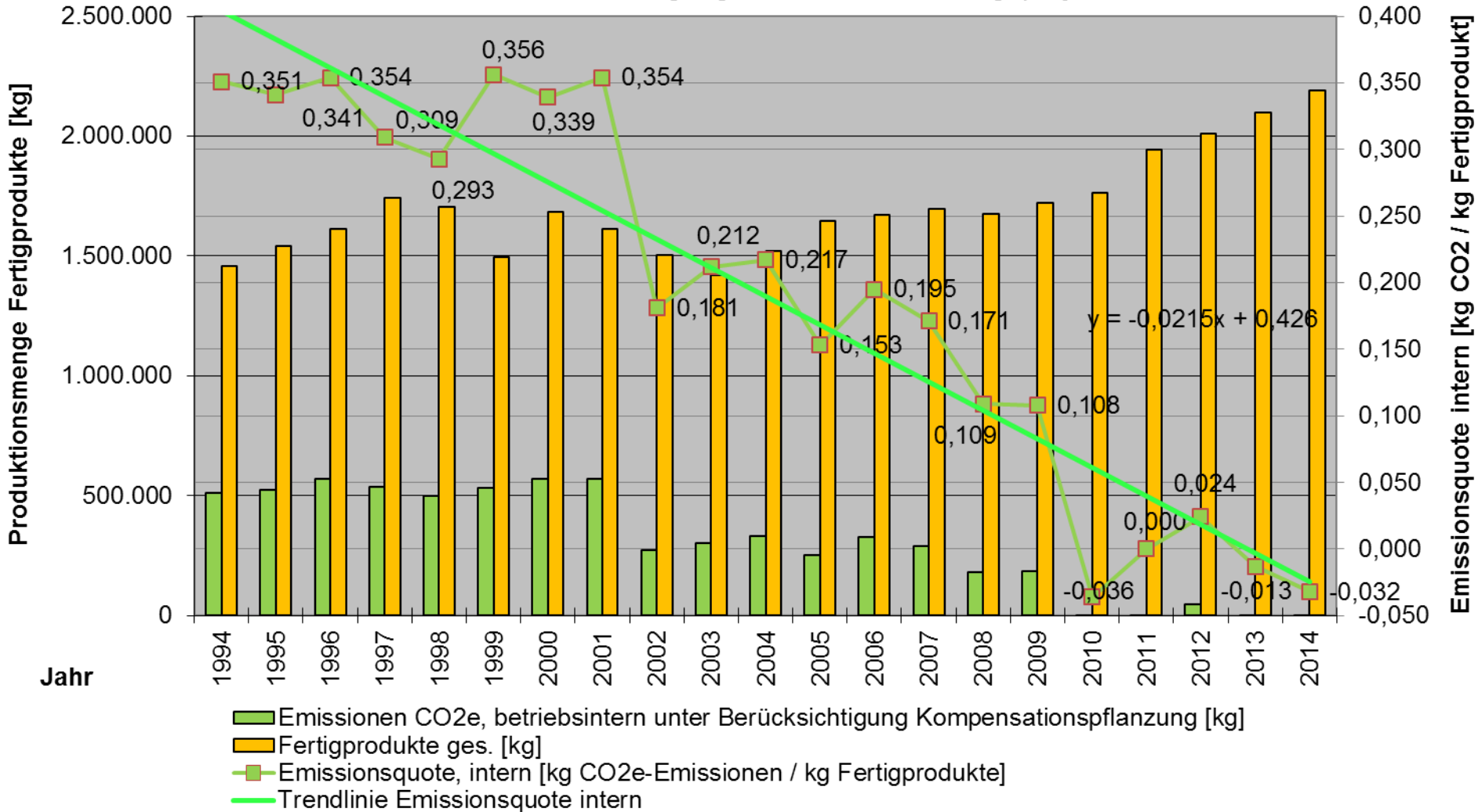
Ulf Dobroschke, *demeter* Hof Gut Peetzig/
Uckermark, im Champagnerroggenfeld.



BROTBÄCKEREI demeter
www.landbrot.de

ecological management

Emissionsquote CO2e, betriebsintern unter Berücksichtigung des Waldaufforstungsprojektes

