first

australian consensus conference

gene technology in the food chain

Lay Panel Report

Old Parliament House
Canberra

March 10 – March 12 1999

Convenor: The Australian Museum
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First Australian Consensus Conference
Preamble

We the lay panel of the First Australian Consensus Conference have been given a unique and challenging opportunity. The Conference has provided us with a chance to contribute to a better future not only for the citizens of Australia, but for the people of the world. It has allowed us to give volume to the voice of the people. For all of us, this has been both a privilege and responsibility in which we are honoured to have taken part.

Through this process, decision-makers around the world can clearly understand the aspirations, ideas and fears of the general public around the issue of gene technology in the food chain. It has allowed us to provide direction on the issue in order to encourage a fair and balanced decision-making process without undue influence from vested interest.

Our lay panel of 14 citizens has talked, argued, discussed and, most importantly, listened to and respected the views of others to achieve consensus. Our participation in this process serves as a model of consultation in its purest form. It is an excellent example of how to include the public in decision-making on issues of national and global importance.

History has taught us that without change we can never progress. It is a lesson to be well heeded. However, that change must benefit the majority of the populace and not merely serve the interests of a privileged few. The public must be afforded the opportunity to make an informed decision as to whether they choose to embrace that change.

We may well be laying the foundations for a change in political process that can deliver the public an opportunity to contribute to the formation of the laws they are governed by, and in so doing, partake in the shaping of their own destiny.

We see this as the beginning of the consultation process.

###
First Australian Consensus Conference

Introduction

The issue of gene technology in the food chain is important to all Australians because it impacts directly on our health and environment.

The perceived benefits are many, ranging from longer shelf life of produce to reducing world hunger. However, whether or not these benefits are achievable is an issue of contention.

The potential hazards are largely unknown in the long-term and as such demand due caution during the research, development and initial use of GMOs. The speed at which GMOs have been developed and introduced by multinational companies and the scientific community has left many people internationally completely unaware of and uninvolved in the process. An issue as important as altering the genes of our food supply should not be left in the hands of a few.

No country should exclude exploring any and all opportunities that could offer benefits to its and the world’s citizens. However a precautionary approach to this and all new technology issues will ensure that public interest rather than commercial interests determine our future course.

We believe that decisions about gene technology in the food chain cannot and should not be made solely on the basis of scientific analysis. We believe that cultural, moral and religious beliefs must be fully considered in the decision-making process surrounding gene technology in the food chain.

It is hoped that the Australian government will take our Consensus Conference report and input seriously in determining all future regulations on gene technology in the food chain.

###
First Consensus Conference on Gene Technology in the Food Chain

Main Issue Areas: Comments and Recommendations

1. Regulations of Gene Technology in the Food Chain
While the lay panel did not ask a specific question regarding the regulation of GMOs, virtually all of the questions asked impacted our response and recommendations on this topic.

We as a panel believe that the regulatory and advisory bodies in place (e.g. ANZFA, GMAC, etc.) are currently not serving community interests. If Australia embraces GT technology it must be subject to stringent control by independent regulatory and advisory bodies. Self-regulation by commercial interests is seen as totally unacceptable.

It appears that current regulation is too narrow in its focus on science and that the overriding principle when drafting legislation should be the environment and the physical, mental and social health of individuals.

**Recommendation:** The formation of a new statutory authority with responsibility for GMOs with well-balanced representation be established whose outcomes and deliberations are public.

Companies wishing to commercially release GE products should pay a substantial licence fee to government to support insurance against risk and the funding of the new statutory authority mentioned above. Such companies would have their licences withdrawn if found to be violating GMO safety regulation.

Safety regulations should include strict codes of practice and encompass the following:

- That all GE products be subjected to random tests by independent inspectors to establish ongoing compliance with licence requirements.
- That any legislation be uniform across all states so as to prevent loopholes in the law by allowing individual states to draft local legislation that may allow manufacturers to circumvent the act.
- That any legislation be of benefit to and protective of the environment and community at large and not just be formulated to serve any one interest.
- That all legislation be subject to regular review.

2. Processes of Decision-Making
Again, the panel did not ask a specific question about the process of decision-making, however its importance became obvious during the Conference.

