

# Risk perception – sociological perspective

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**RISK PERCEPTION: SCIENCE, PUBLIC DEBATE  
AND POLICY MAKING**

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# Public perceptions of agricultural biotechnologies in Europe (PABE)

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# PABE study :

## Two types of results

### 1. Perceptions of GMOs by the **public**

*Method: focus groups*

### 2. Perceptions of the public by **stakeholders**

*Methods:*

*(i) Interviews*

*(ii) Participant observation*

*(iii) Analysis of documents*

# The stakeholders

- **Biotech companies**
- **Food industry, food distributors**
- **Government**
- **Members of expert committees**
- **Scientific researchers**
- **Farmers' unions**
- **Environmental NGOs**
- **Consumer NGOs**

# Key results from PABE study

## Stakeholder perceptions of the public

1. People are either **“for”** or **“against”** GMOs
2. Lay people are **ignorant about scientific facts**
3. People think (wrongly) that GMOs are **“unnatural”**
4. People refuse **agricultural** (green) GMOs, but accept **medical** (red) GMOs
5. Consumers demand labelling to exercise their freedom of choice
6. Because of the BSE crisis, citizens have **lost trust** in science and in regulatory institutions
7. The public demands **“zero risk”**, but this is not reasonable
8. Public opposition is due to **“other”** (**ethical or political**) factors
9. The public is manipulated by sensationalist **media**
10. Consumers in the **USA** accept GMOs whereas **Europeans** do not

**These stereotypical assertions about  
public perceptions of GMOs  
are *not*  
supported by our focus group results**

# Key results from PABE focus groups

## Public perceptions of GMOs

- **Ambivalence** : arguments for *and* against
- **Concerns *also*** raised about other technologies (e.g. pesticides, conventional breeding)
- **Discrimination** between types of GM products
- **Risk/benefit evaluation** important - but *not* at an individual level: focus on societal *need*
- **Reactions to *institutions*** which create, regulate and put GMOs on the market
- **Science is *also* an institution:**  
“*when they created GMOs, what kind of world did they have in mind?*”

**Key results from PABE focus groups**  
**Reactions to institutional behaviour**

**Focus group participants react to:**

- **Introduction of GM foods on the market without adequate labelling**
- **Formal declarations of safety (“no risk”)**
- **Gap between promises (feed the world) and reality (herbicide and pest resistance for crops in USA and Europe)**

# Key results from PABE focus groups

## Questions raised by focus group participants

- **Why do we need them? What are the benefits? For whom?**
- **Who decided to create them and how was this decision taken?**
- **Why were we not better informed about their arrival?**
- **Why are we not given a real choice about consuming GM foods?**
- **Have the risks been seriously evaluated? By whom? How?**
- **Have long term consequences been taken into account?**
- **Have uncertainties and domains of ignorance been taken into account?**
- **Do regulatory institutions have the power and the means to counter-balance the interests of large firms?**
- **Who will be responsible in case of unanticipated harmful consequences?**

**Common statement (MYTH):**  
**“The public does not accept GM food, but does  
accepts GM pharmaceuticals,  
because people can see the direct benefits.”**

**PABE focus groups results do *not*  
support this assertion :**

**Public attitude was globally more positive for  
pharmaceuticals...**

**... but not only, or even mostly, because  
of perception of *personal* benefits.**

# Positive factors for pharmaceuticals (PABE FG results)

- **Rigorous risk evaluation**
- **Post-market monitoring and recall**
- **Direct access to information (doctor, notice)**
- **Information adapted to patient**
- **Information acknowledges possible negative side-effects and uncertainty**
- **Personal control and free choice**
- **Targeted to small number of people that benefit**
- **Exposure targeted in time**
- **Social need**

**➔ *NONE of these were felt to apply to GM food***

# **Not-so-positive factors for GM-pharmaceuticals (PABE FG results)**

- **Separation from environment?**
  - **Separation from food chain?**
  - **Concern about genetic manipulation of animals**
  - **“Human genes”**
- Only use when there are no non-GM alternatives,  
and to cure serious diseases  
(life-or-death situations)**

# Myth: “the problem is due to lack of knowledge among the public”

Ordinary tomatoes do not contain genes, while genetically modified tomatoes do.

*True or false?*

"correct" answer	"incorrect" answer	Don't know
35%	35%	30%

- Public concerns *are* based on knowledge, but not this kind of knowledge.
- They use knowledge derived from “common sense” and from everyday experiences, especially about behaviour of institutions.
- For example BSE, which was taken as a *typical example*, not an *exception*.

# **MYTH: “It’s just like BSE !”**

**(and many other experiences)**

- **It is impossible to anticipate all negative consequences - especially in the long term.**
- **This uncertainty is not acknowledged and not taken into account in the decision-making process.**
- **In this context of uncertainty, economic interests override health and environmental considerations in the regulation and management of risks.**
- **Preventative action is delayed even when risks become apparent. Only act when they are forced to.**
- **Even when rules are established, they are not strictly adhered to (incompetence, lack of means, fraud).**

# MYTH: “It’s just like BSE !”

(and many other experiences)

- There is no **transparency** in decision-making:  
How are different interests balanced against each other?  
Different risk/benefit options?
- Decisions which have important impacts on our lives are taken “above and without us”, by **alien institutions**, which are not accountable to us.
- **One step too far**: New developments all tend to facilitate the current trajectory of agro-food system, towards more intensive agriculture and 'artificial' food, that people are already unhappy about.
- These developments in the agro-food system are closely associated with **broader societal changes** which people also feel uneasy about  
(choice between a “transgenic world” and an “organic world”?)