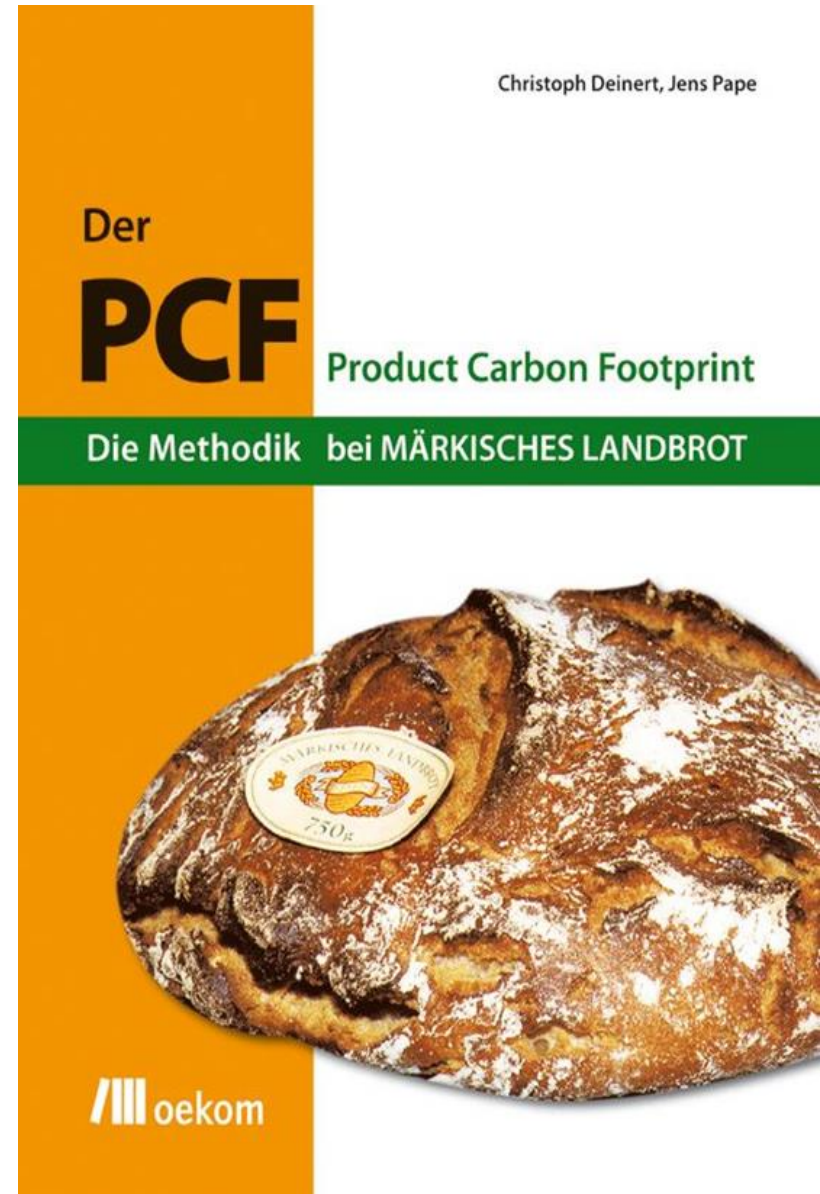


transparency

transparency

MÄRKISCHES LANDBROT

- global reporting initiative (GRI), level A
- product carbon footprint (PCF) for all products
- website





ÖKOLOGIE

Förderung ökologischer Projekte

Umwelt- und Naturschutz

Demeter-Anbau

Biodiversität

Gentechnikfreiheit

Ökologische Technik

Umweltmanagement

Umweltleitlinien

CO2e-Fußabdruck

Demeter zertifiziert

EMAS zertifiziert

JETZT BERECHNEN!



ES GIBT IMMER EINEN ANFANG FÜR DAS BESSERE.



