

Honey-free Europe

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The EJC decision on MON810 maize pollen in Bavarian honey

On the 6th of September the Court of Justice of the European Union (ECJ) made a judgement in case C-442/09 regarding the case Karl Heinz Bablok and Others v. Freistaat Bayern concerning the presence of pollen from the genetically modified Monsanto maize MON810 in the honey produced by Herr Bablok⁽¹⁾. Honey produced on Herr Bablok's farm was found to contain pollen from MON810 which was cultivated, at a distance of 500m from the farm owned by the Bavarian State.

The decision document of one single page, which is virtually void of scientific facts; such as for example the % of pollen actually present in Herr Bablok's honey (cited as "*very small amounts of MON 810 maize DNA*"). It would have been scientifically useful to know, for example, the sampling methods, the detection methods, the units used to measure this, the reproducibility of the results, and the qualifications of the detection laboratory. From the information present in the decision document, what the ECJ discloses as "*very small amounts of MON 810 maize DNA*" could simply be the QPCR machine background. In the case of pollen (as distinct from honey) collected by Herr Bablok, the ECJ does provide a figure of 4.1% (as a MON 810 maize DNA proportion of the total maize DNA) but, as above, provides no scientific justification, and no confidence levels, to justify this percentage.

Relevant GMO Regulations

As the judgement correctly states, two EC regulations may be relevant to this case:

1) **Directive 2001/18/EC** on genetically modified organisms (GMOs) which provides that such organisms may be released deliberately into the environment or placed on the market only when prior authorisation has been given.

With reference to Directive 2001/18, the ECJ concluded that MON810 pollen has lost its ability to reproduce and is totally incapable of transferring the genetic material which it contains. Thus it no longer comes within the scope of being considered an organism (and thus also not a genetically modified organism). Thus, Directive 2001/18/EC is not considered relevant by the ECJ.

2) **Regulation (EC) No 1829/2003** on genetically modified food and feed, which provides that GMOs for food use, foodstuffs containing or consisting of GMOs, or foodstuffs produced from ingredients, produced using or containing GMOs must be authorized before being placed on the market.

From the available decision document, no discussion seems to have been initiated regarding the fact that MON810 is the only maize approved for food, feed and cultivation in Europe and that it has been cultivated and approved as safe by the EC for cultivation and food and feed, since 1989. Thus, all Mon810 derived produce, even residues and dusts, including pollen from MON810 may implicitly legally be found in the air we breathe and on the lettuce we eat. Bees may visit maize plants or other plants upon which MON810 pollen has fallen. It is thus biologically and logically not surprising that bees, and thus their honey, may come in contact with MON810 pollen, as they do with all other kinds of pollen.

With reference to Regulation (EC) No 1831/2003 the ECJ concluded that products such as honey and food supplements containing such pollen constitute foodstuffs which contain **ingredients** produced from GMOs within the meaning of the regulation. This definition of pollen as an ingredient of honey and not as a natural component is a new juridical step of considerable importance.

An alternative possibility would have been to judge the presence of pollen (GM or otherwise) in honey to be ‘adventitious and technically unavoidable’, which would have avoided the considerable problems discussed below. The concept of ‘adventitious and technically unavoidable presence’ of GMO or derived products is important for Regulation 1829/2003 in determining whether labelling of products containing less than the labelling threshold of 0.9% of approved GMOs, is necessary^(2, 3). Thus, for example, cargoes of maize arriving in Europe do not require labelling if:

- 1) the % of approved GMO is less than 0.9% threshold (measured as the haploid genome equivalent (HGE) definition of DNA copies recommended by the (EC) 787/2004). In this particular case, the threshold for labeling of MON810 pollen would be expressed a % of the total maize pollen in the honey.

AND

- 2) it can be demonstrated (on each occasion) that this GMO presence is ‘adventitious and technically unavoidable’. In this case the ‘adventitious and technically unavoidable’ nature of the GMO pollen seems evident, since the bee-keeper does not instruct his bees as to which pollen is desirable and as bees are collecting honey components over about 30 km²

Honey thus now becomes an exception to this rule of ‘adventitious and technically unavoidable presence’, since the ECJ has decided that ‘*pollen is not a foreign substance or an impurity, but rather a normal component of honey, with the result that it must indeed be classified as an ‘ingredient’*’. Under this interpretation, the pollen, as an ingredient, would be classified as being produced from GMOs and would need authorization to be incorporated into honey. The ECJ considers that the concept of ‘adventitious and technically unavoidable presence’ is concerned with labelling of products that are already authorized; where MON 810 pollen is not. The ECJ further insists that such prior authorization is necessary irrespective of the proportion of GM material in the product.

Professor Moritz Hagenmeyer⁽⁴⁾ a legal partner of Krohn Rechtsanwälte (Hambourg) has criticized the legal basis of the ECJ ruling, since in his opinion, “*pollen in honey, unless it was intentionally - and unlawfully - added by the manufacturer can certainly be considered a component or even a contaminant or residue, but never an ingredient.*” According to Professor Hagenmeyer, the Labelling Directive 2000/13/EC will soon be replaced by the new Food Information Regulation containing a new definition of “*ingredient’ and stating explicitly that “residues shall not be considered as ingredients”*”.

