

National Farmers' Federation

**NFF Submission to the House of
Representatives Standing
Committee on Primary
Industries and Regional Services
Inquiry into Primary Producer
Access to Gene Technology**

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1. Introduction

NFF welcomes the opportunity to submit our views to the House of Representatives Standing Committee on Primary Industries and Regional Services inquiry into primary producer access to gene technology.

Australian farmers have a significant stake in deliberations on access to gene technology and its use in Australia. NFF believes biotechnology will be an important tool now and in the future which will enable farmers to continue to increase productivity in an environmentally sustainable way.

Farmers recognised the potential value of gene technology a number of years ago, because of its benefits not only for farm production but also in terms enabling the delivery of quality agricultural product to meet the needs of the community.

NFF recognises that with any new technology the wider community will have concerns about its impacts. Biotechnology in agriculture has raised consumer's concerns regarding its safety and its potential impact on the environment. It is therefore of critical importance that the Government ensure that existing deficiencies in regulation of biotechnology in Australia are addressed as soon as possible.

Not only do we believe this action is needed to ensure access for primary producers to biotechnology, but also to ensure consumers have confidence in food products associated with biotechnology.

Our Submission presents a number of recommendations which we believe will foster investment in biotechnology in Australia and will go some way to enabling consumers to make informed choice about the products of biotechnology.

2. The future value and importance of genetically modified varieties

Value of biotechnology in agriculture

Australia's farmers are under ongoing and ever increasing pressure to not only increase productivity and efficiency to remain competitive on world markets, but to do so in environmentally sustainable ways. NFF believes biotechnology will be an important tool which will help enable farmers to meet this challenge.

Australian agriculture's viability is dependent on exports. 80 per cent of agricultural produce is exported every year, with earnings valued at \$27 billion last year alone. Australia's domestic policy responses to biotechnology must therefore be sensitive to our need to operate and compete as a free trade country on international markets.

The International Service for the Acquisition of Agri-biotech Applications (ISAAA) estimates that the global market for transgenic crops alone will be worth about \$25 billion in 2010. In 1996 the world area planted to transgenic crops was 7 million acres, in 1998 the global area of transgenic crops is estimated to be 75 million, representing a ten fold increase since 1996.

The rapid increase in global area under transgenic crops is the result of a number of Australia's key trading partners recognising the essential role of biotechnology in competitive food production and trade.

Farmers and industry in these countries have rapidly adopted the technology. In the United States 22 different transgenic crops are being grown. The US accounts for 74 per cent of transgenic crops planted by global area, followed by Argentina on 15 per cent and Canada with 10 per cent.

In comparison Australia's performance to date demonstrates that we are rapidly being left behind these world trade leaders. Australia currently grows 2 transgenic crops, with plantings last year accounting for only 1 per cent of the global area, about 80,000 hectares. A key factor in Australia's poor performance is deficiencies in our regulatory system for biotechnology, this is leading to hold ups in product assessment and release. Australian agriculture's capacity to compete on world markets is being compromised by the failings of our regulatory processes.

It is notable that a number of international policy and trade groups have identified that biotechnology offers significant opportunities in enhancing the world's capacity to feed an ever growing population, in particular feeding developing nations.

The International Federation of Agricultural Producers (IFAP), the world farmers' organisation which currently has as members 85 national farmers' organisations in 60 countries, supports the view that biotechnology will be one of the tools which

will open up new possibilities for its members to improve performance in plant and animal production.

Importance of biotechnology to agricultural productivity

Australian farming is dependent on increasing productivity and efficiency to ensure continued viability. Our recent history provides a telling example. In the 1960s, there were about 200,000 farms, this number has now declined to about 114,000 farms. In spite of the fall in farm numbers the gross value of rural production has risen from around \$3 billion 40 years ago to \$27 billion last financial year in real terms. If biotechnology provides the capacity to reduce farmers' input and production costs by only 10 per cent, this could mean highly significant changes in cash flows, profitability and agriculture's capacity to invest in environmental sustainability.

