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No link between animal feed crisis and EU zero tolerance policy

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Zero tolerance and the speed of GMO approvals do not need to be changed. These issues will not make any difference to the EU livestock industry's year-long crisis. The number of documented contamination incidents with EU non-approved genetically modified organisms (GMOs) and the amounts of feed which couldn't be placed on the EU market are so low that they couldn't cause a feed crisis. Any decision to weaken GMO laws is a capitulation to the USA, which is responsible for most of all contamination incidents, and its allies in US and EU agribusiness.

According to EU´s Rapid Alert System on Food and Feed (RASFF) the USA was responsible for about 90 percent of all contaminations from 2004 till end of June 2009 (37 out of 42 contamination cases). Including RASFF-data from 31st of July 2009 until end of the year 2009 more than 70 percent (43 out of 58) contamination cases originated from the United States.

Compared to the 32 million tons of soya imports to the EU a maximum rejected amount of 66 000 tonnes which is confirmed officially, not all of which is feed, is insignificant and it is highly unlikely that these amounts could cause any kind of a feed crisis.

Dropping zero tolerance will be controversial and unpopular with the European public, and would undermine a key safety filter in EU GM legislation. It would protect the business interests of the biotech corporations, commodity dealers and the most industrial parts of the feed and food sector instead of securing the right of EU citizens to GMO free food and feed.

Friends of the Earth Europe has been following this issue since 2007. The latest push to get zero tolerance dropped started in summer 2009 after EU authorities in April found Mon 88017 in soy shipments from the USA – genetically modified maize from Monsanto which had no EU authorization at that time.[1]

Background

There has been a history of controversy and costly recalls due to contamination incidents in the EU due to non-approved GMOs. Because of the EU´s zero tolerance policy all contaminated food and feed products have to be withdrawn from the market. These recalls are often extremely expensive for those whose products are contaminated.[2] Because there is no strict liability regime in place those affected are unlikely to get compensated for financial damages. Often the source of contamination and hence who is responsible, remains unclear – examples of potential sources include research institutes, biotech companies, seed producers, farmers, commodity dealers, and crushing mills.

1 The EU-Commission authorized Mon 88017 on 30th of October 2009 for import. Before there was no qualified majority in favour on Mon 88017 within the Agriculture Council on 19th of October 2009. (top agrar online, 30th of October 2009: EU-Kommission erlaubt weitere GVO-Maissorten. [EU Commission approves further GM maize varieties.]

2 The rice contamination case of LL 601 – a rice tested in field trials and never foreseen for cultivation - caused a worldwide damage between 741 million and 1.285 billion US dollars. Neal Blue, E (2007). Risky business. Economic and regulatory impacts from the unintended release of genetically engineered rice varieties into the rice merchandising system of the US. Greenpeace International.

"**Zero tolerance**" is the EU´s policy whereby any imports that are found to be contaminated, even with trace amounts, by a GMO that has not been approved in the EU cannot enter the European Union.

The EU´s zero tolerance policy has been under pressure since 2007. Pressure started with the case of Herculex maize (DAS 59 122). Maize exported from the US, destined for the EU, was found to be contaminated with Herculex, a GM maize commercialized in the USA but unapproved in the EU. Industry declared that this would present a severe problem for animal feed importers in the EU.

In June 2007 DG Agriculture published a scenario[3] declaring that the EU´s zero tolerance policy and asynchronous approvals would have fatal consequences for the European pork meat and poultry meat sector. Soya as the main protein source would be either not available at all or only available at exorbitant costs. Therefore meat production would decrease dramatically. With January 2007 as a baseline, the worst case scenarios for 2009 and 2010 predicted that - the three major exporting countries, USA, Brazil and Argentina wouldn't deliver any soybeans or soymeal to the EU due to the strict EU GMO regulation, as such, - pig meat production would fall by up to 29.3 percent (in 2009) and up to 34.7 percent (in 2010) whilst poultry meat production would fall by up to 29.2 percent (2009) and up to 43.9 percent (2010). Pork meat exports would drop by up to 86 percent (2009) and 85.3 percent (in 2010). Poultry meat exports could even fall 100 percent (2009 and 2010).[4] Consequently imports from third countries would increase enormously, and EU pork and poultry consumption would collapse - with falls of 24 percent (in 2009) and 17 percent (in 2010) for pork and falls of 16 percent (in 2009) and 26 percent (in 2010) for consumption of poultry.[5]

GM industry hyperbole

Referring to the European Union's rejection of shipments of livestock feed contaminated with GM "Hercules Maize" in 2008, Nathalie Moll, executive director at EuropaBio, a European biotech industry association, says the EU's resistance to GM produce – in particular, Europe's "zero tolerance" on GM-contaminated grain imports – may further drive up food prices. She predicts: "The zero tolerance policy is likely to bring the European livestock industry to its knees."[6]

Moll says that if a solution isn't found, European farmers will be forced into wholesale slaughter of their livestock rather than have the animals starve.[7]

Though the EU´s zero tolerance policy is still in force and the authorization procedure hasn't speeded up there is no evidence of a drop in the EU´s pig and poultry production. In fact, in Germany for example, for one out of five major producers of pork and poultry, 2009 was the year with the highest number of pigs going to market ever: In total 56 million pigs were produced; 1,5 million more than in 2008 (an increase of 2.7 percent).[8] 2009 saw an increase in the production of poultry meat as well, 3.4 percent higher than in 2008.[9]

The term "**asynchronous approvals"** is used to describe how the EU approves GMOs at a slower rate than the USA which in turn has the most rapid GMO approval rate in the world.

3 European Commission, Directorate-General for Agriculture and Rural Development: Economic Impact of Unapproved GMOs on EU feed Imports and Livestock Production. June 2007.

4 European Commission, Directorate-General for Agriculture and Rural Development: Economic Impact of Unapproved GMOs on EU feed Imports and Livestock Production. June 2007. p 11.

