

WILL CONSUMERS ACCEPT GENETICALLY MODIFIED ANIMALS?

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1. POTENTIAL USES FOR GENETICALLY MODIFIED ANIMALS

- 1.1 Previous speakers have covered the uses made of genetically modified farm animals (GMO). This includes direct improvements in rates of gain in weight efficiency of feed conversion, improved fat/lean meat ratio as well as molecular techniques which assist animal breeders to select desirable animals as parents.
- 1.2 Animals can be used as a means of producing products of pharmaceutical value, for example, having the product of interest excreted in the milk and extracting the product.
- 1.3 Animal husbandry can be enhanced by the development of recombinant vaccines which are administered orally as live vaccines. Or, recombinant organisms with improved capability to metabolise plant toxins or resistant fodder components could be introduced into ruminants.
- 1.4 Perhaps the most important application of the technology relates to fundamental research into the genetic make-up of animals, the methods of gene regulation, alteration in gene expression and inheritance of genetically determined performance traits.

2. COMMUNITY PERCEPTIONS OF THE TECHNOLOGY

- 2.1 Technology is so novel that it should be banned or at least subject to stringent, special legislation.
- 2.2 Outcomes are not completely predictable and so must be especially scrutinised.
- 2.3 Monsters may result from modifications.
- 2.4 Concern that modified organisms could
 - become virulent pathogens or pests
 - provide a new food/habitat for pests
 - displace a wanted species
 - decompose a wanted substrate or food supply for a wanted species
 - become feral and become a pest
 - interbreed with an unwanted feral species
 - interbreed with native species
 - contravene ethical or moral beliefs of some sections of the community.

3. **REGULATORY ISSUES**

3.1 Commonwealth/States

It is desirable to have Commonwealth regulation/surveillance of GMOs, but Commonwealth regulations must be implemented by State agencies and this can present problems. The States tend to have different departments (which change frequently) dealing with various issues. Different States have different legislation and hence have different inspectorates and permits.

The State agencies have had experience in the surveillance of a number of different organisms made by conventional methods. It seems sensible to use these skills and experience to monitor those same types of organism made by novel genetic methods. In principle, the surveillance should be directed to the outcome - not to the way in which the organism was produced, although that information will assist in safety assessments.

3.2 Legal definitions and limitations

The law allows GMOs to be defined and conditions precisely outlined, but this also introduces an advisory environment in which those wishing to do so can comply with the letter of the law, but conduct work in a way which is contrary to the spirit of the law.

The law tends to lag well behind technological advances, so that new technologies can emerge which the existing law may not cover.

3.3 Products of GMOs

Many of the products of GMOs can be covered by existing legislation directed to safeguarding the safety, efficacy, quality, compliance with defined limits of contaminants, etc. There is no need to have any special legislation simply because the organism is genetically modified for this type of product.

Some consumers are adamant in demanding that products made from GMOs should carry a label to that effect.

4. **HOW IS THE PUBLIC INFORMED ABOUT GENETIC MODIFICATION TECHNOLOGIES?**

4.1 Pressure groups

Within the community there are those holding an ideological stance regarding food/animal welfare/life style. These will express their views through their own literature, politicians (especially at election time), press and television at every opportunity. Because of their extreme position they make good "press" so they are welcomed by the media. Their understanding of the technology is often very poor and they are not above putting "worse scenario" cases as if they are the ones to be confidently expected.

Such groups are a tiny fraction of the public, but significant for all that.

4.1 Users of the technology

How do these people come across? Generally they are not good speakers, they do not explain what changes they make in language the public will understand and are not willing to go to school teachers, schools, CWA meetings, RSL club nights, football clubs, youth clubs and tailor their message to the group. This last point is critical. There is not one public out there but many, and speakers must recognise this and ensure they pitch the message to "that public". Make sure you are aware of and answer sensitive concerns. Outline for them the surveillance system.

Professionals should be willing to offer refresher workshops at science teachers conferences to ensure that these people have the opportunity to ask questions, raise issues with someone who knows about the technology. This can be done through your professional society - draw up a team of people that can be volunteered as speakers. This requires scientists to give up time but if you want to change perceptions you must be prepared to do this.