Some of the production benefits from crops derived from biotechnology include:

- ♣ varieties with increased resistance to pests and diseases which lead to benefits including, reduced pesticide and herbicide use, reduced input costs and reduced adverse environmental impacts from chemical use;
- ♣ new varieties which make better use of soil nutrients, leading to reduced fertiliser use;
- ♣ reduced labour costs and energy costs;
- ♣ improved yields, quality and produce that is better adapted to requirements of the food industry and consumers;
- ♣ quicker adaptation of crops to environmental and climatic factors, such as reduced water use, salt resistance and drought tolerance;
- ♣ crops which incorporate the nitrogen fixing ability of lucerne, peas and soya into other crops, assisting improvement of soil nutrition and enhancing productivity, and
- ♣ accelerated breeding of plants with improved characteristics leading to productivity gains, such as faster growing trees for wood production and higher quality grains.

Examples of the production benefit already offered by commercialised transgenic crops overseas include:

- ♣ In 1997 herbicide tolerant soybeans grown in the USA led to a 33 per cent reduction of overall herbicide use on those crops.
- ♣ In 1997 AgrEvo's herbicide tolerant canola grown in Canada led to a 10 to 20 per cent yield increase. There was also a higher proportion of #1 Grade grain, 85 per cent of the transgenic crop vs 63 per cent of the traditional crop.
- ♣ Current insect resistance technology is projected as having the capability to substitute for nearly \$3 billion worth of the \$9 billion global market in insecticides. For example, the transgenic crop Bt cotton leads to a reduction in the number of insecticide applications required, which benefits the grower by

reducing costs, time and health risk and also benefits the environment by reducing the quantity of chemical applied.

Value of agricultural biotechnology to consumers

The ‘first wave’ of agricultural biotechnology products have been focussed on benefits for producers. The so-called ‘second wave’ of products are expected to provide direct benefits to consumers. Most products commercialised to date relate to input traits , such as herbicide tolerance, insect resistance and virus resistance.

Some beneficial output traits from biotechnology already identified include:

- ♣ fruit and vegetables which keep fresh for longer, reducing spoilage of food in transport and storage;
- ♣ foods which contain healthy fats and oils and cooking oils with lower saturated fat content;
- ♣ increased nutritive value such as higher expression of vitamins;
- ♣ soybeans with higher expression of anti-cancer proteins naturally found in soybeans;
- ♣ elimination of allergy-causing substances, for example, 1.8 million Australians suffer from allergies to rye grass, planting of modified rye grass which is allergen free could alleviate that suffering;
- ♣ food products which carry with them medicinal properties.

Conclusions and Recommendations

Biotechnology in agriculture offers Australian’s significant production, environmental and consumer benefits. Australia must be in a position to benefit from the international development and investment in biotechnology which is occurring at a rapid rate.

While recognising that there are a number of domestic policy issues to be addressed, Australians must be encouraged to take advantage the opportunities offered by this technology under strict government control and monitoring.

The Government’s slow pace in addressing deficiencies in existing regulatory arrangement for biotechnology risks undermining agriculture’s export competitiveness and potential community gains.

NFF is strongly opposed to any “wait and see” approaches to the use of biotechnology in agricultural production in Australia.

NFF supports research by the Australian Government into the economic benefits of biotechnology and the dissemination of this information to a wide domestic audience.

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

NFF supports farmers having the right to exercise choice in the commodities they produce the manner in which they produce them and how they are marketed.

There are already market opportunities for producers targeting niche markets, for example organic foods. Potentially there could be market opportunity for farmers producing products which can be guaranteed free of genetic modification. How big such markets could be remain to be seen, however there are some countries currently exercising their preference for non-genetically modified products because of consumer fears of gene technology.

It would however be foolhardy for Australia to take that stance that our agricultural produce is to be entirely free of genetic modification. To employ such an approach could severely disadvantage those producers who wish to grow crops which are competitive with producers overseas who are competing for the same markets.

NFF's priority is to ensure Australian farmers have access to the newest innovations and technology available to them. It is down to the individual producer to decide whether they apply such technologies to their production and the markets they choose to access.

