

The response reproduced below was submitted further to an invitation to comment on the draft Discussion Paper by the Nuffield Council on Bioethics: *The use of genetically modified crops in developing countries*, during June to August 2003. The views expressed are solely those of the respondent(s) and not those of the Council.

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Comments to Draft June 2003

"The use of genetically modified crops in developing countries".

Dear Mr. Schmidt,

First of all we would like to congratulate you to the very interesting paper on the use of GM crops in developing countries.

In addition to the topics mentioned in the sections of your paper we would like to make the following comments:

1) We miss some strategic considerations in GM crops-research for substantial contributions (objectives of future research) of global nutritional security as

- Effective using of limited resources (e.g. water, phosphorus, fossil fuel etc.),
- Increase of heat tolerance and salt water tolerance of plants,
- Improved resistance
- Improved output (yield) with lower inputs

Some attention is given to improved content of micronutrients in some foods (like functional foods), but we feel that a decrease of undesirable substances (like allergic substances, mycotoxins, alkaloids, glucosinolates etc.) would be more important. Optimal animal and human diets can be formulated by combination of various feeds and foods or by different feed/food additives or supplements (e.g. amino acids, vitamins, major and trace elements etc.), but it is very difficult to remove undesirable substances.

Therefore the effective using of limited resources and the decrease of undesirable substances in feeds and foods should be - from our understanding - main aims of genetical modifications of crops. Of course there is a conflict between public need and interests of some companies.

2) We miss some remarks/contributions to the use of GM crops in animal nutrition in developing countries.

Many crops are only cultivated for feeding or large portions (up to 80 %) are used as by-products (e.g. oil meals, brans, pomace, pulp, brewer grain etc.) in animal nutrition. Therefore aspects of animal health and safety of foods of animal origin after feeding of GM crops or by-products from GM crops should be mentioned or discussed in the paper.

We are willing to contribute to the paper esp. to aspects of animal nutrition if necessary.