DLG Memorandum

Zero-tolerance policy is putting the European livestock industry at risk and restricting consumers' freedom of choice

Findings of the DLG closed session on "GMO and animal feed" on 27/28 August 2008 in Kassel, Germany

On 27 and 28 August, the German Agricultural Society (DLG) met in Kassel with representatives from the animal feed, agricultural, dairy and meat industries, as well as consumer representatives, government officials and scientists, to discuss the impact of the EU approval procedure for GMO constructs on the supply of feed protein and the prospects for the German and European livestock production industry. The discussions led to the following conclusions:

The zero-tolerance policy currently being applied within the EU towards genetically modified soya varieties which do not have EU approval is also beginning to hinder the import of approved soya feeds. Consequently, European livestock production is being deprived of an indispensable part of its feed resources. It is feared that this will result in high cost increases, loss of competitiveness, the migration of large parts of the pig and poultry production and, ultimately, more meat being imported from outside the EU.

There is no scientific basis for the zero-tolerance policy, and it is not necessary in order to ensure high standards of consumer health protection. It dramatically increases the economic risks and the costs of the market players.

The EU Commission should scrap zero tolerance in favour of thresholds which are practical and based on fact. Such thresholds are the only way of ensuring freedom of choice between plant-based resources that require mandatory labelling and those which do not. Analysis and sampling methods used as part of national and international controls must be standardised on the basis of good professional practice. An accelerated procedure for approving GMO constructs assessed as safe elsewhere would further ease the situation.

Trends in cultivation and in the flow of GMO plants as feed resources
Globally, GMO plants are grown on around 115 million hectares, or around 7 per cent of the land under cultivation. This figure is increasing by more than 10 million hectares each year. The USA, Brazil and Argentina are the main exporters of soybeans. GMO varieties of soybeans already account for between 57 per cent (Brazil) and 98 per cent (USA) of the land under cultivation for this crop. New, second-generation GMO varieties with improved quality and resistance properties and higher yields are already being grown in the USA, while preparations are underway for cultivation in Argentina and Brazil. Most of these varieties are still not approved in the EU because of the lengthy licensing process.

There are currently 24 genetically modified soybean constructs already undergoing the approval procedure. The probability of inadvertent contamination with varieties not yet approved in the EU rises as the area under cultivation expands. The costs of complying with the current limits of 0.0 for non-approved or 0.9 per cent for approved GMO constructs are increasing exponentially.

The EU currently consumes 57 million tonnes of protein feed, around 78 per cent of which has to be imported. The importance (market strength) of the EU as the biggest importer of soybeans from South America has fallen substantially in recent years in favour of China. It is unlikely that this declining market strength can be mobilised to reduce the proportion of GM soybeans cultivated in the exporting countries.

Approval of plant resources with GM constructs
The approval procedure for a GM variety currently takes between two and 12 years. The multi-faceted decision procedure (EFSA – EU Commission – EU Council) is lengthy and complex. The decision-making processes must be shortened and the powers of EFSA and the EU Commission must be increased.

The work carried out so far at international level to standardise the procedures and requirements for the granting of licences (Codex Alimentarius, OECD, Cartagena Protocol), must be continued intensively and supported politically, and the results integrated into existing approval procedures. The currently unsatisfactory international synchronisation hinders the flow of goods and the application of technical advances and has a significant negative impact on national economies.

Consequences of the zero-tolerance rule for the supply of protein feed
In a study carried out in spring 2007, the EU Commission's Directorate-General for Agriculture calculated the economic impact of three different scenarios for 2009 and 2010. All the scenarios assume that various source countries cease to export to Europe because of the risk of contamination with GM constructs not licensed in the EU: Scenario 1: USA, Scenario 2: USA and Argentina, Scenario 3: USA, Argentina and Brazil.

The case of GM maize variety Herculex in summer 2007 shows that the scenarios are extremely realistic. According to a calculation by the German Association for Animal Feed (DVT), the import of maize gluten feed to the EU almost completely stopped when cultivation of these varieties began in the USA, because of the contamination risk. This has resulted in an economic loss of around €1.5 billion.

The significance of soya imports for European and German livestock production is immeasurably greater. In 2007, some 6.8 million tonnes of soybeans and soya extraction meal/cake were imported into Germany. This amounts to around 2.8 million tonnes of protein. It is unlikely that home-grown substitutes (grain legumes, coarse colza meal, DDGS) or other imported protein feed (sunflower meal, cotton seed meal, maize gluten feed) would be able to cover more than 10-20 per cent of the total quantity of currently imported soya protein. Allowing a return to the practice of feeding animals food waste and bonemeal (category-3 material) would close the gap by another 10 per cent at most, leaving a large shortfall. Without imported soybeans or soya meal, it will not be possible to maintain the production of food of animal origin at current levels, either in terms of price or quantity. It should also be noted that all plant-based substitutes for soya meal have a lower feed value.

The price difference between GM and non-GM soya meal is currently around €40 per tonne, or approximately 15 per cent. The share of GM-free soya meal is currently estimated to account for around 10 per cent of the total imported quantity. If this were increased to the total quantity - assuming that this was even possible in the current market - and the price differential remained the same, annual costs would increase by around €250 million. However, it can be assumed that as demand rises and supplies become more scarce, the price differential would multiply. On top of this there are increased costs of logistics, inspection and certification.

