

Committee Secretary
Standing Committee on Primary Industries & Regional Services
House of Representatives
Parliament House
Canberra ACT 2600
Attention: Fran Bailey

Franbailey1.doc

July 29, 1999

Dear Fran

Inquiry into Primary Producer Access to Gene Technology

We apologise for a delayed response to your inquiry and trust you will accept our belated comments for your consideration.

AgrEvo is a global leader in developing new tools for crop production systems throughout the world and gene technology applications in Australia are a key component. Our Australian office has its head quarters in Melbourne, with over 100 people employed nationally, within this, AgrEvo operates a dedicated business line - seeds/crop improvement, which currently employs 15 people (plus casuals) and will expand rapidly in the near future. AgrEvo focuses its gene technology activities in core crop areas including canola, corn, soybeans, rice, cotton, vegetables and wheat. In Australia our main interest and activities are concentrated on canola, where we will be introducing herbicide tolerance (seed brand name LibertyLink and Liberty herbicide), a unique hybrid system (brand name for seed is InVigor produced via the SeedLink system) and eventually disease, agronomic and quality features via genetically enhanced measures. A company brochure and some product literature are enclosed for your background information.

AgrEvo have recently conducted stakeholder consultations on the herbicide tolerant and hybrid canola products as a step towards unconditional environmental (General release) approvals being granted by GMAC. The stakeholder workshops allowed us to focus on key messages and activities required to support the sustainable and successful use of this technology in Australian farming systems.

We therefore offer the following comments, to address the terms of reference for your inquiry into primary producer access to gene technology based on our experience with genetically improved canola developments both in Australia and overseas;

Future value and importance of genetically modified varieties

In order to maintain a sustainable, viable, globally competitive Australian agricultural industry, new tools and creative solutions to pest, disease and agronomic problems must be implemented. Genetically improved varieties will provide one new option for Australian farmers to achieve success.

Our products of gene technology focus in particular, on significantly enhanced yield, through a unique, genetically controlled hybrid system. The herbicide tolerance included in this product package provides farmers with the **option** of using a chemical exhibiting a new mode of

action. This is important in combatting weed herbicide resistance as well as offering a more environmentally sound alternative weed control product.

Farmers in Canada especially demanded a share in the benefits of a high yielding, herbicide tolerant canola product, creating a clear market pull for the introduction of the technology and sending signals to Government and stakeholders that such new tools and options were vital for their sustainable, global competitiveness. As a result, adoption rates for plants with novel traits, especially herbicide tolerant canola, has been exponential. Given the similarities of products being developed for Australia and competing market places, there is no reason why the adoption rates in Australia should be any different to those experienced in Canada.

The Australian canola market currently occupies approximately 1.6 million hectares with average yield of 1T/ha, representing a harvested grain value of approx. \$480 million. Growth in the canola industry over the past 5 years has been rapid regardless of development of herbicide tolerant varieties. We expect the market to peak at over 2.4 million hectares in the next 6 years, after which we expect a plateau. Value of harvested grain is then expected to exceed \$800 million at maturity.

In order to compete in the global marketplace with agricultural commodities, our farmers must also have access to the latest range of management tools and production solutions. This includes, genetically modified varieties.

The future value and importance of genetically enhanced varieties can be measured in a number of ways, with influence ranging from narrow or niche market opportunities to broad social, economic and environmental areas.

In Canada, the agricultural biotechnology industry (includes agriculture and food processing) currently employs 1800 people in over 80 companies, by 2001 the employment number is expected to increase to almost 3000.

In AgrEvo, our personnel dedicated to the seeds/crop improvement business line is expected to at least double in numbers over the same period. Representing a growth area (globally) for jobs and long term career prospects. AgrEvo's breeding centres have brought significant wealth to local areas including Mt Gambier, South Australia and Wagga Wagga, New South Wales with the establishment of state of the art seed breeding and production facilities. Further expansion and investment is planned.

Competition with traditional varieties

It stands to reason that any new varieties, genetically modified or not, must offer a benefit to the farming system at least equal or better than the existing varieties.

The development and successful commercialisation of our genetically improved herbicide tolerant and hybrid canola varieties will not remove any traditionally bred (competing) canola varieties. Nor will it preclude access to organic farming systems or alternative integrated cropping systems. A farmer will not pay more for a new variety unless the benefit is captured in higher returns (ie through better yields or agronomic performance). Similarly all other input requirements including new chemical options must be competitively priced.

LibertyLink and InVigor hybrid canola varieties can be grown in the absence of application of Liberty Herbicide. Growers will be provided with a new option for weed control not available to other varieties but certainly not compulsory.

Variety development in canola involves the combination of traditional breeding and genetic improvement methodology with the objective of providing a seed product that constantly meets the wish list of today's farmers and their global markets. These include; yield, disease

control, insect and weed control as well as enhanced agronomic features involving plant architecture, tolerance to environmental extremes and enhanced oil or meal characteristics.

Despite over 75% of Canada's canola market utilising herbicide tolerant varieties, derived from both genetic modification and traditional plant breeding, 9 new conventional varieties were introduced into the market place in 1999.

Commercialisation and marketing of varieties

The entry of traditional crop protection companies into seed production and biotechnology has created new opportunities and outlook on the commercialisation and marketing of the products of gene technology. AgrEvo can draw upon its experience as a leader in crop protection products and agronomic sales support to assist in the successful introduction of these products in the near future. Relationships with distributors and farmers and quality assurance systems including farm chemical training, container recycling, premises accreditation, emergency response and complaint handling procedures are easily applicable to new seed and technology products.