5 European Commission, Directorate-General for Agriculture and Rural Development: Economic Impact of Unapproved GMOs on EU feed Imports and Livestock Production. June 2007. p. 5.

6 http://www.climatechangecorp.com/content.asp?ContentID=5157 14th of February 2008.

7 Peter Mitchell: Europe´anti-GM stance to presage animal feed shortage? In :Nature Biotechnology 25, 1065 – 1066 (2007)

8 http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Presse/pm/2010/02/PD10__052__413,templateId=renderPrint.psml

9 http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Presse/pm/2010/02/PD10__052__413,templateId=renderPrint.psml

The second major push to get zero tolerance dropped started in summer 2009. After EU authorities in April found non authorized Mon 88017 maize in soy shipments from the USA lobby groups and the (meanwhile former) Agricultural Commissioner Fischer Boel took the opportunity to twist the DG Agriculture report even further and claimed that due to a dramatic drop in soy imports from Argentina and Brazil caused by poor harvests during the 2008/2009 season European farmers were therefore dependant on only one source of soya, and that was from the USA.

At the time a German alliance of the biggest feed and food industry associations – calling themselves "Grainclub" - declared that nearly all soya imports from the USA to the EU had been stopped since June because of the EU´s zero tolerance policy. "Grainclub" estimated that between 6 and 7.5 million tons of soya were needed in the EU between September 2009 and March 2010. Should US imports be blocked because US producers couldn't meet the zero tolerance rules or because GMO approvals in the EU were not speeded up they predicted a loss for the European food and feed industry of 3.5 to 5 billion Euros.[10]

Paul Green, a trade consultant from Washington in the US, told a media briefing (…) that the European Union (…) has found a tiny amount of GM corn in a soya bean shipment.

As a result imports of soya are likely to be banned, which means that very shortly there will not be enough oil seed to maintain animal feedstocks, which will mean that animals will have to be slaughtered.

There will eventually be a shortage of meat, and meat will have to be imported.[11]

More recently a prominent member of the "Grainclub" has "corrected" the figure in a lecture given at the Agriculture Fair "Green Week" in Berlin on 21st of January 2010. According to the director of the German Feed Association there was only a loss of between 200 and 400 million Euro in 2009.[12] He explained away the discrepancy by noting that the EU Commission had authorized four GM maize varieties from end of October on: Monsanto´s Mon 88017 and Mon 89034, Pioneer`s 59122XNK 603[13], and Syngenta´s MIR 604[14]. This had occurred under the existing EU approval process.

Not only were the original predicted figures of 3, 5 to 5 billion Euros completely inflated, but in both cases – 3, 5 to 5 billion Euros and 200 to 400 million Euros - the basis of the figures is not publicly transparent, instead they are "protected" under so called confidential business information, so there is no actual accurate verification of any loss at all incurred.

It is clear that the dire predictions that the EU livestock industry would be on its knees, were woefully incorrect and the wholesale slaughter of animals has never happened.

However despite the complete lack of evidence for their assertions over the EU zero tolerance policy, and that reality has shown their scenarios as simple fantasy, the GM industry and associated lobby groups are still pressuring to allow unauthorised GMOs into the European food chain.

Which EU non approved GMOs exist?
There are different types of EU non approved GMOs:

- GMOs authorized in non EU countries
- GMOs tested in field trials but still remaining unauthorized

10 Letter from eleven German feed and food industry organisations to German Agriculture Minister Ilse Aigner, 6th of August 2009, letter available from Friends of the Earth Germany.

11 http://business.iafrica.com/news/1962781.htm, 5th of October 2009.

12 The Power Point Presentation by Bernhard Krüsken „Gentechnik – Europa in der Sackgasse?" [Biotech – Europe in a deadlock?]. Lecture held on 21st of January 2010. Available from Friends of the Earth Germany.

13 Approved from the EU Commission on 30th of October 2009.

14 Approved from the EU Commission on 30th of November 2009.

- GMOs tested in field trials but never put forward for authorization (Bt 10, LL 601)
- GMOs once deregulated but subsequently withdrawn from the market (linseed FP 967)

Why keeping zero tolerance is essential.

There is strong opposition to GMOs amongst the European public. 14 years after their market introduction they are still products without any demand. In the EU GM crops are grown commercially on less than 0.05 percent of agricultural land, and in pretty much just one country: Spain. They are nevertheless present in the EU market, through imports from the USA, Argentina and Brazil and mostly used for animal feed.
This is because GMOs are cheaper than non GMOs and this is due to the fact that under current laws, GM-free producers must pay costs to maintain GM-free status. These are costs for segregation, analysis and certification. Since the polluter pays principle is not applied the additional knock on costs actually caused by GMO cultivation are added as surcharges to GM-free products.
Secondly, products from animals fed with GM feed don't have to be labelled. Only farmers know what their cows and pigs were fed with - not consumers. It is this "labelling gap" that enables market access for GMOs in Europe.

Consumers don't want GMOs on their plates; farmers don't want them in their fields. There is still an ongoing debate about the safety of GMOs, and this means that adverse health impacts cannot be ruled out. Environmental risks also remain; six member states have banned the – till 2nd of March 2010 – only GM crop which is authorized for commercial growing in the EU (Monsanto's Bt Maize 810) on environmental grounds.

Whether GMOs pose adverse health effects or not is highly controversial. Controversy also remains over the adequacy of the testing procedures and the independence and effectiveness of the authorisation processes. It seems that all that we know for sure is that GMOs are not acutely toxic. Acute allergenic effects seem to be picked up by present testing procedures. However when negative effects have been observed in animal tests, including damage of inner organs, immune systems and reproductive viability, they are dismissed. Possible subtoxic, chronic and epidemiologic effects are not investigated further, pointing to inadequacies in safety protocols. These must be addressed.