Currently different interests compete to lobby government and consequently government must frame legislation within a highly adversarial context. This process encourages lobby and interest groups to compete to set the agenda. Government should embrace a commitment to bring together all stakeholders to talk to each other to reach agreement on mutually beneficial solutions. In short, government, in conjunction with the proposed Gene Technology Office as described above, should act as a facilitator rather than an arbitrator.

**Recommendation:** Government should establish a mechanism similar to the model of the Consensus Conference, to bring together consisting of industry, consumer groups, critics, other experts and Australian lay people. This would ensure that dialogue between all of these groups would lead to better government decisions.

### 3. Science and Risk

**Question 1. What constitutes an acceptable risk of introducing Genetically Modified Organisms (GMOs) into the food chain?**

There is currently a lack of understanding in the general community of the risks and benefits involved in introducing GMOs into the food chain, both short- and long-term. Decisions are being made too quickly and with a lack of public consultation. The decision making process is currently inaccessible and open to bias. Decisions by any regulatory body should take into account more than just science.

**Recommendation:** No new commercial releases or unlabelled importation of GMO foods, both whole or processed, be allowed in Australia unless and until:

- An independent, unbiased Gene Technology Office within a statutory authority is established to assess and report on all aspects of GMO safety.
- A clear Australian position on the Biosafety Protocol be established (see International Conferences section),
- An all-encompassing GMO labelling system be established,
- A process of co-operative consultation between industry, government and consumer groups on the GMO issue be established.
- The establishment of an independent academic peer review system for GMO research.
- A full evaluation of the risks of GMO field trials be conducted and/or overseen by the recommended Gene Technology Office.

This should in no way affect current usage of GMO crop cultivation in Australia or any existing use of GMO products.
Research and field trials into GMO development should be allowed to continue provided adequate containment procedures are enforced.

The importation of GMO foods should only be allowed when full identification be provided to the end consumer by comprehensive labelling.

4. Environment and Health

Question 2: What are the fundamental issues affecting the environment in relation to Genetically Modified Organisms (GMOs), and what are the potential negative impacts of gene technology on living organisms?

Environmental and human health safety must be of paramount concern in any decisions regarding gene technology.

The risks associated with gene technology are of major concern in regard to transgenic mutation as it is seen as a threat to biodiversity. Evidence suggests that large areas planted with a single species are vulnerable to new matching strains of pathogens or pests. All risks associated with the release of new types of plants should be thoroughly investigated prior to planting of such crops. The issue of liability in relation to the possible effects of GMOs in the environment should be taken up by either or both of the proposed Gene Technology Office and statutory authority.

We believe that the recommendation regarding human health detailed under labelling and public awareness should be addressed as a primary concern.

Recommendations: Environment and Health departments should be integrally and proactively involved in developing strategies to prevent and prepare for any possible health and environmental problems or disasters that might occur through GMO applications.

A specific adverse reactions register should be established to ensure that any possible health links to GMOs be closely monitored.

In order to ensure the highest standard of public health, the regulation of GMO issues should not be moved to Agriculture, Fisheries and Forestry Australia.

5. Alternatives to Gene Technology

Question 3: What would happen if Australia said ‘no’ to allowing gene technology, particularly in the areas of agriculture, the environment and our relationships with other countries who will allow gene technology?

In a democracy, the public should be involved in decision making and therefore need to be informed about all issues involving their future. The vision citizens hold for the future of their country must be taken into account.
While we should be open to new technologies, we should not ignore the opportunities presented by alternatives to these technologies. By not investigating and investing in the opportunities alternatives to GMOs present, Australia risks missing key market opportunities currently available.

**Recommendation:** Independent assessment of the viability and impacts of choosing non-GMO options should be carried out assessing the potential impacts on industry, local producers and Australia’s international trade. This process should explore political, cultural, financial and environmental ramifications of this issue.

We recommend a process where information gained from this assessment should be communicated widely to the public. Community, scientific, industry and government consultation and involvement should then take place to ensure an inclusive decision-making process.

### 6. Ethics and Morality

**Question 4:** *What are the ethical issues involved in altering the fundamental building blocks of life through gene technology, including the issues of ownership, control and manipulation?*

There are many moral and ethical issues raised by gene technology such as:
- Should life become a commercial property through patenting?
- Should we create transgenic organisms, particularly those containing human and animal DNA?
- Who advocates for nature?
- How do we ensure that our decision-making processes respect the diverse cultural, moral and religious beliefs within our multicultural society?