IFAP takes a cautious but positive view of biotechnology. One link, which is common to the vast majority of IFAP members is their attachment to the family farm. IFAP is of the view that biotechnology has the capacity to make a significant contribution to addressing the issues of famine and food security in developing countries and believes it will also play a role in expanding the economies of these countries. It is notable that so far the major crops involved in biotechnology are soya bean, maize/corn, cotton and potatoes, all important crops in developing countries.

Conclusions and Recommendations

NFF supports farmers having the right to choose the commodities they produce, and the production tools they use. Consumers also have a right to exercise choice in the food products they buy.

There are a variety of production methods available to farmers such as organic, traditional and biotechnology, there are market opportunities for farmers should they wish to target particular markets.

Government must ensure that a regulatory framework is established and an Office for Biotechnology in place which provides for informed consumer choice of food products.

4. The Commercialisation and Marketing of agricultural and livestock production varieties

Australia has enormous natural advantages over our competitors in agriculture with a clean green environment, an industry which has been continually increasing its productivity over the past 20 years, and an outstanding agricultural research and development sector (funded to a large degree by farmers themselves).

Australia's workforce is highly educated, skilled, multicultural, computer literate, stable and flexible and is recognised as a bountiful source of innovation. Robert Gottlieb (Business Review Weekly) refers to innovation as the creator of wealth in the future and consequently Australia should be investing in research and development and protection of the resultant intellectual property to protect our own wealth and future prosperity.

Australia therefore has an ideal climate for investment in agricultural biotechnology and taking the further step of commercialisation. Our agricultural research sector is respected world-wide and creates 2 to 4 per cent of global knowledge in agricultural innovation, in spite of relatively low investment levels by government. However, there is evidence to suggest that Australia is not optimising our current investment in research and development in biotechnology due to poor levels of investment in the next step, commercialisation.

International investment in agricultural biotechnology

The following statistics provide some indication of international biotechnology expenditure in world agriculture:

- ♣ DuPont and Pioneer Hi-Bred will jointly spend over US\$ 400 million on agricultural gene technology research in 1998.
- ♣ USDA's 4 year US\$200 million National Food Genome Strategy will "enhance the usefulness" of economically important species.
- ♣ NSF will spend US\$40 million in 1999 on a Plant Genome Initiative

Australian investment in research and development of agricultural biotechnology

Australia has a substantial agricultural research capacity that forms the basis of our current strong presence in gene technology internationally. The OECD found that over the past twenty years, Australian agricultural productivity improved by 2% or more per year. Half of this growth is attributed to the application of R&D results. Australia is one of the few countries where a direct link between research and farm productivity can be demonstrated.

NFF has been concerned for some time that Australia as a country has not been maximising the benefits of publicly invested research and development funds in agricultural biotechnology for the community.

A scoping study and survey commissioned last year by NFF to assess the potential for commercialisation of Australian intellectual property in agricultural biotechnology confirmed that there is a strong research and development community within Australia which is equivalent to or better than world standard. Australia does however appear to lag in industry funded research which is focussed on commercial outcomes. For example, most multi-nationals tend to centre their research in North America or Europe.

However, those involved in research and those who are investing agree that more commercialisation of agricultural biotechnology innovation in Australia would be beneficial for researchers, industry and farmers. Such investment is thought to be hampered by a lack of domestic companies with sufficient wealth to invest in R&D projects and the high risk nature of biotechnology. It must be recognised that investors should be able to receive a commercial return on their investment.

Recent figures released in the Research and Development Scoreboard for 1998, demonstrates the poor levels of investment in agricultural R&D by our leading companies. These companies are considered to have significant influence over Australia's innovation system through their investment choices.

Together, the top 20 companies recorded in excess of \$1.3 billion in R&D expenditure for the 1996/97 financial year, of the 20 only one company, Goodman Fielder Limited was from the food, beverages and tobacco manufacturing sector, investing nearly \$27 million in the 1996/97 financial year.

A significant impediment to domestic commercialisation appears to be the fact that most Australian institutions do not have the resources, market access, or often the intellectual property management regimes to take successful scientific discoveries in gene technology to the commercialisation stage for use in Australia or sale on global markets.