Aspekt	Beschreibung	Bezeichnung	Kern / Zusatz	Inhalt	Berichterstattung (ausführlich: Homepage Ökologie / GRI-Index Ökologie)
M.	Materialeinsatz	EN1 - 2	K	eingesetzte Materialien nach Gewicht oder Volumen, Anteil von Recyclingmaterial am Gesamtmaterialeinsatz	<ul style="list-style-type: none"> Umwelterklärung 2011 Ökobilanz 2011
Energie	direkter und indirekter Energieverbrauch, eingesparte Energie, Entwicklung energieeffiz. Produkte und Dienstleistungen	EN3 - 4	K	direkter und indirekter Energieverbrauch, aufgeschlüsselt nach Primärenergieträgern	<ul style="list-style-type: none"> Homepage Ökonomie / wirtschaftliche Leistung / Folgen des Klimawandels Homepage Ökologie Umwelterklärung 2011 / Umweltprogramm Ökobilanz 2011 / Umweltauswirkungen
		EN5 - 7	Z	Zusatzindikatoren s. ausführlicher GRI-Index auf der Homepage	
Wasser	Energie, Wasser, Emissionen	EN8	K	Gesamtwasserentnahme, aufgeteilt nach Quellen	<ul style="list-style-type: none"> Ökobilanz 2011 Kap. 2.2 Ökobilanz 2011 Anlagen 3 und 6
		EN9 - 10	Z	Zusatzindikatoren s. ausführlicher GRI-Index auf der Homepage	
Biodiversität	Biodiversität	EN11 - 12	K	Ort und Größe von Grundstücken in Gebieten mit Schutzgebieten / hohem Biodiversitätswert, wesentliche Auswirkungen von Aktivitäten, Produkten und Dienstleistungen auf Biodiversität	<ul style="list-style-type: none"> nicht in unmittelbarer Nähe eines Schutzgebietes Ökobilanz 2011 Kap. 4 Ökobilanz 2011 Kap. Umweltprogramm 2011 – 2015
		EN13 - 15	Z	Zusatzindikatoren s. ausführlicher GRI-Index auf der Homepage	
Emissionen, Abwasser und Abfall	Emissionen, Abwasser und Abfall, Treibhausgase, Ozon abbauende Stoffe, Verringerung Emissionen, Initiativen	EN16 - 17, EN19 - 20	K	Treibhausgasemissionen, NOx, SOx und andere wesentliche Luftemissionen nach Gewicht	<ul style="list-style-type: none"> Ökobilanz 2011 Kap. 2.5 Homepage / Ökologie / CO₂e-Fußabdruck Ökobilanz 2011 Anlage 8 (Emissionen)
		EN18	Z	Zusatzindikator s. ausführlicher GRI-Index auf der Homepage	
		EN21 - 23	K	Abwassereinleitungen nach Art und Einleitungsort, Abfall, Abwasser nach Art und Entsorgung	<ul style="list-style-type: none"> Ökobilanz 2011 Kap. 2.1 Ökobilanz 2011 Anlage 3 (Abwasser)
		EN24 - 25	Z	Zusatzindikatoren s. ausführlicher GRI-Index auf der Homepage	
Produkte und Dienstleistungen	Produkte und Dienstleistungen als weitere Bereiche, in denen eine Organisation Einfluss auf die Umwelt haben kann	EN26	K	Initiativen, um die Umweltauswirkungen von Produkten und Dienstleistungen zu minimieren, Ausmaß ihrer Auswirkungen	<ul style="list-style-type: none"> Ökobilanz 2011 Kap. 2.5 Ökobilanz 2011 Kap. Umweltprogramm 2011 – 2015 Homepage / Ökologie / CO₂e-Fußabdruck Gemeinwohl-Bilanz A1: Ethisches Beschaffungsmanagement, D3: Ökologische Gestaltung der Produkte
		EN27	K	Anteil der verkauften Produkte, bei denen das dazugehörige Verpackungsmaterial zurückgenommen wurde, aufgeteilt nach Kategorie	<ul style="list-style-type: none"> Ökobilanz 2011 Kap. 6 (Verpackungseffizienz) Ökobilanz 2011 Anlage 9
Einhaltung Rechtsvorschriften	Einhaltung von Rechtsvorschriften, befasst sich mit spezifischen Kennzahlen, mit denen die Organisation ihre Umwelleistung steuert	EN28	K	Geldwert wesentlicher Bußgelder und Gesamtzahl nicht-monetärer Strafen wegen Nichteinhaltung von Rechtsvorschriften im Umweltbereich	<ul style="list-style-type: none"> Managementreview 2012 (unterschiedene Compliance-Erklärung S. 4) Seit Aufbau des Umweltmanagements 1995 wurden keine Bußgelder oder Strafen fällig.
Sonstige	Transporte, Umweltschutzausgaben	EN29 - 30	Z	Zusatzindikatoren s. ausführlicher GRI-Index auf der Homepage	

CERTIFICATE : AUDIT

COMMON GOOD
BALANCE 2013-14

for **Märkisches Landbrot GmbH**
 Auditor **Johanna Paul**

STAKEHOLDER	VALUE	Human dignity	Solidarity	Ecological Sustainability	Social Justice	Democratic Co-determination & Transparency				
A) Suppliers	A1: Ethical Supply Management					90 %				
B) Investors	B1: Ethical Financial Management					70 %				
C) Staff Incl. Owners	C1: Workplace quality and affirmative action	50 %	C2: Just distribution of labor	50 %	C3: Promotion of environmentally friendly behavior of employees	60 %	C4: Just income distribution	60 %	C5: Corporate democracy and transparency	30 %
D) Customers / Products / Services / Business Partners	D1: Ethical customer relations	60 %	D2: Cooperation with businesses in same field	70 %	D3: Ecological design of products and services	80 %	D4: Socially oriented design of products and services	50 %	D5: Raising social and ecological standards	80 %
E) Social Environment: Region, sovereign, future generation, global fellow human beings, animals and plants	E1: Value and social impact of products and services	90 %	E2: Contribution to the local community	60 %	E3: Reduction of environmental impact	90 %	E4: Investing profits for the Common Good	100 %	E5: Social transparency and co-determination	60 %
Negative Criteria	Violation of ILO norms (international labor standards) / human rights	0	Hostile takeover	0	Massive environmental pollution	0	Unequal pay for women and men	0	Non-disclosure of subsidiaries	0
	Products detrimental to human dignity and human rights (e.g. landmines, nuclear power, GMO's)	0	Blocking patents	0	Gross violation of environmental standards	0	Job cuts or moving jobs overseas despite having made a profit	0	Prohibition of a works council	0
	Outsourcing to or cooperation with companies which violate human dignity	0	Dumping Prices	0	Planned obsolescence (short lifespan of products)	0	Subsidiaries in tax havens	0	Non-disclosure of payments to lobbyists	0
							Equity yield rate >10 %	0	Excessive income inequality within a business	0