For an EU-GMO-authorization both a scientific and a political green light are needed. The European Food Safety Authority (EFSA) has to carry out a safety assessment. The EFSA is seen as much too close to the GM biotech industry, biased, and therefore remains a most controversial body. After its positive opinion the Council of Ministers decides whether a GMO is placed on the EU market or not. If the Council doesn't gain a qualified majority in favour or against an authorization – which is the case most of the time – the Commission decides, and almost always in favour of a GMO approval.

Dropping zero tolerance would mean:

- The EU would protect narrow business interests not the safety of EU citizens. European citizens expect their politicians to protect them from the potential risks caused by GMOs.
- Thresholds for GMOs that are either non-approved in the EU still awaiting EU approval or have been insufficiently evaluated according to EU safety standards and remain without political approval would undermine the EU`s GMO laws and contradict the precautionary principle. An approval procedure which can be side stepped at any time through thresholds is totally insufficient. The inherent lack of transparency would also hinder traceability – and hence product recalls, and any kind of effective risk management.
- A low-level presence of non-approved GMOs would be an unacceptable surrender to polluters who are not able or willing to install a working segregation and traceability

system. To reward perpetrators with a change of regulations in their favour is an invitation for further carelessness.

The assertions of agri industry – a reality check

How many contamination incidents are documented?

The European "Rapid Alert system on Food and Feed" (RASFF) documents all contamination incidents that become known. The competent authorities from the Member States refer to this data.

The following table is part of an answer from the German Federal Ministry of Food, Agriculture and Consumers Protection to requests No. 8/155 and No. 8/156 from Member of German Parliament Ulrike Höfken (The Greens), 31st of August 2009.

Number of rapid alert reports of non-approved GMOs in the years 2004 to 2009

Year	2004	2005	2006	2007	2008	2009*	Total
Food	6	8	128	35	26	14	217
Feed	-	4	9	12	7	10	42

As of 30.07.2009, source: BVL (Bundesamt für Verbraucherschutz und Lebensmittelsicherheit – German Federal Authority for Consumer Protection and Food Security)

From 2004 to 2009 (30th July 2009) the RASFF has documented 42 contamination incidents for feed with EU non-approved GMOs. In 18 cases (or 42.9 percent) pet food was contaminated - feed definitely not destined for the livestock industry - only in 24 cases (or less than 60 percent) was livestock feed contaminated[15]

For 2009 in total 26 feed contamination incidents were registered: the ten listed in the table above, and after the end of July till 31st of December 2009 four with the maize varieties Mon 88107[16] and MIR 604[17] (three livestock feed, one pet food) and 12 more incidents: ten contamination cases with linseed FP 967, one with Yieldgard maize and one incident with non-specified genetically modified maize. In nine cases livestock feed was contaminated, in three cases pet food.[18]

The total number of rapid alert reports of non-approved GMOs in feed in the years 2004 to 2009 is shown in the following table:

Total number of rapid alert reports of non-approved GMOs in the years 2004 to 2009

Year	2004	2005	2006	2007	2008	2009*	Total
Feed	-	4	9	12	7	26	58

As of 31.12.2009, source: BVL (Bundesamt für Verbraucherschutz und Lebensmittelsicherheit – German Federal Authority for Consumer Protection and Food Security) and RASFF 2009

The most prominent recent contamination case is the GM linseed FP 967 incident. FP 967 is a herbicide tolerant linseed with an antibiotic resistance gene as a marker. Developed in Canada it had an approval for commercial growing and for use as food and feed in Canada and the USA for the years 1996 till 2002. In 2001 the approval was withdrawn in Canada. It never had an authorization in the EU, and became unauthorised, and hence illegal, anywhere in the world after 2003.[19]

15 See appendix I.

16 Approved through EU Commission on 30th of October 2009.

17 Approved through EU Commission on 20th of November 2009.

18 RASSF: https://webgate.ec.europa.eu/rasff-window/portal/ und https://webgate.ec.europa.eu/rasff-window/portal/index.cfm?event=searchResultList&StartRow=1.

19 http://www.transgen.de/datenbank/pflanzen/11.flachs.html.

The first contamination cases in the EU occurred in September 2009. Up to the 31st of December 2009 the RASFF has documented 95 incidents, nine for feed, one for pet food and 85 for food.[20]

The linseed FP 967 case cannot be compared with contamination incidents caused by DAS 59 122, Mon 88017 and MIR 604. All these GMOs had approvals at least in the USA. In 2009 when GM linseed was found in products all over the world it had been unauthorized for at least six years.

What amounts of feed have been contaminated?

Answers from the German Ministry of Agriculture to requests No. 7/266 and 7/267[21] from the Member of Parliament Ulrike Höfken (The Greens), state that amounts of contaminated food or feed[22] are between 0.5 kilograms and 6 600 tons. That means for the ten reported cases in 2009 up till 30th of July the contaminated amounts of feed are between five kilograms and 66 000 tons. Given the fact that 18 out of 42 cases concern pet food and that food and feed contamination are registered together it is likely that the amount of contaminated livestock feed is far under 66 000 tons.

For the 16 documented feed contamination incidents since the end of July 2009 there is no information on quantities affected. Four out of 16 incidents involved pet food. Soya was affected in 3 cases.

Compared to the 32 million tons of soya imports to the EU a maximum rejected amount of 66 000 tons, not all of which is feed, is insignificant and it is highly unlikely that these amounts could cause any kind of a feed crisis.

Which GMOs caused the contamination incidents, and from which countries did they come?

Answers from the German Ministry of Agriculture to requests from the Member of Parliament Ulrike Höfken (The Greens) based on the EU's "Rapid Alert System on Food and Feed" (RASFF) state that from 2004 till 30th of June 2009 nearly 90 percent (37 out of 42) contamination cases originated from the USA.[23] Including RASFF-data from 31st of July 2009 until end of the year 2009 more than 70 percent (43 out of 58) contamination cases originated from the United States. The 15 other incidents had different sources: China, Ukraine, Canada, Germany and Belgium.

