



## **Statement of the Federal Ethics Committee on Non-human Gene Technology (ECNH) on the application by the company Plüss-Staufner for a field trial using T25 maize in Oftringen**

According to Art. 29i para. 2 subpara. c of the draft revised LPE, the ECNH evaluates "permit applications or planned research which has basic or exemplary significance". By the terms of its mandate under the decree of appointment, the ECNH is issuing a Statement on the current application for a field trial using genetically modified maize.

While the task of the Federal Expert Commission for Biosafety is to evaluate the safety of humans and the environment, the ECNH faces additional ethical questions in connection with the application. One of the central tasks of ethics is to analyse and evaluate the goals and impacts of human actions. To do justice to this, the ECNH must include the goals of the application and their justification in its evaluation.

The following aspects and considerations are foremost in the ECNH's ethical evaluation:

### **1. Transparency of the planned experiment's objective**

Research today is linked internationally. Against this background, we doubt whether the field trial in Switzerland is at all justifiable in terms of the value of its scientific findings. It appears rather more to be a step towards putting a product onto the market, and should therefore be evaluated as such.

The objectives of the experiment should thus be stated as the marketing of transgenic, herbicide-resistant maize, and the authorisation of a total herbicide, previously only permitted for fruit farming and viticulture, for the cultivation of maize. These objectives however are not apparent from the application documents.

The applicant's documentation is incomplete in other respects as well. The ECNH bases its evaluation substantially on the position taken towards the application by the Swiss Expert Commission for Biosafety, which although it agreed to the experiment raised questions which were not satisfactorily answered. The ECNH itself notices missing documents, for example on the impact on soil erosion and on biodiversity.

The ECNH is of the view that the application documents and publication in the official journal are unclear and unsuitable for informing the public adequately about the objectives and impacts of the experiment. A transparent presentation of goals and impacts is necessary for proper participation by the population in the decision. Both the applicant and the competent authority must therefore take steps to ensure that the announcement and documentation are complete, clear and understandable.

## **2. Social acceptability**

The ECNH believes that in the period immediately preceding the application being made, the information needs of the affected population were insufficiently taken into account. No concept of public participation can be seen from the applicant's documentation. Public reaction has shown that neglecting social discourse can lead to social tensions. Particularly because of the novelty and controversial nature in Switzerland of the field trials, it would be ethically necessary to take seriously the open scepticism and the feelings of impotence and vulnerability of the population. This would require an increased involvement of the public in discussion and planning, and a more socially justified experimental design. Their inaccessible documentation and precautions indicate that the applicant and the authorities are risking loss of the public's trust in the fairness of the decision-making process.

The legal compensation regulations cannot make up for this lack of communication. Legal compensation should be regarded as a last resort, because as a rule it works retrospectively and particularly because it does not compensate for damage to immaterial values.

The assessment of the application from an ethical viewpoint goes beyond questions of safety. Planned use of gene technology must be considered in a social context. The use of herbicides and the spread of antibiotic resistance in agriculture should be discussed in public debates. These debates would however be of a general nature, rather than focusing on gene technology or on a particular concrete application. The mandate of the ECNH obliges it to contribute to such a public discussion.

## **3. Economic benefit**

The right of the applicant to extend its position in the market is not disputed, as long as this experiment harms no public interests. But in order for the application to include an economic benefit among the assets to be assessed, the applicant would have to show that the cultivation of genetically modified maize would involve such a benefit, in comparison to alternatives.

## **4. Ecological benefit**

Several ecological questions arise concerning the release of transgenic plants. Misgivings about their long-term potential for damage have not yet been dispelled. For example, the long-term effects of the application of total herbicides have not been clarified. Further documents and supporting research would be necessary for this. Considering the given experimental field, the estimation of the Swiss Expert Commission for Biosafety prompts the question of whether appropriate supporting research would even be possible.

As part of the ECNH's mandate to scrutinise adherence to the principles of protection of biological diversity of animal and plant species and their sustainable use, the ecological benefit of the experiment should also be considered. A study of the Swiss Agency for the Environment, Forests and Landscape on the use of herbicide-resistant plants concludes that a significant reduction in the quantity of herbicide used cannot be expected.

**Decision**

Having considered all the aspects under assessment, the ECNH concludes unanimously (with 3 abstentions) that a postponement of the experiment is the only defensible solution. The social and ecological misgivings are too substantial to be balanced by possible economic advantages. The ECNH therefore proposes not to grant the application at this time.

The ECNH believes it important to emphasise that its decision should not be understood as a general reservation towards the agricultural use of gene technology. Some members of the Committee point out that in view of the misgivings over the particular project being evaluated, performing it would be unwise and would do no service to gene technology overall.

17 March 1999