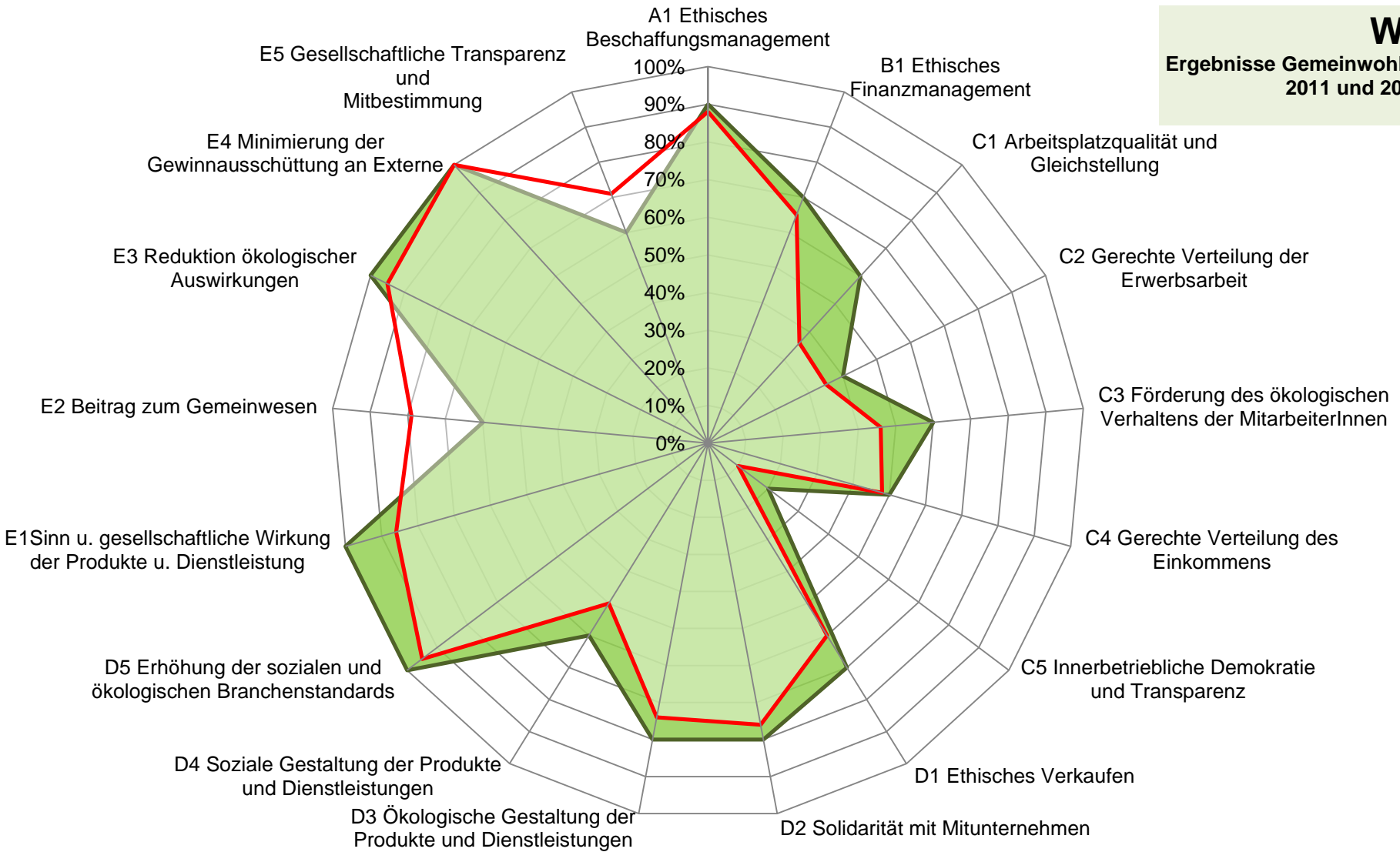
This certification confirms the audit of the common good report. The certificate refers to the common good matrix 4.1. Detailed information concerning the matrix, the indicators and the audit system can be found on www.economy-for-the-common-good.org

Certification valid 31.03.2017

END BALANCE 689

values





■ Bilanzjahr 2012 - 2014 (Auditergebnisse: Matrix 4.1): 689 von 1.000 Punkten (inhaltlich bis Bilanzjahr 2014, auf Basis von Kennzahlen bis Bilanzjahr 2013)