Exporting country, use and transformation events 2004 - 2009

Exporting country	Use	Event	Rapid alert reports (2004 -2009)
USA	Feed for farm animals	7x maize Mon 88017 in supply of processed soy maize MIR 604 maize DAS-59132 maize DAS-59122-7 LL rice 601 maize Bt10 gm-maize*	22
	Pet food	maize Mon 88017 maize MIR 604 maize DAS-59122-7	21

20 https://webgate.ec.europa.eu/rasff-window/portal/index.cfm?event=searchResultList&StartRow=1.

21 Answer from the German Federal Ministry of Food, Agriculture and Consumers Protection to requests No. 7/266 and 7/267 from Member of German Parliament Ulrike Höfken, 6th of August 2009.

22 The documentation doesn't differentiate between food and feed.

23 See appendix I.

		rice LL 601 maize promoter GSR0f Yieldgard VT	
China	Feed for farm animals	rice Bt63	4
Ukraine	Feed for farm animals	gm-soy* in part of processed soy	1
Canada	Feed for farm animals	linseed FP967	5
Germany	Feed for farm animals	linseed FP967	3
Belgium	Feed for farm animals	linseed FP967	1
	Pet food	linseed FP967	1
Total			58

*transformation events unspecified. Source: Answer from the German Federal Ministry of Food, Agriculture and Consumers Protection to requests No. 7/266 and 7/267 from Member of German Parliament Ulrike Höfken, 6th of August 2009, based on data from BVL (German Federal Authority for Consumer Protection and Food Security) and RASFF portal from 31st of July to 31st of December 2009.

According to RASFF there is not a single contamination case reported from Brazil or Argentina

Why are cases of contamination reported from the US, but not from Argentina and Brazil?
The soya grown in Argentina is predominantly genetically modified, which is true for about half of the Brazilian soy.[24] Both countries export genetically engineered soy to the EU. However, in contrast to the US, they respect EU import approvals, and cultivate new genetically engineered varieties or supply them to Europe only if they have EU approval.

In the EU, the approval process for genetically modified plants takes an average of two and a half years. The only country in the world that approves genetically modified organisms faster is the USA. It takes about 15 months. This is mainly due to the fact that a safety evaluation must be carried out only upon the explicit request of the applicant.[25] Brazil needs an average of between three and five years for an approval, Argentina takes three years.[26]

Has the import of soya from the USA to the EU really stopped?
In their letter to German Agriculture Minister Ilse Aigner dated 6th of August 2009, eleven lobbying associations for the German food and animal feed industry which have joined together as the "Grainclub" claim that since June 2009 the import of soybeans and soya meal from the US to the EU has "practically come to a standstill".

Since the 1st of June 2009, the month as of which the imports of soya from the US is said by "Grainclub" to have stopped, till the 31st of December 2009 the RASFF lists ten cases of contamination in soya products originating in the USA. In eight cases feed was contaminated with Mon 88017, in one case Mon 88017 and MIR 604 were found in fruits and vegetables and in one case Mon 88017 was detected in dietetic foods, food supplements, fortified foods.[27]

24 Cert ID: 28.08.09: Cert ID certified "Non-GMO" soy meal and other soy products: Volumes available from South America, http://www.cert-id.com.br/wp-content/uploads/2009/09/brazil-non-gm-cert-volume-2009-eng-v3-0.pdf.

25 Friends of the Earth: Campaigner´s Briefing. Animal feed crisis and EU GMO laws – Is there a link? July 2008; http://www.foeeurope.org/GMOs/ZERO_TOLERANCE_Campaigner_briefing_FINAL.pdf.

26 Friends of the Earth: Campaigner´s Briefing. Animal feed crisis and EU GMO laws – Is there a link? July 2008; http://www.foeeurope.org/GMOs/ZERO_TOLERANCE_Campaigner_briefing_FINAL.pdf.

27 See appendix II.

Just the appearance of new contamination incidents from the USA shows that the US is continuing to supply the European market with soya.

The Agra-Europe news report dated 19th of October 2009[28] states for soy meal: "However, the 'zero tolerance policy' practiced until now by Brussels has not been reflected in US statistics; the American soy meal exports are even expected to increase slightly over 2008/09. In the current campaign, US exporters are expected to sell 8.7 million tons of soy meal worldwide, for which the European refining centers are traditionally major delivery destinations."

The statement that US soya imports to the EU have "practically stopped" is therefore wrong.

The world soya market

Worldwide, some 244 million tons of soya were harvested in 2009. The primary growing countries are the USA (80.5 million tons, i.e. 38 percent of world production in 2008/09), followed by Brazil (57 million tons or 27 percent), and Argentina (32 million tons or 15 percent). Other notable soy producers are China (16 million tons or 4.7 percent), India (9.1 million tons or 4.3 percent), Paraguay (3.8 million tons or 1.8 percent) and Canada (3.3 million tons or 1.6 percent). Other countries together grew 8.9 million tons or 4.3 percent of the soy produced in 2009.[29]

Soybeans: World production in thousand metric tons (MT)									
Production	2005/06	% of Total 2006	2006/07	% of Total 2007	2007/08	% of Total 2008	2008/09	% of Total 2009	*Forecast 2009/10*
United States	83,507	37.84	87,001	36.69	72,859	32.94	80,536	38.22	*88,322*
Brazil	57,000	25.83	59,000	24.88	61,000	27.58	57,000	27.04	*62,000*
Argentina	40,500	18.35	48,800	20.58	46,200	18.99	32,000	15.18	*51,000*
China	16,350	7.40	15,967	8.29	14,000	6.33	16,000	4.74	*15,000*
India	7,000	3.17	7,690	3.24	9,470	4.28	9,100	4.31	*9,000*
Paraguay	3,640	1.64	5,856	2.46	6,900	3.12	3,800	1.8	*5,750*
Canada	3,161	1.43	3,460	1.43	2,700	1.22	3,300	1.56	*3,500*
Other	9,512	4.31	9,337	3.93	8,004	3.62	8,986	4.26	*9,363*
Total	220,670		237,111		221,133		210,722		*243,935*

In the last two decades, soya production has undergone a major geographic shift: while up until the middle of the 1990s the US still grew around 50 percent of the soya grown worldwide[30], between 2007 and 2009 its share dropped to significantly below 40 percent. Simultaneously, Brazil and Argentina, through expansion of land under cultivation, doubled or tripled their own production. The two countries' combined share of world soya production in the two last years was 47 and 42 percent respectively. When combined their soya production exceeded that of the US.

