AMPC

Engaging Industry in Innovative Solutions

15 June, 2005

A PROFITABLE AND SUSTAINABLE RED MEAT PROCESSING SECTOR

SUBMISSION TO THE AGRICULTURE AND FOOD POLICY REFERENCE GROUP

KEY POINTS ARE AS FOLLOWS:

1. Future Operating Environment.

- A characteristic of the sector is the relentless consolidation that has occurred over the last 25 years which has seen 10 - 15 slaughtering establishments disappear every year. This trend to fewer, larger, export oriented establishments will continue.
- In order to compete with lower cost countries such as Brazil the surviving businesses have to become much more sophisticated in their management of: people; information; supply chains; environmental issues; animal welfare; product traceability and the development and installation of automated equipment.
- A growing shortage of suitable labour willing to work in meat processing plants is reaching alarming proportions. To survive future plants will need to be technologically more advanced than present and this will exacerbate the shortage of skilled labour particularly engineers of all sorts, IT personnel and tradespeople especially electricians.
- Well managed, well coordinated and well funded R&D is vital to the sector's future. Currently all R&D is managed for the sector by Meat and Livestock Australia with mixed results. A review of these arrangements is long overdue.
- The growing "tail" of injured ex-employees adds an almost unsupportable burden of carried workers' compensation costs for the continuing businesses no matter how efficiently they run.

2. International Trade

- It seems likely that the greatest competition to Australia's current red meat trade will be in the grass fed, commodity end of the market from South American countries mainly Brazil.
- There would seem to be significant advantages to Australia going "upmarket" producing very high quality, premium meat products. Australia has the technology and knowledge to do this but is currently hampered by the lack of an effective grading scheme to prevent substitution of low quality meat for higher quality items e.g., manufacturing beef for grilling cuts and mutton for lamb. Establishment of high quality branded products has been slower than expected.
- The dairy industry has transformed itself by producing many high value co-products so that profitability no longer depends on whole milk. A similar transformation is possible for red meat based on developing new high value co-products and realising more value from the abundant range of co-products that are currently produced.
- This requires a major increase in properly managed and coordinated R&D along with sophisticated marketing. The current R&D management structure and funding the industry has in place needs to be improved.
- The Danish pork industry has taken world leadership in automated pork processing by reducing the labour content of pork processing in their plants by 60% over a period of 15-20 years. If Australia could do this for beef and sheep meat and double the current value of co-products then the industry would not only be the world leader but there would be a major benefit to Australia's bottom line. This requires a significant commitment to R&D funding and properly coordinated project management over a period of 5-10 years.

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3. Education Skills and Labour

- The meat industry is fortunate in having in Mintrac, one of the best training organisations of any industry in the country, however the breadth and depth of new skills that are required pose a severe challenge. Currently Mintrac is taking personnel to diploma level and will soon go to advanced diploma but the industry needs more degree personnel of almost every type.
- Meat and Livestock Australia and AMPC have recently introduced a scheme to attract undergraduates, especially engineers, to the industry on six week work experience "scholarships". Only in its second year, it has been very successful in exposing the sector to the value of university trained personnel. The next stage is to develop a graduate cadetship scheme to help attract and retain graduates in the industry.
- The greater the rate of technological advancement that is achieved, the greater the supply of skilled people that is required.
- Assistance is needed to develop and maintain more tradespeople, particularly electricians, and stop them being poached by other industries.
- The sector is keen to be able to recruit overseas to find people willing to do the hard dirty work that is less and less attractive to young Australians. This has many implications however, not the least of which are the language problems encountered, the impact in regional centres of pockets of unassimilated foreigners and how long the newcomers will stay in the industry once they have the language skills and knowledge to leave.