While there have been a few notable successes, public research agencies in Australia typically attempt to improve their external earnings, by selling discoveries in agricultural biotechnology as soon as possible. Alternatively research institutions forge alliances often with multi-national companies.

Commercialisation in Australia currently occurs by the following methods:

- ♣ licensing technology;
- ♣ patenting;
- ♣ partnerships with commercial companies;
- ♣ licensed and sold;
- ♣ part ownership in IP and licensing;
- ♣ brokering.

The greater proportion of survey respondents were found to be engaged in various forms of alliances and advised NFF that many encourage partnerships in the early stages of technology developing. Forms of alliance include:

- ♣ research contractor and partners,
- ♣ joint ventures-incorporated /unincorporated,
- ♣ collaborative research arrangements,
- ♣ contract research,
- ♣ licenses,
- ♣ royalty-sharing arrangements,
- ♣ alliances.

NFF recognises that alliances play an important role in ensuring that investment in biotechnology reaches commercialisation. Such alliances are logical as each partner gains access to the others expertise, be it research, market access or IP management.

However, alliances cannot be the only solution to commercialisation of Australian innovation in agricultural biotechnology. Affordability for farmers becomes a concern if Australia is forced to purchase back technology that was originally developed in Australia within a publicly funded institution, at a higher price than we could have accessed it if it was commercialised in Australia.

The NFF survey also found that Australia is considered poor in the area of marketing of IP compared to world standards. Traditionally in Australia IP has not been commercialised but publicly released. This patten appears to now be changing with institutions using their IP to find alternative funding sources. For example, Anutech believes their marketing level is greater than the world standard.

One example of a company in Australia which has invested in agricultural biotechnology for considerable gain is Thursday Plantation. Thursday Plantation pioneered genetic selection of pharmaceutical grade tea tree oil. A declining cottage industry has been turned around by their investment to now being worth \$100 million globally.

Conclusions and Recommendations

NFF's research has found that Australia is a recognised source of world standard gene technology research, however there is a real concern that we are "green" in the area of commercialisation. There is a need for a national coordinated approach to harness the value of the intellectual property, Australia is creating, mainly with the use of public funds.

NFF recommends that Government, with industry investigate strategies to enhance current commercialisation activity in this country, with a view to addressing barriers to investment in commercialisation of biotechnology developed with public funding.

5. The cost to producers of new varieties

Worldwide, there is concern that the small number of multi-national companies currently actively investing in ownership of biotechnology intellectual property could dominate the market and deny Australian farmers access to genes/enabling technology or charge premium prices.

Australian primary producers must have access to genetically improved products or technology at reasonable prices, if they are to remain globally competitive. There is concern that Australian farmers may have to pay significant premiums to benefit from gene technology. Such a prospect is especially unpalatable when the initial research has been publicly or industry funded, sold to a multi-national and then brought back to Australia.

The farming community will therefore be significantly affected as a result of Australia's ability to participate in controlling and trading in biotechnology intellectual property in the future.

Although such concerns are genuine, Australia, as discussed earlier, has considerable natural advantages in agricultural biotechnology. NFF believes government should ensure that a business environment, that is conducive to investment in innovation and encourages greater levels of commercialisation will strengthen our position against the perceived risk of multi-national domination of markets.

IFAP has also identified that commercial companies are likely to have little interest in improving some traditional crops which may be important to a particular country. At the same time IFAP holds concerns that some transgenic crops owned by multi-nationals will be beyond the means of farmers in developing countries. IFAP goes on to reinforce the view expressed by NFF, that to address such issues it is critical that research and development by both public and private entities within individual countries must be encouraged.

Australia, as the only developed mega-diverse country, also has significant advantages based in our native biodiversity resources. Australia should ensure that we maximise benefits from the exploitation of our own biological resources to Australia.

Recommendation

NFF recommends that Government encourage opportunities in Australia for commercialisation of biotechnology traits that may be of little interest to multi national companies but have significant market value both domestically and possibly to other countries. Such investment will help to ensure Australian agriculture has access to biotechnology products.

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

“Australia stands to gain more from this technology than any other country in the world, but not enough resources are being directed towards it.” Rick Roush from the CRC Weed Management.