Origin of EU soya imports

After China, the 27 EU countries are the world's largest soya importer, the most recent figures being 32 million tons of soy equivalent.[31] By way of comparison, the world's No. 1, China, imported approximately 39.8 million tons in the 2008/09 fiscal year, and in 2009/2010 China is anticipated to need approximately 38.5 million tons.[32]

28 Agra-Europe 43/09, 19. October 2009, Markt und Meinung [Market and Opinion], p. 1: Sojanotierungen gehen durch die Decke [Soy prices are going through the roof].

29 USDA, quoted from Cert ID Europe, Cert ID certified NON-GMO soy meal and other soy products: Volumes available from South America, 28 August 2009.

30 H. Ehlers and A. Czekala: Hintergrundinformationen zur Herkunft und Verwendung von Soja in der Futtermittelwirtschaft [Background information on the origin and use of soy in feed agriculture]. Deutscher Raiffeisenverband e.V., Bonn 2007.

31 EU Agriculture Minister M. Fischer Boel, quoted from Agra-Europe 38/09, 14 September 2009, Europa-Nachrichten, p. 11: Fischer Boel demands clear commitment on imports of GM feed.

32 Toepfer International: Market report dated 24 September 2009, p. 9.

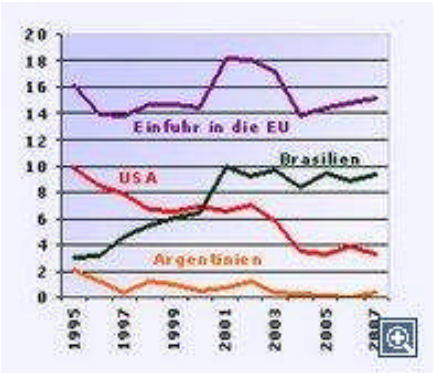
The EU import volume for the 2008/09 fiscal year breaks down into 21.8 million tons of soy meal and 13.9 million tons of soy beans.[33]

Of the 21.8 million tons of soy meal, about 500 000 tons (or 2.3 percent of EU soy meal imports) came from the US. 12.2 million tons (or 56 percent) were imported from Argentina and nine million tons (or 41.3 percent) from Brazil. A large portion of the 13.9 million tons of soy beans came from Brazil (9.5 million tons, i.e. 68.3 percent of EU soy bean imports) only 2.2 million tons came from the US (corresponding to 15.8 percent).[34]

With respect to the countries of origin of the soy meal and soy bean imports into the EU, the last few years have shown a similar distribution:[35]

Imports of soy meal into the EU, total and by country of origin (in millions of tons)

Imports of soy beans into the EU, total and by country of origin (in millions of tons)



Annotation: graph “Einfuhr in die EU” – Import of soy meal into the EU, „Argentinien“ – Argentina, „Brasilien“ – Brazil

For soy meal, the import quantities from the US and Brazil remained relatively constant from 1995 to 2007; only Argentina was able to increase its soy meal exports to the EU consistently in recent years. For soy beans, the imports from the US have been falling consistently since 1996/97, while exports from Argentina remained comparatively steady and Brazil increased its exports to the EU from 1996/97 to 2000, the level remaining relatively steady since then.

This means that the US now plays only a marginal role in soy meal imports to the EU. For soy beans it currently supplies only one sixth of the quantity imported.

Current soy harvest yields and forecasts for the next harvests

According to data provided by the US Department of Agriculture (USDA), from 2007/08 to 2008/09 harvest yields in Brazil and Argentina fell by 6.5 and 31 percent, respectively. For Brazil this translates to a decrease from 61 to 57 million tons, for Argentina a decrease from 46.2 to 32 million tons.[36] This means that, in comparison to the previous year, there were 18 million tons less of soy available from these countries.

33 The soy beans imported into the EU are processed into soy meal and soy oil. If oil seeds are processed into plant oils, the yield rate is 15 to 20 percent of oil. In soy processing, therefore, approx. 80 percent is the protein-rich soy meal, which is also used as animal feed.

34 Agra-Europe 37/09, 7 September 2009, Europa-Nachrichten, p. 11: EU-Agrarverbände: Sojaimporte aus Nordamerika gestoppt [EU agricultural associations: soy imports from North America stopped].

35 Figures from A. C. Toepfer International, USDA, Eurostat, quoted from transgen: Weltmarkt Soja [world soy market], http://www.transgen.de/lebensmittel/soja_mais/181.doku.html.

36 Agra-Europe 38/09, 14 September 2009: Amerikanische Sojaernte wird immer größer [US soy harvest continues to increase]. And: press release from Cert ID, 28th of August 2009. It uses USDA data.

For the 2009/10 harvest season, however, the forecasts are once more significantly higher. For Brazil an increase of almost 10 million tons (from 57 to 66.9 million tons) is anticipated[37], and for Argentina the increase is expected to be 19 million tons (from 32 to 51 million tons).[38] Thus it appears that any shortages were short-term and the production that is forecast will more than make up for the lower harvest yields in the past growing seasons: the yields for the 2008/09 season, which were lower by 18 million tons, will be compensated by the forecast 29 million tons to be produced in the coming 2009/10 season.