■ Bilanzjahr 2011 (Auditergebnisse: Matrix 4.0): 652 von 1.000 Punkten

content

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

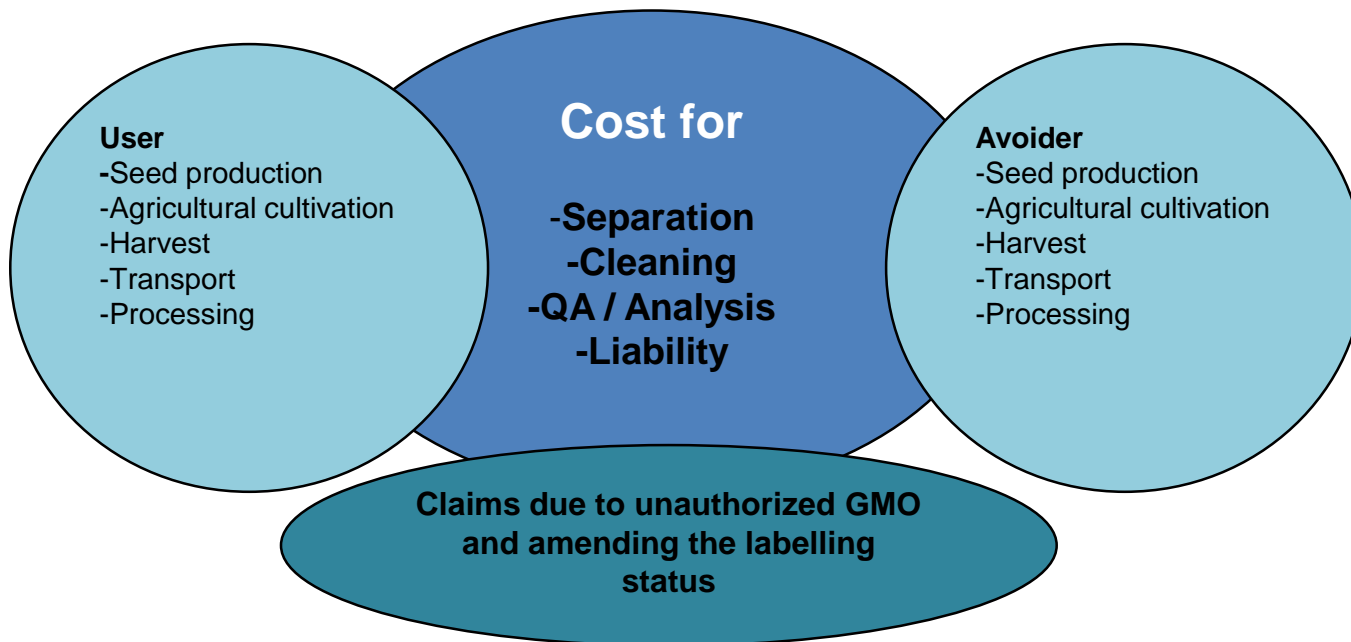
The Cost of Genetic Engineering: - Who pays the bill?

- Genetic Engineering Damage Report 2015

http://www.boelw.de/fileadmin/Dokumentation/150112_BOELW_Schadensbericht_Gentechnik.pdf

Introduction – Cost Structure

- Costs of agricultural genetic engineering arise for all the participants, for the user and the avoiders; abroad and at home - as long as there is a cultivation and research release of GM crops!



content

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

Operating costs of the Genetic Engineering users - Claims

- From **2000 -2014 worldwide 409 registered claims** with unauthorized GMO (GM Contamination Register, 2014)
- A total of **105 findings of unauthorized GMO** (flaxseed, rice, papaya) – were reported in **Germany** in the period from **2008-2012**
- Alone through the **4 Claims** with Starlink-maize, Bt10-maize, LL601-rice and Triffid-flaxseed a minimum damage of **5.4 billion US dollars** worldwide arose
- Autumn 2014: Through contamination with unauthorized GM maize (MIR 162) a **potential market of 2.9 billion** in China **escaped** the American farmers

Operating Costs of the Genetic Engineering Users - Soy

- The **seed costs** for GM soy have risen in the **past 17 years** in the **US by 320%**
- The **pesticide costs for soya** have risen in the last 2 years in the **US by 75%**
- The soy yield has +/- remained the same

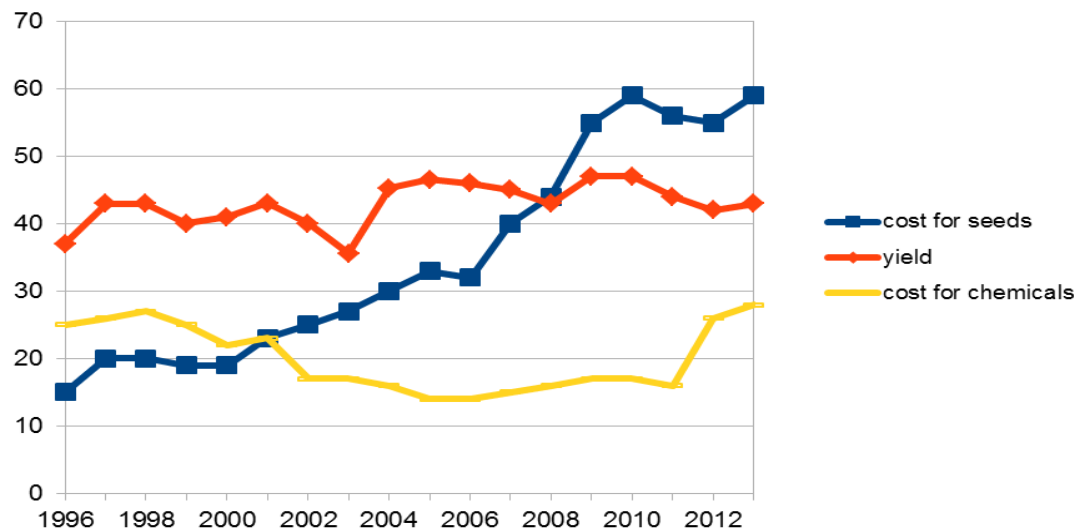


Fig. 1: Development of the cost of seeds (US dollars per acre), for PSM ("Chemicals", US dollars per acre) and yields (bushels per acre) for soybeans in the United States from 1996 to 2013 (source: Then et al. 2014 / USDA data).