Whilst the levels of government investment in public R&D continue to be cut back, the Australian private sector is also lagging in investment in R&D, this could be due to the pressure for profit maximisation and shareholder return in the short term. Australian companies and their investors need to be educated to become more visionary and globally astute. Being aware of the business environment and the global fluctuations that directly impact on their operations, accepting sustainable long term profits and investing in R&D to strategically position themselves in the innovation market for long term survival in the global environment.

Biotechnology, by its very nature is a high risk (although potentially high return) venture. There are a number of factors which can be identified which act as disincentives for investment in this area:

- ♣ long lead times and costs involved in R&D with no guarantees of success,
- ♣ lack of a regulatory framework and uncertainty in obtaining approval to market a product,
- ♣ a high level of funding required over a long period of time,
- ♣ the competition (Multi-nationals) are experienced in competing in the market, securing rights to technology and patents is an integral part of obtaining potential product value,
- ♣ scare mongering of gene technology by promotion of false claims to an uninformed public.

Taxation and risk

A tax system will be neutral with respect to risk providing perfect loss offsets are allowed¹. The tax system is the major mechanism where society shares the benefits and risks of investment with the investor. A tax system that does not allow full loss offsets of both revenue and capital losses will reduce risk-taking by business, and reduce economic growth.

The Australian capital gains tax system discriminates against risky investments because of its asymmetric treatment of losses and gains. Realised capital gains are taxed immediately as income, whereas realised capital losses can only be carried forward and offset against current or future capital gains. There has been no attempt to quantify the cost that the asymmetric treatment of losses is imposing on the Australian economy.

¹ E D Domar & R A Musgrave (1944) ‘Proportional Income Tax and Risk-Taking’, *Quarterly Journal of Economics*.

Society is likely to have a different risk profile from the entrepreneur because it is better placed to withstand large losses. For example, consider projects where the expected equi-probable payoffs are \$200 million or a loss of \$100 million. The expected value of the project is \$50 million, a positive addition to national wealth and benefit to society. However, few entrepreneurs would consider such a project because the size of the potential loss would be catastrophic. If society is more risk preferring than the entrepreneur, then a case can be made for the tax system to encourage risk taking, not discriminate against it.

Even with perfect loss offsets, the tax system is likely to discriminate against risky activities. This is because with progressive taxation, returns to successful investment are likely to be more highly taxed than losses from unsuccessful investments are subsidised. This is supported by recent research from the US National Bureau of Economic Research² that argues that the taxation of income from risky assets in a small open economy is likely to reduce risk taking, and economic growth. The authors argue ‘The share of private investment is the single most important determinant of differences in cross-country growth performance’. While this research relates to South Africa, it is also relevant to Australia.

Many OECD countries, and most of Australia’s trading competitors, allow taxpayers to offset current years losses against the tax paid in the previous three years³. Compared to carry-forward tax losses, the carry-back of losses provides the firm with cash-flow when it is losing money, rather than lower taxes when the firm returns to profitability.

Similarly, many OECD countries provide a more generous capital gains regime than Australia. In particular, the UK ‘stepped rate’ proposals appear to provide a model that Australia could well emulate.

Conclusion and Recommendation

A tax system that does not allow full loss offsets of both revenue and capital losses acts to reduce risk-taking by business with adverse consequences for the economy.

NFF recommends that the Government address the deficiencies in the existing Capital Gains Tax system in Australia, which currently discriminates against investment in high risk ventures, such as biotechnology.

² P K Asea & S J Turnovsky *Capital Income Taxation and Risk-Taking in a Small Open Economy*, NBER Working Paper 6189.

³ Including Britain, Canada, France, Germany, Japan, and the USA. (Source: OECD (1993) *Taxation in OECD Countries*.)

7. Assistance to small producers to develop new varieties and the protection of the rights of independent breeders, in relation to genetically modified organisms

Industry needs to be encouraged to increase levels of private investment, one such approach could be through the spreading of investor risk and provision of business conditions conducive to national investment.

