

**SIXTH FRAMEWORK PROGRAMME
THEMATIC PRIORITY 5
FOOD QUALITY AND SAFETY**



Co-ordination of Research on genetic resistance to plant Pathogenic Virus, and their
Vectors in European Crops
Project number: FOOD-CT-2005-006961
Co-ordination Action

Deliverable 45: Report on the second Technology Transfer Workshop

***Transgenic Plants in Europe:
Public Acceptance and Regulatory Bottleneck***

Due date of deliverable: **M 30**

Actual submission date to the Commission: **M 37**

Start date of the project: **February 1st, 2005**

Duration: **48 months**

Organisation name of lead contractor: **CRA-PAV**

Project co-funded by the European Commission within the sixth Framework programme (2002-2006)	
Dissemination Level	
PU public	PU
PP Restricted to other programme participants (including the Commission Services)	
RE Restricted to a group specified by the consortium (including the Commission services)	
CO Confidential, only for members of the consortium (including the Commission services)	

Introduction

The second technology transfer workshop (*Deliverable 31*), entitled: “Transgenic plants in Europe: public acceptance and regulatory bottleneck”, took place at the 5th ResistVir meeting in Vienna.

Most recent analysis data on public acceptance of transgenic plants and the understanding of regulatory bottlenecks at the European level are of particular interest for persons dealing with virus resistance. Obtaining resistance to plant viruses by traditional breeding is difficult, laborious and time consuming or even impossible in many cases. In the last two decades, the use of genetic engineering has greatly increased the possibility of obtaining plants resistant to viruses. Great successes have been achieved by producing transgenic plants. Plants being resistant to numerous viruses as well as plants exhibiting new traits or expressing recombinant proteins have been generated. The global area of commercially grown GMOs is continuously increasing world wide. Despite this successful story, in the European Union, the use of transgenic crops is severely hampered by many different constraints, mainly comprising legislative, communicative and ethical issues.

In order to gain information about the current situation on commercial use of transgenic plants in Europe, a multidisciplinary workshop was organized and three speakers were invited :

Prof. Joachim Schiemann

(Federal Research Centre for Cultivated Plants, Institute for Biosafety of Genetically Modified Plants, Germany)

“Regulation and risk assessment of transgenic plants at European level”

Prof. Gabriela Krczal

(RLP AgroScience GmbH AIPlanta - Institute for Plant Research, Germany)

"GM crops - do they work in Europe? Mechanisms of public acceptance"

Dr. Alessandro Blasimme

(European School of Molecular Medicine, Italy)

“Transgenic plants: nature between bioethics and science”.

Prof. Joachim Schiemann is both a virologist and GMO specialist. In particular he has great experience in GMO biosafety. Since 2003 he has been a member of the Panel on GMOs of the European Food Safety Authority (EFSA). He is the President of the International Society for Biosafety Research (ISBR).

Prof. Gabriela Krczal has a deep expertise in plant virology and biotechnology. She is the Managing Director of RLP AgroScience GmbH, and head of AIPlanta - Institute for Plant Research. This body carries out basic and applied research in the fields of biotechnology and agro-ecology and is involved in the transfer of knowledge to companies, research institute and concerned people.

Dr. Alessandro Blasimme is a philosopher. He deals with moral philosophy, applied moral philosophy such as bioethics, and especially genome manipulation related issues, and philosophy related to biology.

The invited speakers presented their experience on these topics, each of them for a 45 min. talk on the 22nd of February 2008.

The three contributions allowed the audience to face up questionable issues with regard to transgenic plants from different points of view, and showed how this multidisciplinary, normative, social-communicative and bioethic-philosophical approach is important to deal with and solve this controversial matter. In this respect, finally, it may be concluded that even in their diversity of approaches, all the contributions converged into analogue and overlapping conclusions somehow. An important outcome and message of the workshop was that public acceptance of transgenic plants cannot be achieved without obvious benefits that are seen by the end users.

The abstracts and the complete pdf presentations are available on the ResistVir website, should you need them (public <http://www.resistvir-db.org/documents.htm> and private <http://www.resistvir-db.org/private/deliverables/WP7.htm> areas).