4. R&D

- As mentioned under "International Trade" the industry needs a major program of well managed R&D. Unfortunately many in the sector are very wary of R&D since it could produce change that they will not be able to adapt to and will therefore force them out. This is not a good environment for encouraging well managed institutionalised R&D, which consequently has a fairly patchy track record. The current arrangements and particularly the low level engagement of the CSIRO and universities are not ideal.
- From the nation's point of view the potential benefits of a well coordinated, well funded R&D program are large, since at a base level it will help preserve one of our largest export industries and at an advanced level will allow it to develop new value added products that will enhance not only Australia's income but also its knowledge base for expanding other agriculturally based exports. It would also have significant collateral benefits for the environment, food safety and animal welfare.
- The main areas for R&D and / or adoption of new technology are:
    - Automation of slaughter and boning room processes;
    - New and value added co-products including biodiesel;
    - Value added meat products;
    - Improved environmental systems including: reduced water use; better waste disposal; productive use of nitrogen and phosphorus (currently considered pollutants); reduced greenhouse emissions.
    - Improved bacterial recognition and elimination for longer shelf life and lowered risk.

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Red Meat Processing Sector R&D Requirements

Category	Requirement	Action
Automation of slaughter floor	• Development of new sensors • Industry cost / benefit analysis by task to rank in order of pay back for (a) small stock and (b) cattle • Commercial development of five key items.	• CSIRO to form a unit dedicated to sensor development in the food industry. • Boost current low level project with a high powered multi-disciplinary team. • Fund five year plan.
Automation of boning room	• Development of new sensors • Industry cost / benefit analysis by task to rank in order of pay back for (a) small stock and (b) cattle • Commercial development of three key processes. • Redesign carcase break up and boning room organisation for reduced labour, lower OHS demands and better traceability.	• CSIRO to form a unit dedicated to sensor development in the food industry. • Boost current low level projects with high powered multi-disciplinary teams. • Fund five year plan.
New and value added co-products including bio-diesel;	• Intensive research on new uses for bovine and ovine blood isolates and new cheaper production methods. • Research into cartilage extracts such as chondroitin sulphate and other anti inflammatory agents. • New extraction processes and uses for bovine and ovine glands and glandular products. • New and improved collagen extraction and purification. • Improved methods of bio-diesel production and use of blends with ethanol, methanol and regular diesel.	• CSIRO to form a unit dedicated to new product development in the food industry. • Encourage a CRC in this area.
Value added meat products;	• Food Science Australia is working in this area but progress is slow.	• Find out why progress is slow and speed it up.

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Red Meat Processing Sector R&D Requirements (continued)

Improved environmental systems including: reduced water use; better waste disposal; productive use of nitrogen and phosphorus (currently considered pollutants); reduced greenhouse emissions.	• Strong government help is required to change current laws which prevent or limit the ability to use recycled water in food processing no matter what the quality. • Fail safe systems need to be developed which prevent the use of contaminated recycled water. • Funding assistance with introducing the latest recycling techniques will speed up their introduction. • Excellent R&D on phosphorus and nitrogen removal is underway but more effort on turning the waste into saleable fertiliser is needed. This technology would have world wide sales potential. • All meat processing waste is organic and potentially very valuable for co-products e.g., bone material can be made into hydroxy apatite; fats can produce bio diesel; residues in waste ponds can produce algae for feeding fish etc, etc. Many of the potential products are well known but the final stages for realising the products commercially needs to be funded. • Meat processing has enthusiastically embraced the Greenhouse Challenge but the financial incentives need to be lifted by about 50% to make capturing methane from ponds, co-generation and bio-diesel production attractive.	• AQIS to make a stronger effort to bring in sensible reform in this area. As a first step to persuading overseas governments to make long overdue changes we should reform our state legislation to allow use of high quality recycled water. The test should be the quality of the water not where it came from. • The more progressive plants are very keen to introduce recycling to reduce their water consumption and all they need is the legislative changes to allow it to happen. Some moderate financial incentives would cause a rapid uptake by other plants. • Given the phosphorus deficiency of Australian soils it is appalling that this resource has been allowed to go untapped for so long. This should be a national project for the CSIRO. • A CSIRO unit devoted to new products for the meat industry could take the waste stream into consideration as well.
Improved bacterial recognition and elimination for longer shelf life and lowered risk.	• Good work is being done by the Environmental Biotechnology CRC in this area but it needs a funding boost to speed it up.	• The EBCRC needs more funding.

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