Government policy makers need to influence the regulatory, legislative and taxation environment in which companies operate, provide appropriate public infrastructure and intellectual property protection, encourage strategic and organisational skills in firms that do or could innovate, and provide some coherence to often disparate incentive structures.

In spite of the growth of multi-national company control over IP, however NFF contends that Australia needs to take an entrepreneurial approach to IP ownership and focus research in value adding areas in which Australia has strength and commercial advantage. There are a number of strategies which could be employed including investment in IP to provide commercial leverage and secondly investment in IP which is specifically advantageous to reducing the input costs of Australia's farmers and enhancing their productivity.

A downward trend in public investment in research and development can be identified world wide. For the private sector to meet this growing responsibility, government must create legal and institutional frameworks conducive to private sector activities. Such a framework includes a regulatory climate that ensures consumer confidence in products, a favourable investment climate and protection of intellectual property.

Dr Ray Shorter (CSIRO Tropical Agriculture) and Dr John Cullen (GRDC) at the Pulse Industry 98 Conference referred to the locking up of patent rights for genes and other technologies by multi-nationals. "It is not sufficient for Australia to patent it's own useful genes – we need freedom to operate for research and commercialisation of the outcomes of any research we need to generate intellectual property that others require and use as trading chips for intellectual property that others have and we need. It will involve forming alliances and partnerships, in many cases with multinationals. Hence, the priority given to Australian gene technology R&D doesn't match its strategic significance, more needs to be done."

Trends in agricultural production suggest that the greatest opportunities for agricultural producers in the developed worlds are in valued-added products. These products are differentiated in the marketplace by the intellectual property invested in them. The World Trade Organisation administered TRIPS Agreement exists to provide minimum standards of intellectual property rights around the world. The Agreement is due to be reviewed at the end of 1999. The recognition given to biotechnological innovations by the patent system is likely to be a contentious issue.⁴

⁴ 'Intellectual Property in Agricultural Trade', a report for the Rural Industries Research and Development Corporation by Dr Andrew Stoeckel and John Asker, Centre for International Economics, June 1999

8. The appropriateness of current variety protection rights, administrative arrangements and legislation, in relation to genetically modified organisms

Australia needs a regulatory environment that promotes R&D and investment, and an investment environment that promotes products best suited to Australia's needs and which integrate well with its farming systems.

We are behind the US and Europe in establishing a regulatory framework. Australia needs a robust framework to satisfy consumers that food is tested and safe to eat before being released onto the market. This will also provide certainty to potential investors. Regulation of the technology should be based on scientific grounds, not perceived as a non-trade barrier and consistent with our international obligations.

Government action should have a positive impact on the capacity of the private sector to contribute to feeding the world and sustainable agriculture. Government should make clear commitment to open, well-functioning markets, an enabling framework for the dissemination of approved technology in agriculture and science-based food quality standards.

The demand for mechanisms to protect investment in intellectual property is growing not only in Australia but also internationally. Australian farmers access to biotechnology is dependent on the strength of Australia's intellectual property protection systems.

Australia needs to identify ways to encourage greater investment in agricultural research in order to optimise the potential returns from Intellectual Property (IP) developed domestically. Such investment not only gives Australia the opportunity to develop agricultural biotechnology which will enhance our farmers competitive advantage, but it also provides Australia with a bargaining tool on the world stage with multi-national companies who are continuing to invest huge financial resources in agricultural biotechnology IP.

NFF welcomed the announcement in the budget of funding of \$17.5 million for the development of a comprehensive new biotechnology strategy, \$10 million over two years for a range of measures including establishment of a senior Ministerial Council to manage the biotechnology agenda, development of a national biotechnology strategy, public awareness programs, the establishment of Biotechnology Australia.

The further \$7.5 million allocation for the establishment of a statutory office of regulation to ensure an effective, enforceable system of regulation for the industry was welcomed by NFF however we are concerned by its location under the Health and Aged Care portfolio.

NFF believes, given the broad range of interest in biotechnology that a new Statutory Office for biotechnology should be established.

Conclusions and Recommendations

NFF supports a comprehensive and rigorous regulatory system to ensure the safety of genetically modified products prior to their release on the market and to the environment.