It would be presumptuous of us to answer these issues or to assume that we have identified all of them, however we believe that ethical considerations must assume a prominent role in decision making about gene technology.

**Recommendation:** That an ethicist be involved in the formulation of major decisions regarding GMO policies.

### 7. Multinational Corporations

**Question 5:** *Why have multinational corporations been allowed to decide the fate of GMOs in the food chain internationally thus far, and what are the dangers of this?*

We are concerned about the consequences regarding concentration of ownership of food resources into a handful of multinational companies, particularly their control over all aspects of food growth, production and marketing. We are also concerned about the move toward agricultural research being predominantly influenced and funded by the very companies that stand to benefit the most from GMO technology.
Recommendations: That the Australian Consumer and Competitive Commission (ACCC) take a proactive role in investigating and preventing multi-national monopolies in the food industry.

That protocols be established to ensure that public input into research proposals and funding be established to ensure that broad public as well as commercial interests are served.

8. International Conventions

Question 6: Could you outline which treaties and trade agreements Australia is subject to that affect our ability to make or change our decisions about gene technology in the food chain?

We the panel do not believe that Australia should pursue a solely economic agenda in the negotiations on the Biosafety Protocol. We are also sceptical of the arguments put forward by organisations that stand to benefit from GMO technology that it offers a blanket solution to the issue of world hunger.

Recommendations: In the negotiations of the Biosafety Protocol, Australia should support a regulated trade approach in relation to GMOs. This would ensure a precautionary approach to GMO trade, the provision of a specific liability regime and segregation and labelling of all products.

Australia should seek to initiate and support international treaties that protect those vulnerable from exploitation by bio-prospecting companies.

9. Public Awareness and Participation

Question 7: What information about GMOs should the public be made aware of at all stages of food production, from paddock to plate, rather than at the point of sale alone?

Currently the public does not have enough information about GMO food to make informed purchasing decisions. To allow real choice, information must be more readily available. Awareness allows the opportunity for wide public discussion and debate.

Recommendation: Better processes to allow public access to information, which includes varying perspectives, should be established at many levels, including:
- the establishment of a gene technology information office,
- government sponsored advertising campaigns,
- toll-free phone lines and Web site for consumer information,
- public notices on GM issues,
- information fact sheets,
- focused education information and CD Roms.

Increased consumer representation on existing and future decision making bodies is absolutely necessary. A stringent selection process conducted by an independent body, similar to that used to select Consensus Conference lay panel members, should be applied in choosing representatives. Equal
representation from public, industry and other key stakeholders should be established.

In addition, resources should be identified and allocated to produce a follow-up report about the Consensus Conference process one-year on that will evaluate and monitor its impact in relation to the issue of GM foods. This should include:

- a clear list of any results linked to the conference.
- input by external experts knowledgeable about public participation processes.
- input from a wide circle of those involved in the Conference including lay panel members, expert speakers or the organisation they represented, paying audience members, sponsors, etc.
- recommendations on how to improve and make better use of this process.
- assurance that the report be widely circulated and distributed to key decision-makers and interested parties.

10. Labelling and Choice

Question 8: **How will consumers be provided with the information necessary to enable them to make a well-informed choice to buy or not to buy genetically modified food?**

The lay panel strongly recommends that all genetically modified foods, regardless of where modification occurs, should be labelled to allow free and informed consumer choice. Such labelling must show the reason for genetic change and any other information necessary for human or animal health advice.

A view has been expressed that some GMO foods are virtually indistinguishable from their conventional counterparts (referred to as “substantial equivalence”) to justify that labelling is not necessary.

**Recommendation:** We reject the use of the term substantial equivalence in relation to GMO foods because of its narrow scientific application. Comprehensive labelling is the only way to ensure that health, religious, moral and ethical food choices are placed solely in the hands of each individual consumer.

There are many debates about the difficulties of providing effective and clear product labelling. The panel agrees that this is a difficult issue and suggests that more discussion involving all sectors will have to take place before specific labelling regulations be decided for GMO foods.