Operating Costs of the Genetic Engineering Users - Maize

- **Tripling of US seed costs for GM maize** since 2002
- The harvest has remained the same
- Costs for pesticides have +/- remained the same

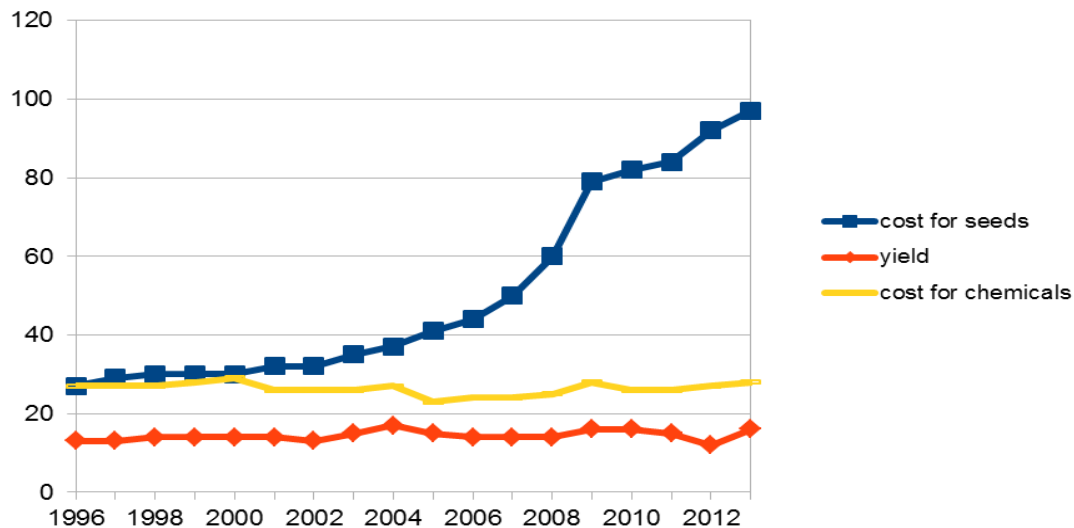


Fig. 2: Development of the cost of seed (US dollars per acre) for pesticides ("Chemicals", US dollars per acre) and yields (bushels per acre x factor 10) for maize from 1996 to 2013 (source: Then et al . 2014 / USDA data).

Operating Costs of Genetic Engineering - Users

- **24 glyphosate-resistant plant** species are known in 2013 in the north-eastern United States ("superweeds")
- Presence on **92% of cotton and soy fields**



Source: Then u. Boeddinghaus 2014, Mertens 2014)

Operating Costs of the Genetic Engineering Users - Conclusion



A long-term cost-effectiveness of genetic engineering cannot be seen

- **Increasing operational costs**
- **Consistent income**
- **Non-realization of thought market potential**

content

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

Cost of GM - Avoiders

- Currently (nearly) **no cultivation of GM crops** in Germany
- GM raw material mainly enters Europe and Germany via the global **feed-import (protein)**
- Germany imported in 2012 around **4.4 million tonnes of soybean** meal, approximately 80% of which were marked

Costs of GM - Avoiders

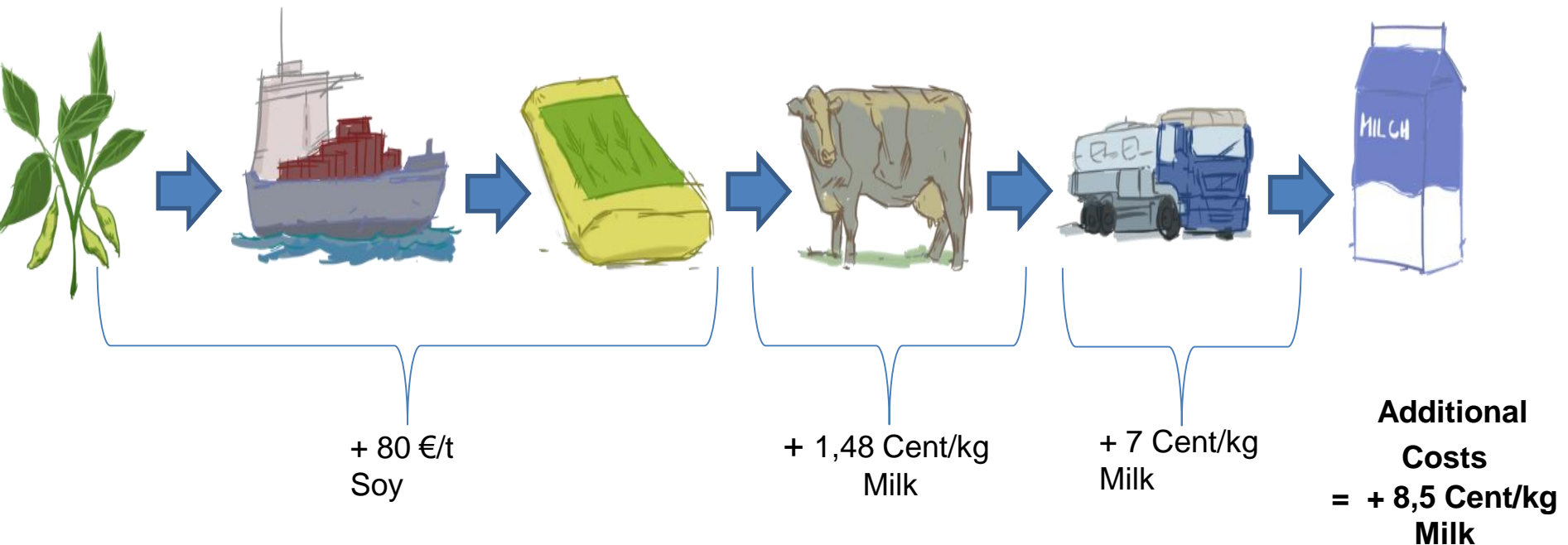
The guarantee of freedom of choice is connected to separation costs along the entire value chain. These additional costs are borne by the avoiders but not the polluters.