NFF agrees there is a need for the control and rigorous testing, in a transparent manner of agricultural biotechnology products, based on sound scientific principles prior to their release onto the market or the environment.

NFF believes that a Statutory Authority ensures the body has sufficient independence from government and political process that consumers can be confident that a truly transparent and scientifically rigorous approach is employed to assessment of gene technology.

NFF recommends that the Government establish a new statutory authority with responsibility for biotechnology.

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

Public acceptance and the development of new technologies do not always move at the same pace. In the case of biotechnology, which is a technology by its very nature that is leading to rapid changes in food production, consumer concern is evident.

NFF agrees with the need to allow consumers to exercise choice when purchasing food products. However, more needs to be done to ensure consumers are exercising informed choice and are not being lead by media scare campaigns, for example “Frankenstein foods”.

The farming community already carry some understanding of the potential benefits of biotechnology to the farm sector, however there is concern that such benefits may be lost in the telling to consumers. Further, there will be little benefit from the technology to producers and growers if the market does not accept the product.

One of the barriers to consumer acceptance at this stage appears to be the fact that there is currently little discernible benefit to consumers in the products on shelves. Many of the biotechnological characteristics developed so far benefit agricultural inputs, for example they may be drought resistant or salt tolerant. However, it is difficult for those benefits to be extrapolated to the finished product, so that consumers can see (and taste) the benefits as well.

Labelling of Genetically Modified Food

NFF supports the standard, which came into force on 13 May 1999, which requires a pre-market assessment of the safety of all genetically modified food and requires the mandatory Labelling of food produced using gene technology which is substantially different from the conventionally produced counterpart. NFF does not believe however that foods which are substantially equivalent should be subject to mandatory Labelling.

From a consumer point of view it may be desirable to label all foods which have had biotechnology applied to them at some stage in the production process. However NFF believes that Labelling should not be applied to production processes, rather Labelling should be on the basis of the product on the shelf. For example, a plant oil product manufactured from seed, which has had biotechnology applied in the leaves, say for insect resistance, is identical in scientific testing to its shelf counterpart, we do not believe it is meaningful to label such a product.

NFF also has serious concerns about the trade implications of Australia requiring mandatory Labelling of all genetically modified foods. Of particular concern is the risk that Australia may be in contravention of the World Trade Organisation Technical Barriers to Trade Agreement which requires countries to adopt measures which are least distorting to trade.

Agrifood Alliance Australia

A demonstration of the farming communities and industry's commitment to playing a role in informing consumers a new ground breaking alliance which has been established called Agrifood Alliance Australia.

The Alliance was officially launched shortly after this years budget and is a cooperative venture between NFF, Avcare (the National Association of Crop Production and Animal Health), the Research & Development Corporations (RDCs), the Seed Industry Association of Australia, the Australian Biotechnology Association (ABA), Cooperative Research Centres Association (CRCs) and Pivot Limited.

Each of these founding bodies offers a wealth of knowledge, and strategic benefits in the area of biotechnology, along with substantial contact networks. This means AAA can interact with both the public and government.

The alliance has been formed in response to the recognition that unless consumer concerns are addressed with regard to biotechnology and the public is given access to the information it needs to exercise choice, the benefits to all Australians of the technology could be lost.

Consumer Information

NFF believes that the Government could best serve the interests of consumers and industries through investment in a widespread public information campaign on gene technology and through the establishment of a transparent regulatory regime for gene technology in Australia. The Government's Budgetary allocation this year to such a campaign was therefore welcomes, however we are concerned that funding levels may not be sufficient to ensure a comprehensive consumer information campaign.

The first Australian Consensus Conference on gene technology in the food chain, held earlier this year, brought to light a number of key concerns that the general public have with regard to biotechnology. Of note was a clear lack of consumer confidence in existing regulatory processes for gene technology and the need for a mechanism to allow for greater consultation between government, industry and consumers and public access to information.