###
THE LAY PANEL’S CHOICES OF QUESTIONS AND SPEAKERS FOR
THE FIRST AUSTRALIAN CONSENSUS CONFERENCE (on gene technology
in the food chain)

Questions are listed in the order in which they will be tackled on Wed Mar 10. Each
question and its sub-questions should be taken as a whole (the sub-questions are
signposts to the direction the lay panel asks speakers to follow in their response).

SCIENCE AND RISK
1. What constitutes an acceptable risk of introducing Genetically Modified
Organisms (GMOs) into the food chain?
   • Who is granted the authority to decide what constitutes an acceptable risk in
     relation to GMOs in the food chain? How is it granted?
   • You’ve given us a perspective on what is an acceptable risk of introducing GMOs
     into the food chain - why is your personal view correct compared with differing views?
   • Given the many different points of view on what is acceptable risk, how can the
     public decide what an acceptable risk should be?
   • Knowing that your answer will be subjective and that all the facts are not yet in,
     what do you think are the potential human risks of eating genetically modified foods?
   • How does the precautionary principle apply to risk management of GMOs in the
     food chain?

Speakers: 8.45 - 9.00 a.m. Dr Jim Peacock, Chief, Division of Plant Industry, CSIRO
9.00 - 9.15 a.m. Associate Professor Peter Wills, Physics Depart, University of
Auckland
9.15 - 9.45 a.m. Discussion

ENVIRONMENT AND HEALTH
2. What are the fundamental issues affecting the environment in relation to
Genetically modified organisms (GMOs), and what are the potential negative
impacts of gene technology on living organisms?
   • What are the differences in risk between a small-scale field trial of GMOs and a
     large-scale commercial GMO operation?
   • Given that GMOs have escaped into the wider environment in the past, what are the
     risks and dangers of this occurring again?
   • Who will develop and implement strategies to prevent and/or prepare for potential
     human health and environmental disasters that might occur if GMOs are introduced
     into the food chain?
   • Who would be held fiscally responsible for any disasters that might occur?

Speakers: 9.45 a.m. - 10.00am Mr Bob Phelps, Director, Gene-Ethics Network
10.00 - 10.15 a.m. Dr Bill Blowes, Technical Director, Agriculture, Monsanto.
10.15 - 10.45 a.m. Discussion

ALTERNATIVES
3. What would happen if Australia said ‘no’ to allowing gene technology, particularly in the areas of agriculture, the environment and our relationships with other countries who will allow gene technology?

- In what other ways could we solve some of the problems that gene technology is said to be able to solve such as world hunger, herbicide and pesticide use and sustainable agriculture?
- In what direction do you see gene technology in the food chain taking Australia in the future, and where would you like to see it go?

Speakers: 11.15 - 11.30 a.m. Mr Brendan Stewart, Vice President, National Farmers Federation
11.30 a.m. - 11.45 a.m. Mr Scott Kinnear, Chair, Organics Federation of Australia
11.45 a.m. - 12.00 p.m. Ass Prof Rick Roush, Director, CRC for Weed Management Systems
12.00 - 12.15 p.m. Discussion

ETHICS AND MORALITY
4. What are the ethical issues involved in altering the fundamental building blocks of life through gene technology, including the issues of ownership, control and manipulation?

- Who is currently determining these ethical decisions and whom do you believe should be involved in making them?
- What measures should there be to ensure that this decision-making is inclusive of all cultures, religions and beliefs?
- What rights does nature have and who advocates for nature on the issue of GMOs?
- In light of these issues, how do we draw up guidelines to determine what is ethically acceptable in relation to transgenic manipulation of human, plant and animal DNA?

Speakers: 12.15 - 12.30 p.m. Father Des Coates, Catholic Chaplin of the University of Southern QLD
12.30 - 12.45 p.m. Dr Jim Peacock
12.45 - 1.00 p.m. Mr Bob Phelps
1.00 - 1.15 p.m. Discussion

MULTINATIONAL CORPORATIONS
5. Why have multinational corporations been allowed to decide the fate of GMOs in the food chain internationally thus far, and what are the dangers of this?

