

14 May 1999

Ms Fran Bailey, MP
C/- The Secretary
House of Representatives Standing Committee
on Primary Industries and Regional Services

Dear Ms Bailey

Primary Producer Access to Gene Technology

In response to requests for submissions to the above Standing Committee, I enclose a response on behalf of the WA State Agricultural Biotechnology Centre (SABC), Murdoch University, Perth, Western Australia.

The SABC is the major centre in WA for Research and Development in Agricultural Biotechnology, with extensive research using gene technology.

Yours sincerely

Professor Mike Jones
Director, SABC

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Primary Producer Access to Gene Technology

Comments from : **The WA State Agricultural Biotechnology Centre,
Murdoch University, Perth, Western Australia**

Director : **Professor Mike Jones**

Date : **14 May 1999**

Sir Robert May, UK Chief Scientist, said that this century is the age of physical sciences, and the next century will be the age of biological sciences. Biotechnology will be one of the major forces generating new jobs and wealth, and Australia must be in a position to capture the benefits of biotechnology.

1. The future value and importance of GM varieties

It is predicted that, in about 10 years time, GM food will constitute up to 80% of the normal food eaten by Australians.

This is because of the major potential benefits from GM technology, including:

- improved efficiency of production (keeping costs down and making most efficient use of available land)
- improved quality of produce – better nutritional balance both for human or animal feed; better storage characteristics, better technological/processing qualities
- environmental benefits – genetic resistance to pests and diseases means less toxic chemical control sprays, less contamination of ground water and pollution of waterways from run off
- improved efficiency of utilisation of nutrients
- novel properties – designer oils, designer starches, plants as bioreactors to produce pharmaceuticals and pharmacologically active compounds, possible use of plants for vaccination against viral diseases
- more efficient use of currently cropped land will allow reserves and biodiversity to be maintained – i.e. reducing pressure to clear more land
- there will be a move away from proteins derived from animals towards more plant-derived proteins as a proportion of total food intake

2. The ability for producers to compete using traditionally available varieties

With time traditionally available varieties are likely to become less competitive. However, there will continue to be a market for such varieties – but, they will be more expensive and less environmentally friendly than GM varieties.

3. The commercialisation and marketing of agricultural and livestock production varieties

Increasingly commercialisation of new varieties will transfer from the public to the private sector. Plant breeding of cereals will be 100% privatised within 5-7 years. A period of strong industry – academic research will be required first to incubate new biotechnology companies. The SABC is following this course in Western Australia.

4. The cost to producers of new varieties

New varieties, if GM, are likely to cost more to producers, but to be better value for money because of improved quality traits. Hence they will be more profitable to grow. If they are not, farmers will not use them.

5. Other impediments to the utilisation of new varieties by small producers

Impediments to utilisation of new varieties include : fear of new technologies, need to deal with new management practices and intellectual property issues, possible need for segregation of GM products, fear of public acceptance, need for education.

6. Assistance to small producers to develop new varieties and the protection of the rights of independent breeders

Just as in other industries (eg car manufacturing, banking, mining), the Life Sciences companies are consolidating and focussing on biologicals and vertical integration (eg Monsanto, Dupont-Pioneer, Novartis, Zeneca, etc). Because of Intellectual Property issues, patents and other legal restrictions, these companies will dominate the world agri-seed market, including Australia.

Small producers (? breeders) will battle to compete alone, and must develop alliances with larger players if they are to survive.

7. The appropriateness of current variety protection rights, administrative arrangements and legislation

Plant Breeders Rights and Patents can both be used to protect new GM varieties. The patent route is more expensive but more comprehensive and is likely to be used for GM crops. It is necessary to be vigilant to prevent multinationals from patenting procedures/products in Australia *after* they are already in the public domain. This whole area is extremely complex i.e. Intellectual Property and patents. Australian companies are at a severe disadvantage because most biotech patents have been filed in the US or Europe, driven by multinationals. Such companies are not based in Australia and often see the markets here as too small to be worth bothering about.

8. Opportunities to educate the community of the benefits of gene technology

There is clearly a major need to educate the community of the benefits of gene technology. This is in progress, but needs more support. I enclose a brochure of a recent 'Hypothetical' on this topic held in Perth recently. Those opposing GM technology thrive on misinformation, exaggeration and scare tactics. A proactive approach is required by scientists to explain the benefits and risks to the community – and facts such as the 300 million people in North America routinely eating GM food as normal.

At present, there is little doubt that GM food is actually safer than conventional food, because it is examined much more closely. The major issues are :

1. Food safety (for conventional and GM food)
2. Labelling (sensible labelling that is *informative*)
3. The environment – mainly pollen transfer from GM crops

We must not be influenced by the methods used to generate the final product – it is the final product that must be judged.

Australia is at a severe disadvantage to the US and Europe in GM technologies, because of the lack of IP and of multinationals to drive the technology in Australia. More research funds are urgently needed for Australia to develop its own IP.

Professor Michael Jones
Director, SABC