In the US the soy harvest grew from 72.9 million tons (2007/08) to 80.5 million tons (2008/09). In 2009/10 it is anticipated to be 88.2 million tons – i.e. an anticipated 7.7 million tons in increased production.[39]

Other soya suppliers

India and China also grow soya in significant quantities. In 2008/09 India produced 9.1 million tons.[40] Indian soy is not genetically engineered; the cultivation of genetically modified soy is not allowed.[41] The issue is being debated, but large domestic processors are opposed.[42] Meanwhile, a large share of the Indian harvest is certified via a so-called Identity Preservation System and can thus be labeled as GMO-free when offered on the world market.[43]

In China approximately 16 million tons of soy (only conventional) were grown in the 2008/09 season.[44] China's export markets for GM-free products are Japan and Korea, but also in Europe.[45] For China, cultivating its own soy is much more costly than importing it, and for this reason, the country imports cheap soy on the one hand, while at the same time exporting the GM-free variety. China's share of global soya imports has risen from seven percent (1997) to 48 percent (2007/08, making it the world's top importer.[46]

As a side note: how much GM-free soya is available?

The world's largest producer of GM-free soy is Brazil. In 2008 some 27 to 30 million tons of conventional, i.e. not genetically modified soy beans were cultivated. Of this quantity, 6.3 million tons of beans were imported into the EU certified as GM-free (i.e. with guaranteed traceability with respect to origin and purity).

In 2009, 26 million tons of conventional soy beans were cultivated in Brazil, which translates into 45 percent of its total production.[47] Of this, 9.4 million tons of soy beans certified as GM-free (NON-

37 Latin American Herald Tribune, 30th of March 2010: Brazil expecting near-record harvest..”Soy bean production this year will reach 66.9 million tons.”

38 Source USDA, quoted from Cert ID Europe, Cert ID certified NON-GMO soy meal and other soy products: Volumes available from South America, 28th of August 2009.

39 Source USDA, quoted from Cert ID Europe, Cert ID certified NON-GMO soy meal and other soy products: Volumes available from South America, 28th of August 2009.

40 Source USDA, quoted from Cert ID Europe, Cert ID certified NON-GMO soy meal and other soy products: Volumes available from South America, 28th of August 2009.

41 Transgen, Lexikon Nutzpflanzen [Lexicon of agricultural crops]: http://www.transgen.de/datenbank/pflanzen/67.sojabohne.html (available on 18th of Sept. 2009, as of March 2009).

42 R. Holloh (2009): Beschaffungsmöglichkeiten gentechnisch unveränderter Sojabohnen für den deutschen Futtermittelsektor, Diplomarbeit, unveröffentlicht, Witzenhausen [Procurement Opportunities for Non-GM Soy Beans for the German Feed Sector, degree dissertation, unpublished, Witzenhausen], p. 39.

43 Telephone conversation with Jochen Koester, Trace Consult, 17th of October 2009.

44 Transgen, Lexikon Nutzpflanzen [Lexicon of agricultural crops]: http://www.transgen.de/datenbank/pflanzen/67.sojabohne.html (available on 18th of Sept. 2009, as of March 2009).

45 Product Board for Margarine, Fats and Oils, 2009 quoted from: R. Holloh (2009): Beschaffungsmöglichkeiten gentechnisch unveränderter Sojabohnen für den deutschen Futtermittelsektor, Diplomarbeit, unveröffentlicht, Witzenhausen [Procurement Opportunities for Non-GM Soy Beans for the German Feed Sector, degree dissertation, unpublished, Witzenhausen], p. 39, www.mvo.nl/Portals/0/statistiek/nieuws/2009/MVO_Factsheet_Soy_2009.pdf (available May 2009).

46 Product Board for Margarine, Fats and Oils: Factsheet soy 2009: www.mvo.nl/Portals/0/statistiek/nieuws/2009/MVO_Factsheet_Soy_2009.pdf (available October 2009).

47 Cert ID, 28th of August 2009, Cert ID certified “Non-GMO” soy meal and other soy products: Volumes available from South America, http://www.cert-id.com.br/wp-content/uploads/2009/09/brazil-non-gm-cert-volume-2009-eng-v3-0.pdf.

GMO-Standard) were available – 16.3 percent of the Brazilian soya harvest of 57.3 million tons of soy beans.[48] The share of certifiably GM-free soya production in Brazil is growing steadily.

The discrepancy between the quantities of soy cultivated as GM-free and the quantities of GM-free certified soya is a result of the fact that products that have undergone the certification process are more costly and only if traders are certain that they can pass on the price surcharge to their customers will they subject their harvest to such a process. If there is no specific demand for GM-free soya, then it may simply be mixed with GM soy and sold as "genetically modified".

45 percent of Brazilian soy production in 2009, or 26 million tons, was cultivated as GM-free.[49] Thus, based on the numbers alone, Brazil can continue to supply over 60 percent of the EU's total need for soya in GM-free quality.[50] Furthermore the remaining six million tons of soy needed to meet EU needs could be imported from India and China, whose total non GM production amounts to 25 million tons. How much GM-free soy is actually delivered to the EU depends, however, on local needs, i.e. on European producers of animal feed and food, on food retailers and on demand from farmers and consumers.

Demand for GM-free animal feed seems to be rising in the EU because of state backed GM-free labeling schemes in Austria, Germany, France, Ireland and Italy.

The supply of GM-free soya is assured by a so-called Identity Preservation System: It guarantees products – from seed production, through all production stages, up to the feed silos in the EU – that are certified under the NON-GMO standard.

Under current laws, the producers of GM-free products must pay the additional costs to certify GM-free production. Costs include seed producers, farmers and mill operators in Brazil, as well as European farmers. Since the polluter pays principle is not in force, distortions have arisen in competition. The additional costs caused by genetically engineered cultivation are added as surcharges to the GM-free products; and they end up being more costly than the genetically modified raw materials.