A national postal survey undertaken by the CSIRO last year regarding attitudes to genetic engineering and food achieved a 65% response rate and came up with the following findings:

- ♣ 58 per cent had heard little or nothing about genetic engineering,
- ♣ those who could define genetic engineering thought it had something to do with altering genes, mutation or cloning,
- ♣ 47 per cent of men thought the technology would make life better, compared to only 24 per cent of women,
- ♣ 70 per cent thought citizens had a role in decisions about technology,
- ♣ Only 20 per cent felt that the risks of genetic engineering had been exaggerated.

Recommendation

Until consumer confidence in Government assessment and regulation of foods derived from agricultural biotechnology is established, public acceptance of biotechnology will be continually undermined.

NFF recommends that the Government address the current deficiencies in the regulatory process for biotechnology in Australia as a matter of urgency.

NFF recommends the Government ensure that the information campaign on biotechnology is extensive, presents balanced advice on the benefits and risks of biotechnology and is adequately funded.

10. Conclusions and Recommendations

The future value and importance of genetically modified varieties

Biotechnology in agriculture offers Australian's significant production, environmental and consumer benefits. Australia must be in a position to benefit from the international development and investment in biotechnology which is occurring at a rapid rate.

While recognising that there are a number of domestic policy issues to be addressed, Australians must be encouraged to take advantage the opportunities offered by this technology under strict government control and monitoring.

The Government's slow pace in addressing deficiencies in existing regulatory arrangement for biotechnology risks undermining agriculture's export competitiveness and potential community gains.

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NFF supports research by the Australian Government into the economic enefits of biotechnology and the dissemination of this information to a wide domestic audience.

The ability for producers to compete using traditionally available varieties

NFF supports farmers having the right to choose the commodities they produce, and the production tools they use. Consumers also have a right to exercise choice in the food products they buy.

There are a variety of production methods available to farmers such as organic, traditional and biotechnology, there are market opportunities for farmers should they wish to target particular markets.

Government must ensure that a regulatory framework is established and an Office for Biotechnology in place which provides for informed consumer choice of food products.

The Commercialisation and Marketing of agricultural and livestock production varieties

NFF's research has found that Australia is a recognised source of world standard gene technology research, however there is a real concern that we are "green" in the area of commercialisation. There is a need for a national coordinated approach to harness the value of the intellectual property, Australia is creating, mainly with the use of public funds.

NFF recommends that Government, with industry investigate strategies to enhance current commercialisation activity in this country, with a view to addressing barriers to investment in commercialisation of biotechnology developed with public funding.

The cost to producers of new varieties

NFF recommends that Government encourage opportunities in Australia for commercialisation of biotechnology traits that may be of little interest to multi national companies but have significant market value both domestically and possibly to other countries. Such investment will help to ensure Australian agriculture has access to biotechnology products.

Other impediments to the utilisation of new varieties by small producers

A tax system that does not allow full loss offsets of both revenue and capital losses acts to reduce risk-taking by business with adverse consequences for the economy.

NFF recommends that the Government address the deficiencies in the existing Capital Gains Tax system in Australia, which currently discriminates against investment in high risk ventures, such as biotechnology.

The appropriateness of current variety protection rights, administrative arrangements and legislation, in relation to genetically modified organisms

NFF supports a comprehensive and rigorous regulatory system to ensure the safety of genetically modified products prior to their release on the market and to the environment.

NFF agrees there is a need for the control and rigorous testing, in a transparent manner of agricultural biotechnology products, based on sound scientific principles prior to their release onto the market or the environment.

NFF believes that a Statutory Authority ensures the body has sufficient independence from government and political process that consumers can be confident that a truly transparent and scientifically rigorous approach is employed to assessment of gene technology.

NFF recommends that the Government establish a new statutory authority with responsibility for biotechnology.

Opportunities to educate the community of the benefits of gene technology

Until consumer confidence in Government assessment and regulation of foods derived from agricultural biotechnology is established, public acceptance of biotechnology will be continually undermined.

NFF recommends that the Government address the current deficiencies in the regulatory process for biotechnology in Australia as a matter of urgency.

NFF recommends the Government ensure that the information campaign on biotechnology is extensive, presents balanced advice on the benefits and risks of biotechnology and is adequately funded.

Readings

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