Abstract

Regulation and risk assessment of transgenic plants at European level

Joachim Schiemann, Julius Kuehn Institute (JKI) - Federal Research Centre for Cultivated Plants, Institute for Biosafety of Genetically Modified Plants
Messeweg 11/12, D-38104 Braunschweig, Germany
phone: +49 531 299 3800, email: joachim.schiemann@jki.bund.de, url: www.jki.bund.de

The following topics will be included in the talk: (i) GMO Regulation in the EU, (ii) European Food Safety Authority (EFSA), (iii) Environmental Risk Assessment, (iv) Future Developments and (v) Biosafety Research.

The European Food Safety Authority (EFSA) is the keystone of EU risk assessment regarding food and feed safety. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent scientific advice and clear communication on existing and emerging risks. The EFSA Panel on genetically modified organisms provides independent scientific advice on the safety of (i) GMOs such as plants, animals and micro-organisms, on the basis of Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms, and (ii) genetically modified food and feed, on the basis of Regulation (EC) No 1829/2003 on genetically modified food and feed. The GMO Panel carries out risk assessments in order to produce scientific opinions and advice for risk managers. Its risk assessment work is based on reviewing scientific information and data in order to evaluate the safety of a given GMO. This helps to provide a sound foundation for European policies and legislation and supports risk managers in taking effective and timely decisions.

GM crops - do they work in Europe? Mechanisms of public acceptance

G. Krczal, RLP AgroScience GmbH, AIPlanta - Institute for Plant Research,
Breitenweg 71, 67435 Neustadt-Mußbach, Germany
Phone:+49 (0)6321 671 1301, e.mail: gabi.krczal@agroscience.rlp.de

GM crops are produced worldwide on more than 100 million ha. Despite this evident success there is a debate on a range of ethical, moral, and social considerations associated with risks and benefits of this technique to man and environment. The world has literally become a battleground involving scientists, politicians, policy-makers, journalists, industry representatives, farmers, and consumers with a polarization of society into proponents and opponents of biotechnology. Genetically modified foods are being labelled 'Frankenstein foods' with accusations that the technique challenges the role of God, the sanctity of nature, the ownership of life forms, etc.

Moreover there is also a pending conflict between the World Trade Organization (WTO) and the European Commission: i) Deadlines for lifting unsubstantiated national bans by Austria and Poland expired in January 2008 without any reaction. ii) France recently placed a new ban on the cultivation of the genetically modified maize MON810 although this product has held EU approval since 1998. iii) Several new biotech products are currently waiting for their approval while the Environment Commissioner Stavros Dimas recently questioned the EU authorisation process at large.

One major reason for the negative image of GM crops and foods derived from them probably is that most of the genetic modifications in greatest use thus far have been designed to have farmer and commercial benefits rather than consumer benefits. A much larger proportion of consumers might be willing to support crop engineering if there were more obvious benefits to them such as tastier, cheaper food, or products that are less prone to spoilage.

Perception of risk plays a prominent role in decisions people make. Unfortunately, a disagreement in risk perception between technical experts and members of the general public is frequently observed. Risk analysis is a political and scientific enterprise, and public perception of risk also playing a role in risk analysis brings into the picture issues of values, process, power, and trust. This of course also applies for the "business" of communicating GM technologies. Those promoting and regulating health and safety need to

understand how people think about and respond to risk. Without such understanding, well-intended policies may be ineffective.

GM plants: nature between bioethics and science.

Alessandro Blasimme, European School of Molecular Medicine IFOM-IEO Campus
Via Adamello, 16, 20139 – Milan, Italy
Phone : +39 02 94375021, e.mail: alessandro.blasimme@ifom-ieo-campus.it

GM plants give rise to ethical issues that are commonly dealt with by means of standard strategies in bioethics.

I will assume that a strategy based on the evaluation of the foreseen consequences of our action on the welfare of present and future generations is the most firmly grounded one, and the most suitable for addressing the issues raised by GM technologies.

I will show that predictive knowledge is particularly important when this approach is used in the GMO debate.

I will also show how the availability and reliability of our predicting tools influences our possibility to use an ethical strategy rather than another.

I will maintain that the scale and the scope of our predictions in this field is the evolutionary one, and that it is of unprecedented magnitude and amplitude. This forces us philosophers to look out for a feedback from natural science and evolutionary research that would allow us to set the most suitable ethical framework for reasonably dealing with the problems we are faced with.

I will call your attention on the possible collaboration between science and philosophy in this field, but I will also stress the need for possible partially reformed understanding of the issues raised by GM technologies, an understanding which could provide a more widespread public acceptance of GM technologies by the public.