The requirement to segregate products of gene technology will largely be determined by ANZFAs outcome on food labelling and the consumers right to choose the process by which food is produced. AgrEvo has made a submission to the recent consultation and looks forward to a practical outcome on August 4th 1999. Regardless, AgrEvo adopts a responsible global position that recognises national considerations for consumer acceptance of the products of gene technology and ensures that we work constructively with policy makers on the basis of sound scientific criteria to resolve and harmonise outstanding issues with respect to product labelling, segregation and evaluation.

In Canada, the USA and Japan, no labelling requirements currently apply to substantially equivalent novel products, there is consequently no need for segregation throughout the food chain. As such, different varieties of canola can be grown side by side. The fate of the produce involves extensive mixing of the canola grain commodity and therefore effects of any cross flow of genes does not impact the food production system.

The commercialisation of products of gene technology will create diversity in the market. The critical issue involves expectation of the ability of these products to offer blanket solutions. Gene technology is not a golden bullet.

Cost to producers of new varieties

The price of seed will need to reflect the production and development expenses incurred. In the case of hybrid seed, the process of F1 generation production is quite involved. AgrEvo draws upon its global seed production program to assist this process and allow rapid preparation of the final seed product to meet the highest quality specifications. The seed is likely to be introduced at a price comparable to existing non-GM derived hybrids.

Currently, AgrEvo do not envisage utilising technology use agreements to enforce a contractual arrangement between the growers and the seed and technology package.

Access to new varieties by small producers

Competitive cost considerations as discussed above, will ensure that all producers, big and small have access to new varieties resulting from gene technology.

Lack of national regulatory clarity (and legislation) is a likely impediment for access by all producers to any products of gene technology. Inconsistency in regulatory definition (product versus process) is a potential source of confusion and dissincentive. For example, all herbicide tolerant crops in Canada are known as plants with novel traits and as such are

evaluated for environmental and feed safety. In Australia, GMAC captures only those crops derived by recombinant DNA processes, thereby excluding those crops with novel traits (especially herbicide tolerance) derived by irradiation methods or conventional breeding –and therefore subject to similar environmental management issues. In this context, GMACs requirements for GMOs are restrictive including site selection, management and monitoring.

Variety development assistance and protection of rights

The issues of plant breeders rights and variety protection methods are no different between GM or non-GM derived varieties. GM-derived varieties have the added protection offered through patents however this issue can be kept quite separate to variety rights. The development of GM varieties is expensive due to the global regulatory and product stewardship responsibilities that come with them. This makes it difficult to support widespread access or development of novel varieties by small players. AgrEvo estimates a cost of \$20 million per novel trait for development and marketing in a new GM variety. AgrEvo actively encourages new relationships and alliances for variety development and biotechnology research on the basis of the core crops identified for global priority.

Education of community on benefits

With a limited number of GM products available to view in Australia (3 only approved to date for production in Australia, by GMAC including one cotton and two carnations), it remains difficult to sell the benefits of products of gene technology to Australian consumers.

Clearly, initial developments are focussed on providing solutions to current agronomic and production problems experienced by Australian farmers. The benefits to consumers are not visible in the final products to be consumed. In the case of canola, neither is the genetically modified component visible or present – further complicating the task at hand.

The industry and Government efforts in education and communication need to focus on the broad environmental and sustainable agriculture benefits of current developments utilising gene technology. In time, products may become available that have obvious consumer benefits but we cannot wait for these to eventuate.

AgrEvo will commercialise its first genetically improved canola varieties (Liberty Link and InVigor) in 2002. Until that time, education and communication efforts are focused on the broader acceptance issues involving regulatory policy areas. Farmers, agronomists and resellers will be targetted once the product is clearly identified and freedom to commercialise has been granted. AgrEvo will use reseller accreditation to assist in establishing a quality standard of education for the technology and its responsible use. AgrEvo utilises a global product stewardship strategy for its genetically improved products which incorporates the seed production, quality assurance and agronomic issues relating to the seed, technology and pest control options available. Our product stewardship involves continuous improvement through a commitment to review and survey activities and events occurring in the field.

Public acceptance begins with a transparent and credible regulatory evaluation. Hence the Government must be involved in communicating the policy development in this area to the public through regular formal and informal consultations. AgrEvo is committed to assisting education of the public through its involvement with the industry – Avcare, the Avcare Biotechnology Committee, the Australian Biotechnology Association and a new communications alliance, Agrifood Alliance Australia, which can present a non-biased unified message to the public about the benefits of gene technology.

AgrEvo is also actively involved in assisting communications within and between the industry and regularly participates in local, national, regional and international forums.

AgrEvo believes that the LibertyLink and InVigor canola products will be well accepted by the Australian farmers. Management of expectations amongst all stakeholders and clear

communications of the benefits and fit of gene technology as one component only (not the be all and end all) of sustainable agricultural production will support their acceptance in Australia and throughout the world. AgrEvo is committed to achieving a greater understanding of these aspects by all stakeholders in the community.

We trust the information provided in this submission is of value to your inquiry and encourage you to contact us directly if you would like further information about the issues described.

We look forward to viewing the outcome of your inquiry into primary producer access to gene technology.

Yours faithfully

Naomi Stevens
Regulatory Affairs
Crop Improvement