Speakers: 2.15 - 2.30 p.m. Dr Shawn Somerset, Senior Lecturer, Human Nutrition, Griffith University, Qld
2.30 - 2.45 p.m. Dr Bill Blowes, Monsanto
2.45 - 3.15 p.m. Discussion

INTERNATIONAL ISSUES
6. Could you outline which treaties and trade agreements Australia is subject to that affect our ability to make or change our decisions about gene technology in the food chain?
• How much leverage to determine its own destiny does Australia have, in the light of treaty and trade agreements that we are subject to?
• How much global influence can Australia exert in international treaty and trade negotiations regarding gene technology in the food chain?
• What is Australia’s position on the Biosafety Protocol of the Convention of Biological Diversity, and why has it taken that position?
• How can countries, and in particular developing countries, protect their biodiversity, culture and technical knowledge from exploitation from the commercial interests driving gene technology?

Speakers: 3.15 - 3.30 p.m. Ms Naomi Stevens, Regulatory Affairs Officer, AgrEvo
3.30 - 3.45 p.m. Mr Bob Phelps
3.45 - 4.15 p.m. Discussion

PUBLIC AWARENESS
7. What information about GMOs should the public be made aware of at all stages of food production - from paddock to plate - rather than at the point of sale alone?

Speakers: 4.45 - 5.00 p.m. Dr John Coveney, Dept of Public Health, Flinders University
5.00 - 5.15 p.m. Ms Naomi Stevens, AgrEvo
5.15 - 5.45 p.m. Discussion

LABELLING AND CHOICE
8. How will consumers be provided with the information necessary to enable them to make a well-informed choice to buy or not to buy genetically modified food?
• Is there or could there be a body that has the expertise to impartially regulate labelling of GMOs, and how would it operate?
• How will consumers be informed about GMO content when food is consumed at point of sale? (Take-aways, restaurants)
• If, in the future, only genetically modified food is available, how can consumers demand non-genetically modified food options?

Speakers: 5.45 - 6.00 p.m Dr Geoffery Annison, Australian Food and Grocery Council
6.00 - 6.15 p.m. Ms Mara Bun, Manager of Policy and Public Affairs, Australian Consumers Association
6.15 - 6.45 p.m. Discussion
Summary of Consensus Conference: History and Process

This report is one of the outcomes of an experiment in democracy which has been attempted in other countries, but never before in Australia. This experiment is the first Australian consensus conference.

Consensus conferencing is a process developed in Denmark which re-integrates citizens back into decision-making about controversial areas of science and technology. Through the use of rigorous rules, the conference aims at an ideal, in which a given topic (in this case, gene technology in the food chain) is explored on the basis of the finest available knowledge and the widest possible breadth of views, and discussed in open and unbiased dialogue.

This dialogue takes place between two panels. One is a panel of citizens, a fair cross-section of society, previously uninformed about the topic, but with a range of attitudes and values to it. The other is a panel of experts, from a range of disciplines (including opinion leaders in the community), and also with a range of different and sometimes conflicting views.

The aim of the consensus conference is to bridge the gap between citizens, experts and decision-makers (whether these be in government, science, industry, and so on). The aim of the citizen panel's report is to contribute to informing decision-makers about citizens' views on, and attitudes to, new technologies - in the hope that citizens will come to be regarded as equal and necessary partners in the decision-making process. In Denmark, citizen panel reports have directly influenced the course of legislation.

The distinctive feature about the Danish model of consensus conferencing is that is the citizen panel who is the main actor throughout: it decides all key aspects, including the questions set, the experts selected, and the conclusions reached. This is the model that has been followed in Australia. As such, it represents an enormous risk for stakeholders involved in the gene technology debate to have taken. Unlike their usual community consultation and education strategies, in consensus conferencing there is no control over the outcome.