EFSA⁽⁵⁾ was asked, by the EC, for a rapid scientific opinion on the presence of MON810, pollen in honey. In a preliminary communication, EFSA stated that “*The EFSA GMO Panel considered the safety of maize MON810 pollen both in food, for example when present in honey, and as food, when pollen is consumed directly. The Panel had previously concluded that maize MON810 is as safe as non-GM maize and therefore advises that it is unlikely that pollen derived from MON810 would raise specific concerns as a result of the genetic modification*”. However, according to EFSA, MON810 pollen in honey was not included in the original scope of the authorization application for maize MON810, meaning that honey containing the GM pollen in honey became illegal following the court ruling. A full scientific opinion has not yet appeared on the EFSA web site but it should be remembered that the EFSA opinion is a science-based food-safety decision, while the ECJ considers EC legislation and professes no expertise on science or food-safety.

Curiously, while the ECJ decision has been amply commented upon by the anti-GMO NGOs (not cited), there is no comment to be found on the Monsanto web site, nor upon the CropLife web site which is sponsored by the plant biotechnology industry.

Answers to written questions have been requested by the European United Left/Nordic Green Left (GUE/NGL)^(6, 7) which, according to Wikipedia, groups together European leftist parties (socialists, anticapitalists, antiliberals, eco-socialists, communists and post-communists. Answers have been provided by EC DG-Sanco Commissioner Dalli ⁽⁶⁾, but, here, the purpose of these seems to avoid answering the questions or to provide bland all-purpose answers.

Further implications

Only two GMOs are authorized for cultivation: the Monsanto MON810 for food and animal feed and the BASF Amflora potato for industrial use. Both of these have the potential to be incorporated into honey by foraging bees and neither have a specific authorization for use in honey. In third countries, many GM-crops are cultivated and, likewise, the presence of GM-pollen in honey is probable. Europe is not self sufficient in honey production. It produces 200,000 tonnes per year and must import an additional 140,000 tonne mainly from South America and China both of which cultivate GMOs that are not approved in the EU.

The ECJ decision makes authorization of honey containing GM material obligatory. This applies not only to the honey made by Herr Bablok's bees near GM fields in Bavaria, but to all honey produced in the EU and all honey imported into the EU. Honey produced in EU member states that do not cultivate GMOs would nonetheless require GMO quantification and authorization since it cannot be pre-supposed to be GMO-free. The relative costs of GMO quantification in honey are considerable and far beyond that which might be supported by amateur, and probably professional, bee-keepers. The bee-keepers must thus pass these costs to the customer or go out of business. Large multinationals importing honey in batches may survive these costs but the honey would not be easily marketable if it required labelling. Since, according to the ECJ, the authorizations are necessary irrespective of the proportion of GM material in the honey. The limit of detection would presumably apply, since the zero % (requested by the ECJ) cannot be measured by scientific detection methods.

For the development and safe regulation of GMOs, it is essential to perform field trials in the EC. Such field trials may be performed using authorized or non-authorized GM-crops. This is done routinely in most EC member states in a controlled manner under regulations 2001/18/EC and 1829/2003. Field trials are mostly performed by academic institutions under grants from the EU member states or the EC. Given the ECJ decision such field trials could no longer be performed unless there was a very large isolation distance between the GM-crops and the nearest bee-hives. At this moment it is difficult to estimate how big this isolation distance must be. Some estimates have suggested more than 13 km (the French *Comité Scientifique of Haut Conseil des Biotechnologies*). It is probably impossible, in most EU member states to find a location so distant from any bee-hive. Even if such a location could be found, it would be easy for anti-GMO activists to import bee-hives into the region. The damages for contamination of honey by GM-pollen could be very high, and far and beyond what academic institutions could afford. One only needs to remember the multi-million dollar damage costs awarded against Bayer Crop Sciences for the contamination of batches of non-GM-rice by their unapproved GMO variety LLrice 601. Thus it is likely that GMO field trials will come to a halt in the EC and EC biosafety will be compromised.

Conclusion

The ECJ decision classified pollen, in honey, as an ingredient, rather than as an 'adventitious and technically unavoidable presence' as under Regulation 1829/2003. This has grave implications for continued honey production in the EU. Separate authorizations would be

necessary for each GM-crop cultivated in the EU. Neither of the two GMOs cultivated in Europe (MON810 maize or Amflora potato) have authorizations at the present time; since MON810 did not contain honey as part of the original authorization (presently being subject to the 10 year review) and since the Amflora potato is destined for industrial use and animal feed, but not for human consumption. Consequently, any honey containing GM-pollen must be withdrawn from the market while awaiting authorization, and all honey must be subjected to the considerable costs of GMO quantification, which will be particularly high due to the zero tolerance imposed by the ECJ. Thus will drive up the price of honey and cause most small amateur bee-keepers to go out of business. The situation for imported honey is similar, or worse, since most source countries USA, Canada, South America and China also grow GM-crops many of which do not have EC authorizations. Finally, the ECJ decision will likely put an end to GMO field trials in Europe, which are necessary for food and feed security in the EU.

To close, the ECJ seems to have considered this case without any reference to well documented scientific biosafety issues, or to the probable economic effects. Perhaps the next ECJ case will be to determine the legality of MON810 pollen in the air we breathe? Is it a contaminant, a residue or an ingredient?

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