What is the US policy with regard to contamination with GMOs not approved in the US itself?
The USA is currently the country from which most GMOs originate. However genetically modified plants are being developed for cultivation in other countries. US authorities expect that in the future animal feed and food imports will be contaminated with GMOs that are not approved in their jurisdiction. This prospect moved the Inspector General of the US Department of Agriculture (USDA) to demand stronger import controls.[51] What this means is that not even the US is willing to let in GMOs that have not been previously approved by its own regulatory authorities.

If a country that has recognized the need to protect its own market, and thus its own citizens, from imports of non-approved GMOs, does not want to be accused of operating under a double standard, it must create the legislative framework for protecting its trading partners markets from non-approved GMOs.
This means that the US must establish systems of cultivation, as well as systems insuring separation of products and traceability, that prevent contamination in accordance with the laws and market demands of importing countries. It should follow the example of Argentina and Brazil, and begin

48 Cert ID, 25th of September 2009: Ein Jahrzehnt Non-GMO-Zertifizierung ermöglicht heute "Ohne Gentechnik"[A decade of non-GMO certification now makes "Non-GM" possible] http://www.traceconsult.ch/index.php?option=com_content&view=article&id=140%3Acert-id-a-decade-of-non-gmo-commodity-certification-leads-to-gmo-free-claims&catid=47%3Anewsticker&Itemid=50&lang=de.

49 Cert ID: 28th of August 2009: Cert ID certified "Non-GMO" soy meal and other soy products: Volumes available from South America, http://www.cert-id.com.br/wp-content/uploads/2009/09/brazil-non-gm-cert-volume-2009-eng-v3-0.pdf.

50 Beans can be converted to soy meal equivalents, by multiplying them by a factor of 0.71 – 0.75. Thus 26 million tons of soybeans correspond to 18.5 to 19.5 million tons of soy meal. That, in turn, corresponds to 57.8 to 60.9 percent of the EU requirement of 32 million tons of soy meal equivalent.

51 USDA, OIG 2008. Audit Report. United States Department of Agriculture Controls over Importation of transgenic plants and animals. Report No. 50601-17-Te, December 2008.

cultivating and exporting new GM varieties only once all their trading partners have completed their safety evaluations and approval procedures.

How can the EU agricultural sector free itself from dependency on imported soya?
In place of soya, native protein-rich feed plants can be used. However, the cultivation of peas, field beans and lupines is actually declining substantially. This is because imported soy-based feed materials are significantly cheaper, despite longer shipping routes. This cheaper market price for imported soya, masks the long term environmental and social costs associated with its production, as well as distorting food security agendas in both importing and exporting countries. Consequently, not only the demand for appropriate seed for EU grown proteins, but also actual cultivation has been severely reduced. Meanwhile, some varieties are in danger of disappearing altogether.

This trend affects both conventional and ecological agriculture. It is all the more regrettable since kernel legumes have properties that allow them to be cultivated in ways that spare the environment and resource usage. They allow energy savings by reducing the production of nitrogen fertilizer; they bring far more variety to the fields, lead to greater diversity of species in crop rotation, and thus reduce the problem of pests. Furthermore, they contribute to humus formation, in which CO_2 binds to the soil.

In order to once again cultivate and produce native protein-rich plants, stronger programs to further their cultivation and practically oriented research projects must be initiated, with the close cooperation of farmers. In addition, EU policy can improve the basic conditions for making the production of legumes more profitable, for example by means of higher subsidies when at least one cycle in the crop rotation is devoted to legumes. This would benefit not only climate and soil preservation, but also European farmers. They would have the means to free themselves from the tremendous dependence on imported feed and ever costlier petroleum-based nitrogen fertilizers. This would also contribute to maintaining cattle on grasslands .The opportunity of the present round of CAP reform should act as a catalyst for this process.

Friends of the Earth conclude:

- The number of contamination incidents and the amounts of contaminated animal feed were so low that it cannot be argued that the EU zero tolerance policy caused any kind of a feed crisis. A maximum of 0.2 percent of all soya imports used as animal feed (for livestock and pets) contained EU non – approved GM soya.
- There is no evidence that soya imports from the USA were blocked from June 2009.
- As a soya exporter to the EU the USA plays a minor role: Their share of soy meal imports is 2.3 percent, whilst the share of soy bean imports is 15.8 percent.
- Contamination incidents for feed with EU non-approved GMOs have one main origin: the USA. According to RASFF the USA was responsible for about 90 percent of all contaminations from 2004 till end of June 2009 (37 out of 42 contamination cases). Including RASFF data from 31st of July 2009 until end of the year 2009 more than 70 percent (43 out of 58) contamination cases originated from the United States.
- Contamination is limited to GM shipments being contaminated with other GMOs – this is not a problem for certified non-GM supplies, it is a problem for the US GM industry.
- The two other main producers of GM soya, Brazil and Argentina, have – according to the RASFF data from 2005 to 2009 – caused not one single contamination case. One reason is that both countries accept EU market rules. They authorize and cultivate new GMO varieties in accordance with EU approvals.
- The USA should introduce Brazil's segregation system for GMO free soya. This has worked for many years now.
- The USA has to solve its contamination problems and meet its customer's demands.
- The USA has its own zero tolerance policy in force. US authorities do not accept US-non approved GMOs.

- Brazil can deliver the vast majority of EU´s soya needs in GMO free quality.
- The remainder can be obtained from China and India.
- There are good alternatives to imported soya; EU grown protein feed like peas, beans, lupines, and oilseed rape meal.

