



Your strong and independent voice for livestock producers

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25 October 2018

Professor Kym Anderson AC
Chair - Review of the South Australian GM Food Crop Moratorium
C/- Dept of Primary Industries and Regional South Australia
25 Grenfell St, Adelaide SA 5000
Email: pirsasgmreview@sa.gov.au

Dear Prof Anderson,

Livestock SA welcomes the independent review of South Australia's moratorium on the cultivation of genetically modified food crops.

Livestock SA is the peak body for sheep, beef cattle and goat producers in this State with approximately 3,500 members. Many of these producers are also grain growers and are directly affected by the current moratorium.

GM crops are a source of feed for livestock in other States. Studies into meat from animals fed GM crops have found they are as wholesome, safe and nutritious as meat derived from livestock fed conventional crops.¹ For this reason, there are currently no requirements in any country to label meat from livestock that have eaten GM feed and GM pasture crops.

There are currently field trials of GM canola in Victoria where animal nutrition as well as human nutrition is being considered. If found to be successful, this State's moratorium may well mean this variety could not be grown here, despite its possible benefits to increase livestock production in South Australia. Already the Australian Office of Gene Technology Regulator has approved omega-3 canola for cultivation and use in animal feed.

Studies have revealed that the per-hectare economic capacity of grassland will see a substantial lift in profitability if GM grasses are introduced. GM grasses are not the only answer to increasing ME, however, they play a central role in the matrix of management that is required to remain competitive in a world which is genetically engineering its way to competitive abundance.

¹ *The Official Australian Reference Guide to Agricultural Biotechnology and GM Crops*, Agricultural Biotechnology Council of Australia, third edition, page 26.

What is clear from the results that the bottom line on profitability is not just marginal. One upper end example saw an increase of operating profitability of \$459 per hectare. All parts of the experimental research saw increases in profitability. From the grazing perspective the introduction of GM ryegrass is of particular interest. The benefits that have been seen in the cotton and canola would also be realized in the area of GM ryegrass application. By way of example in New Zealand the argument has been mounted that genetically modified High Metabolisable Energy (HME) ryegrass has been shown in AgResearch's laboratories to grow up to 50 per cent faster than conventional ryegrass.²

It is also able to store more energy for better animal growth, is more resistant to drought, and produces up to 23 per cent less methane (the largest single contributor to New Zealand's greenhouse gas emissions) from livestock.

Earlier this year, market analysis business Mecardo conducted an analysis of price premiums under the South Australian GM moratorium. They found that the moratorium has not led to enhanced premiums over comparable markets to producers for not only grain, including canola, but also for wool, beef cattle, and sheep and lamb.³

The current South Australian GM food crop moratorium supposedly exists for trade and market access purposes. There does not appear to be any evidence of any market benefits from this moratorium.

Livestock SA recommends that the moratorium be immediately lifted.

Regardless of any evidence, it should be up to individual producers to decide the benefit of growing GM crops both as part of a rotation and for any premiums they are able to negotiate when selling their products. Not being able to grow GM crops not only removes the option of using innovative agronomic tools, but also being able to consider whether to feed these crops to livestock. Those growing GM canola in other States now have a further weed management strategy to use towards increasing productivity.

GM crops can be grown alongside non-GM crops, just as is done for malting and feed barley or durum wheat and other wheat varieties. There are on-farm management practices, including the maintenance of buffer zones if considered necessary, to ensure effective segregation. In addition, there are industry protocols to maintain product integrity.

There is no evidence that South Australia will benefit from continuing to impose this severe restriction on their farmers. The moratorium restricts farmer choice, is a costly disincentive for private investment in South Australian agriculture, is unnecessary for preserving the identity of GM and non-GM crops and provides zero trade and marketing benefits for South Australia.

For livestock producers, to improve their herds and flocks requires better breeding. The livestock industry is looking at the potential benefits from gene-editing. With gene-editing it may be possible to obtain such traits as enhanced muscling, heat tolerance and disease resistance in animals. Recently American researchers have bred a genetically-engineered Angus calf to withstand high summer temperatures. Recently the ABC reported that a conservation group is partnering with the CSIRO to investigate how gene-

² AgResearch (NZ) Principal Scientist Dr Greg Bryan

https://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=12088342

³ *Analysis of price premiums under the South Australian GM moratorium*, Mecardo Expert Market Analysis, March 2018.

driven technology could control Australia's feral cat population – and similar control measures of other invasive animal pests may also be possible. Gene-editing could be a game changer for the cessation of mulesing in the sheep industry. It is essential that the current moratorium does not restrict this development in South Australia.

Livestock SA has developed both a South Australian Sheep Industry Blueprint and a South Australian Beef Industry Blueprint with funding support from the University of Adelaide (through the Davies Research Centre), and both the South Australian and Australian Governments. These Blueprints have bold overarching aims of increasing productivity and value of the State's sheep industry by 20% and increasing the supply of the cattle bred in this State by 60,000 per year. The use of all available technological advances is required if these aims are to be realised. This includes being allowed to grow GM crops and gene-editing in livestock.

Yours sincerely

A handwritten signature in black ink that reads "Joe Keynes". The signature is written in a cursive, flowing style with a large initial "J" and "K".

Joe Keynes
President