Stages	Types of cost	Costs
Farmer	GMO free seeds	+ 10 – 15 %
	Cleaning of the machine (labour costs)	9 – 77 €
	Cleaning of the machine (machine costs)	197 – 1.935 €
	Sampling (per test and sample)	50 – 250 €/Test
Commodity trade	separate storage	Ca. 10 €/t
	Sampling (per test and sample)	50 – 250 €/Test
	Tests of outgoing trucks	Ca. 187 €/Test
Food processing (mill)	Quick test	
	Test of the processed products	Ca. 187 €/Test
	Transport costs	0,1 € per km and t

Source: Handbook BioXgen 2012

Costs of GM Avoiders - Example Milk

Additional costs in the individual stages of milk production, which is marked as "No-GMO".



- **Avoidable costs** in a 100% GMO-free milk production in Germany (31 billion kg in 2013) amounts to **2.6 billion €**

Costs of GM Avoiders - Conclusion

- The cost to maintain freedom of choice is carried by the avoider, not the polluter.
- 100% GMO-free existence in Germany would mean billions of dollars of national economic costs can be avoided.

content

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

Economic Consequences

- In Germany, the use of GM raw materials occurs mainly through imported feed (as soy protein carrier)
- The availability of non-GMO soy is guaranteed despite different sounding statements
- The trade demands and promotes GMO-free feeding

*GM-free Shopping.
Look out for the PRO
PLANET label.*

*In Germany, REWE
waived consistently
genetically modified feed
in private label fresh
chicken products and
eggs.*

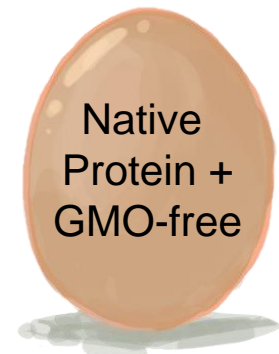


Economic Consequences - Example Egg

Who will pay the additional cost?