Dropping zero tolerance is unacceptable for the following reasons:

- It is the US-agribusiness / commodity industry that has blocked the creation of a modern segregation and traceability system for years. Dropping zero tolerance will simply force the EU market open to contaminated US imports.
- Dropping zero tolerance and speeding up authorization processes in the EU would mean surrendering to the lobby pressure organised by US agribusiness and associates. Instead of giving in, the EU has to state that: Everyone who wants to export to our markets has to accept our laws.
- It would be both hypocritical and perverse if the EU was forced to drop its zero tolerance policy by the USA which itself has a zero tolerance policy in force.
- A feed industry that cannot guarantee zero tolerance for feed cannot be trusted to avoid food contamination. One does not have to be a fortune-teller to predict the next lobbying targets: A low-level presence of non-approved GMOs in food, then a higher-level tolerance, and then allowing a presence of GMOs with no authorization anywhere in the world. Giving in by changing EU law would not be the end of demands but just the beginning of a further series of demands.
- As a consequence of the 2000 StarLink contamination scandal in the USA – genetically modified maize only approved for feed was found in food-, the withdrawal of thousands of food products from the market caused costs of more than one billion US dollars – EU legislation[52] recommends common authorizations for feed and food. A low level presence of non approved GMOs in feed would undermine that principle and probably lead to an accepted low level presence in food.

Friends of the Earth demands

- Zero tolerance for EU non-approved GMOs has to remain in force; EU law must not be undermined.
- The EU has to tell the US to respect its laws and market rules. EU politicians have to defend EU GMO law against US lobby pressure. They have to make it very clear that US legislation has to be changed in a way that US producers are able to satisfy the demands of their trading partners, and not EU law to satisfy US interests. Therefore US agribusiness has to install a working segregation and traceability system.
- To avoid product recalls from GMOs cultivated in the USA but non-approved in the EU, all US-shipments with an EU destination need to be analysed and certified. Therefore a standard for taking samples and rules for analyses has to be developed and implemented with the aim of maintaining zero tolerance. These standards have to be published and made available for exporters and control authorities.
- In order to identify EU non approved GMOs a comprehensive global register for all GMOs ever trialled is needed. It has to include: all authorized GMOs, all GMOs tested in field trials, all GMOs tested in field trials but never put forward for authorization, and all GMOs formerly approved but later withdrawn from the market. This means that biotech corporations and research institutes need to make all their reference material and testing systems publicly available.

52 Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22th of September 2003 on genetically modified food and feed. “Experience has shown that authorisation should not be granted for one single use, when the product is likely to be used both for food and feed purpose; therefore such products should only be authorized when fulfilling authorisation criteria for both food and feed” (10).

- To reduce the dependency on feed imports European farmers should be supported in growing vegetable proteins and keeping their livestock on grassland. The Common Agriculture Policy (CAP) and trade policies have to be reformed to facilitate this.
- The polluter pays principle and a liability regime has to be established so that compensation is available for contamination incidents and so that those who contaminate food and feed with GMOs are held responsible for their actions.

This paper is based on the German paper: „Wie die Agrarindustrie versucht, die Nulltoleranz zu kippen“ (January 2010) written by Heike Moldenhauer, FoE Germany and Annemarie Volling, Arbeitsgemeinschaft bäuerliche Landwirtschaft (AbL e.V. - German peasant farmers association).

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Appendix I

Answers from the German Ministry of Agriculture to requests from the Member of Parliament Ulrike Höfken (The Greens) based on the EU's „Rapid Alert System on Food and Feed" (RASFF) state that nearly 90 percent (37 out of 42) contamination cases are originated in the USA.

Exporting country, use and transformation events

Exporting country	Use	Event	Rapid alert reports (2004 -2009)
USA	Feed for farm animals	5x maize Mon 88017 in supply of processed soy maize MIR 604 maize DAS-59132 maize DAS-59122-7 LL rice 601 maize Bt10	19
	Pet food	maize Mon 88017 maize MIR 604 maize DAS-59122-7 rice LL 601	18
China	Feed for farm animals	rice Bt63	4
Ukraine	Feed for farm animals	gm-soy* in part of processed soy	1
Total			42

*transformation events unspecified, source: BVL (German Federal Authority for Consumer Protection and Food Security); as of 30.07.09

Source: Answer from the German Federal Ministry of Food, Agriculture and Consumers Protection to requests No. 7/266 and 7/267 from Member of German Parliament Ulrike Höfken, 6th of August 2009.

Appendix II

Contamination of soya imports from the USA to the EU from 1st of June till 31st of December 2009 (according to RASFF, as of 29th of March 2010)

Date of case	Last change	Country	Subject	Product category
11/09/2009	09/03/2010	ES	unauthorised genetically modified maize MON 88017 **in soybean hulls from the United States**	feed materials
11/09/2009	09/03/2010	ES	unauthorised genetically modified maize MON **88017 in high quality soybean cake from the United States**	feed materials
11/09/2009	09/03/2010	ES	unauthorised genetically modified maize MON **88017 in low protein soybean cake from the United States**	feed materials
23/07/2009	09/03/2010	ES	unauthorised genetically modified maize (MON88017) **in soybean cakes from the United States**	feed materials
23/07/2009	09/03/2010	ES	unauthorised genetically modified maize (MON88017) **in soy husks from the United States**	feed materials
23/07/2009	09/03/2010	ES	unauthorised genetically modified maize (MON88017) **in soybean cakes from the United States**	feed materials
07/09/2009	11/01/2010	NL	unauthorised genetically modified maize (MON88017/MIR604) **in soy products from the Netherlands, with raw material from the United States**	fruit and vegetables
06/08/2009	06/10/2009	FR	unauthorised genetically modified maize (maize Mon 88017) **in soya protein from the United States, via Switzerland and via Belgium**	dietetic foods, food supplements, fortified foods
05/06/2009	05/10/2009	DE	unauthorised genetically modified maize (maize MON 88017) **in extracted soya bean meal from Germany with raw material from the United States**	feed materials
09/07/2009	25/08/2009	DE	unauthorised genetically modified maize (maize Mon 88017) **in extracted soya bean meal from the United States via Germany**	feed materials