Consensus conferencing is unconventional and challenging, and involves making a leap of faith. For that reason, it is important to acknowledge and congratulate all the sponsors, Steering Committee members, expert speakers and others who have chosen to support this first Australian consensus conference on gene technology in the food chain. And most of all, it is important to acknowledge the citizen panel, who have demonstrated by their daring, stamina and Determination in tackling the enormous task just how competent, rational and
valuable the contributions of citizens can be. It is hoped that in Australia, there will be more.
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<td>Mr Steve Macdonald</td>
<td>Casual Barman</td>
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<td>Student</td>
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<td>Miss Linda Van Oostveen</td>
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<td>Mr Rod Poulton</td>
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For more information, see the ABC Web site on the First Australian Consensus Conference: www.abc.net.au/science

###
SPONSORS (in alphabetical order)

Agriculture Western Australia
Australian Consumers Association
AVCARE
AWRAPO - Australian Wool Research and Promotion Organisation
CLIMA - Centre for Legumes in Mediterranean Agriculture, University of WA
Cotton Research and Development Corporation
CSIRO
Cooperative Research Centre Weed Management Systems
Cooperative Research Centre for Boivertebrate Control
Dairy Research and Development Corporation
Department of Agriculture Fisheries and Forestry
Department of Primary Industries & Fisheries NT
Environment Australia
Fisheries Research and Development Corporation
Forest and Wood Research and Development Corporation
Grains Research and Development Corporation
Grape and Wine Research and Development Corporation
Horticulture Research and Development Corporation
Land and Water Research and Development Corporation
Marsupial Cooperative Research Centre
The Myer Foundation
Natural Resources and Environment VIC
Pig Research and Development Corporation
Rural Industries Research and Development Corporation
South Australian Research and Development Institute
Sugar Research and Development Corporation
Tobacco Research and Development Corporation

Convenor: The Australian Museum
Glossary of terms (used by the lay panel)

**ACCA:** Australian Consumer & Competitive Committee
**ANZFA:** Australia and New Zealand Food Authority.
**Biotechnology:** use of biological systems (living things) to make or change products such as food.
**Bt** (*bacillus thuriengiensis*): soil bacterium used to engineer resistance to insect pests in genetically modified crops.
**Bioprospecting or biopiracy:** accelerating search by developed nations for genetic resources within the gene pool of developing countries.
**Biodiversity:** the vast variety of living things (e.g. crops, animals) which depends on the variety present in the gene pool and how this is managed by our society.
**DNA:** deoxyribose nucleic acid.
**Enabling technologies:** a range of technologies which enable scientists to use gene technology, e.g. to insert a gene into a plant.
**GATT:** General Agreement on Tariffs and Trade.
**Gene technology/genetic engineering/genetic modification:** a type of modern biotechnology attempting to control, modify or transfer genes.
**Genes:** messages contained in the chemical molecule, DNA, coded with the genetic information which gives particular characteristics.
**GMAC:** Genetic Manipulation Advisory Committee.
**GMOs:** genetically modified organisms, living things that have been genetically modified.
**Genome:** a living thing's total DNA – unique.
**ICM:** integrated crop management, a system which integrates a number of ways to control pests and increase yields (including natural, biological controls and careful use of chemicals).
**Life sciences companies:** usually major multinationals which vertically integrate various businesses such as seeds, food manufacturing, pharmaceuticals, and agrichemicals.
**Marker genes:** inserted to tell scientists which organisms have been successfully modified.
**Novel genetically modified food product:** processed food product whose composition has been altered.
**Patent rights:** awarded to developers of new products, giving them sole rights to market them usually for 20 years.
**Precautionary principle:** a key principle of ecologically sustainable development, useful when there is scientific uncertainty and possibility of serious damage to environment. It proposes recognising the

**Pleiotropy:** the multiple effects genes can have (intended and unintended).
**Recombinant DNA technology:** movement of genes between two unrelated species.
**Risk assessment:** on the basis of current knowledge and experience, careful and systematic analysis and assessment of possible adverse impacts, and the scale and likelihood of these.
**Segregation:** when genetically modified crops are kept separate from
conventional crops.

**Substantial equivalence:** a comparative technique used for risk assessment. When faced with a novel or modified food/food product, you search for its nearest equivalent amongst existing organisms used as food or sources of food.

**Sustainability:** preserving natural, non-renewable resources (e.g. soil, water) and intergenerational equity (leaving the land as good as you found it).

**Sustainable agriculture:** ecologically sound, economically viable, socially just and humane.

**Terminator technology:** a kind of gene technology intended to modify plants so that they become sterile and seed produced by the parent crop does not grow.

**Transgenic:** genes transferred from plant to animal, animal to plant or micro-organism to plants or animals or vice versa.

**TRIPS:** Trade-related Aspects of Intellectual Property Rights

**WTO:** World Trade Organisation.

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