+ 0,6 Cent

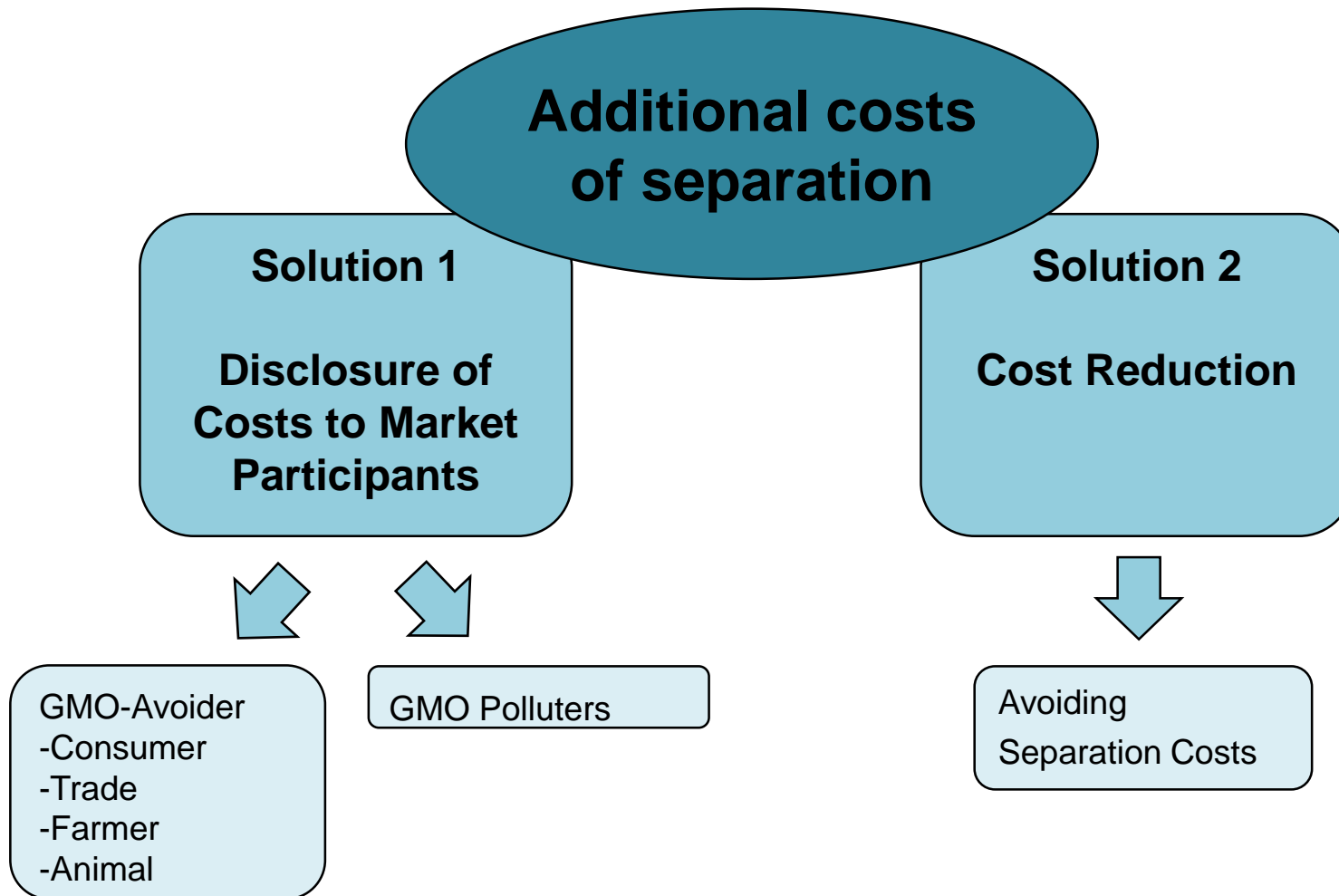


+ 0,8 Cent

The consumer does not want GM (84 % according to BfN)

- The trade will not pay the additional cost (see annual price reduction (23 % on 16.1.14) in discount stores)
- The farmer will only respond to the price pressure

Economic Consequences



Solution 1: Sharing

- *consumer* expects GM-free at no extra cost
- *trade* only strives for market share through price cuts
- *farmer* has already reached the limits of economy
- *chicken* cannot defend itself (keyword animal welfare)
- *polluter*, so far there is *no polluter pays principle*

Solution 2: Reduction of separation costs by avoiding coexistence

- Large-scale, GMO-free regions/ countries
- Increase in market demand for non-GMO feed
- Independent in protein supply during feeding
- Managable flow of goods/ own processing structures
- Security/Certainty in the origin of the goods

Demands



- Implementation of the coalition agreement: closing the labelling gap for animal products
- Nationwide ban on cultivation
- Development and implementation of a native / European GMO-free protein strategy
- Introduction of a polluter pays principle

content

- MÄRKISCHES LANDBROT - facts & figures
- BÖLW: The Cost of Genetic Engineering
 - Introduction – Cost Structure
 - Operating costs of the Genetic Engineering - Users
 - Claims
 - Soy, Maize
 - Conclusion
 - Cost of GM - Avoiders
 - Example Milk
 - Conclusion
 - Economic Consequences
 - Example Egg
 - Consequences an demands
- FibL Deutschland: Demands
- IG Saatgut: Zero Tolerance of Non-Authorized GMOs (LLP)
 - Dangers arising from the introduction of GMO thresholds
 - Political demands

Zero Tolerance of Non-Authorized GMOs

Demands FibL

- Create a moratorium on release trials or for the cultivation of **GMOs, better a ban**
- **Stop further approvals** of GMO
- Enforcing the **polluter pays principle**, i.e. the cost to secure non-GM production shall be carried by those who have developed the genetic constructs
- **Effective control** and transparent published results - in good time before sowing

IG Saatgut: Dangers arising from the introduction of GMO thresholds

- Intensification of the risk of **contamination** through seed
- Increased entry risk by **external storage, processing, transportation**
- Increased cost of seed production and cultivation through increasingly **costly protective measures**
- **Threat to regional** structures through local GMO strains and costs
- **Risk of contamination** remains in GM-free processing companies
- Raising introduced thresholds through lobbying
- **Endangering the credibility** of organic businesses

Zero Tolerance of Non-Authorized GMOs



Political demands IG Saatgut

- Relieving GMO-free working businesses from the cost of protective measures
 - Introduction of the **polluter pays principle** to the entire feed and food production
- **Zero tolerance** stipulated by the EU is to be implemented consistently
 - Still, a strictly implemented zero tolerance cannot guarantee lasting GMO-free existence
- **Coexistence** of GM with non-GM production is **not possible** permanently



KORN

ZIEHT

KREISE

demeter

Brotbäckerei

MÄRKISCHES LANDBROT GmbH

Bergiusstr. 36 · 12057 Berlin · Tel 030/613 91 2-0 · Fax 030/684 51 84 · www.landbrot.de

Economic Consequences - Example Egg



	Standard Mix with GM soy	Standard mixture with non-GMO soy	Standard Mix with GM-free native protein carriers
Egg Production	280 Eggs/Year	280 Eggs/Year	280 Eggs/Year
Feed Consumption	150 g/Egg	150 g/Egg	150 g/Egg
Feed Cost*	35,77 €/dt	39,77 €/dt	41,02 €/dt
Feed Cost per Egg	0,0537 €/Egg	0,0596 €/Egg	0,0615 €/Egg
Additional cost per Egg	-	+ 0,0059 €/Egg	+ 0,0078 €/Egg
<small>Source: Wilbois / Asam 2014 * cost base 2013 1st half</small>			

Avoidable costs of € 80.83 million at a 100% GMO-free soy feeding

Costs of GM Avoiders - Example Milk

Surcharges on the individual stages of milk production, which is marked as "No-GMO".