Based on the experience with maize gluten feed, the loss of market access for soybeans from the USA would increase mixed feed prices by around 8 per cent. The EU study calculated that the anticipated effects of increased shortages due to the additional loss of Argentina's market access (Scenario 2) would produce a 23 per cent increase in feed costs. If we were also to lose Brazil as a supplier country (Scenario 3), the resultant import deficit of 32.3 million tonnes would lead to an even more dramatic price rise.

Consequences for dairy and beef production, and for pig and poultry production
Since the digestibility and protein quality of the feed does not have to be so high for ruminants, it is in principle possible to replace soya meal in the ration with alternative protein feed. However, the sheer quantities involved in substituting around 1.5 million tonnes of soya meal would increase feed costs and thus make these products less competitive on the global markets. The consequence would be a fall in net production of beef and an increase in imports.

It would not be possible to substitute the whole of the soya meal ration in pig feed with alternative protein feed while maintaining the same high output. Shortages of soya meal and the resultant price increases would thus have a significant impact on feed costs, cost-effectiveness and competitiveness. According to the study by the EU Commission's Directorate-General for Agriculture, we can expect a significant relocation of production to non-EU countries and a fall in net production of up to 35 per cent, depending on the level of the assumed supply deficit.

Similarly, it is not possible to substitute the whole of the soya meal ration in poultry feed with alternative protein feed while maintaining the same high output. Soya meal is necessary to maintain high output in chicken and turkey rearing, and also for egg production. Here too, shortages of soya meal and the resultant price increases would have a significant impact on feed costs, cost-effectiveness and competitiveness. The study shows a fall in net production of up to 44 per cent, depending on the level of assumed supply deficit.

Consequences for food retailers
The zero-tolerance policy and a sluggish approval procedure could lead to a significantly reduced supply of animal products and considerably higher purchase costs. Although anti-GM consumer organisations and NGOs are calling for food retailers to label and sell "non-GM" products, so far few retailers have taken up the opportunity to offer products labelled "non-GM". A number of reasons have been given for this:

- Legal uncertainty concerning the labelling of products as "non-GM“, and considerable challenges in terms of communication coupled with an uncertain outcome

- No way of being able to control the claim on the end product through examination
- Food additives and flavourings produced using genetic engineering can no longer be used (subject to the possibility of authorisation)
- Uncertainty as to whether it will be possible to ensure sufficient supplies in future
- High costs of logistics for a third product line, alongside "conventional“ und "organic“
- In the long term we expect to see GM products as functional foods with a transparent benefit for consumers, which may lead to a more positive attitude. Any money invested in developing a third segment would have then possibly have been in vain.

Consequences for the consumer
Surveys show that the majority of consumers do not currently recognise any benefit of GM products. The majority are opposed to genetically modified foods. As well as objective risk/benefit considerations, emotional, psychological and ethical reasons also come into play here. Consumers do not have freedom of choice, which is why so far there are no reliable findings as to how consumers would behave if they were offered GM products at significantly lower prices or with new quality features. It is reasonable to assume a significant discrepancy between the findings of surveys and actual purchasing behaviour as in other cases (organic products, fair trade products).

We can assume that the price point for animal products produced without the use of GMO would, if specially labelled as such, lie somewhere in between conventional and organic goods. It is not known how much of a premium consumers would be willing to pay for products from a third product line ("non-GM"), although market experts suggest that it would be low. However, a shortage of protein feeds will substantially raise the cost of feed in general, and thus also the consumer prices for animal products from all three categories: "conventional“, "organic“ and "non-GM“.

Increasingly, the consumer demand for meat products would be met by imports not reared in accordance with EU standards, so that we would be less able to guarantee consumer health protection let alone freedom from genetically modified organisms. The strict requirement for animal products without GMO could end up being a very bad deal for consumers.

Risk assessment
Studies on animals which have been fed on feed produced from the first generation of genetically modified plants have not produced any evidence of a qualitative reduction in feed value, changes in output or impairments to the animals' health. Nor is the quality of the animal products adversely affected in any way. There is no evidence that transgenic DNA taken up into the animal organism with the feed behaves any differently to DNA from conventional plants, which also contain DNA that is "foreign" to the human organism.

Approved, genetically modified foods are just as safe as their conventional equivalents. Comprehensive scientific studies by the European Food Safety Authority (EFSA), the World Health Organisation (WHO) and the EU Commission's Joint Research Centre (JRC) have all reached the same conclusion. The most recent study ("Scientific and technical contribution to the development of an overall health strategy in area of GMOs“) was commissioned by the European Parliament on the initiative of critics of genetic engineering. Nor are allergies and hormonal effects risks specifically associated with genetic engineering.

The public overestimates the potential risks of genetic engineering in farming and food production. Although the cultivation of genetically modified plants now involves many varieties, accounts for large shares of production on several continents, has been taking place for ten years, and the raw materials produced have been consumed directly or in processed form by millions of consumers, so far there has not been a single documented case in the entire world where ill health can be traced back to toxicity of approved genetically modified plants.

Nevertheless, the monitoring and evaluation of regulatory changes brought about as a result of genetic engineering changes, and of possible interactions and long-term effects, should be developed and extended. Approval procedures already in progress should not, however, be delayed unless there are well-founded and specific grounds for concern.

Excerpt from www.DLG.org