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An invitation is extended to all those involved in the field of animal production to apply for membership of the New Zealand Society of Animal Production at our website [www.nzsap.org.nz](http://www.nzsap.org.nz)

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## Presidential Address 2000 Animal products contribution to New Zealand's wealth

A.R. BRAY

The 60th anniversary of the New Zealand Society of Animal Production is an appropriate occasion on which to acknowledge the massive contribution that animal products have made to the New Zealand economy.

Maori used products from kiore and dogs as well as wildlife and fish. The first Europeans started with whaling and sealing, then moved to wool production before freezers on ships opened up world meat markets. More recently dairying and fishing have boomed and chicken, meat and egg, pork and deer industries have arisen. Add goat, ostrich, mussels, possums etc and you have a long, varied list of species and products.

However it is the products from grazing sheep and cattle that have provided the bulk of New Zealand's export earnings over the last one hundred and fifty years. They continue to dominate to this day (Table 1).

**TABLE 1:** Value of New Zealand exports of products from farm animals, for the year ended March 2000. *Source: Statistics NZ*

Sector	Main products	\$NZ (million)	FOB
Dairy			4546
	Butter	934	
	Cheese	952	
	Whole-milk powder	1168	
	Skim-milk and buttermilk powder	581	
	Casein and caseinates	769	
	Other dairy	142	
Meat			3146
	Beef and veal	1290	
	Lamb	1428	
	Mutton	169	
	Venison	156	
	Other	103	
Wool			967
	Greasy wool	209	
	Scoured wool	542	
	Slip wool	6	
	Tops and yarns	111	
	Carpets and apparel	100	
Skin			551
	Hides and skins	262	
	Dressed skins	41	
	Leather	249	
Co-products			402
	Meat meal and pet food	54	
	Crude animal materials	242	
	Animal oils and fats	79	
	Velvet antler	27	
Live animals			150
	<b>Total animal-based exports</b>		<b>9763</b>
	Other exports		12840
	<b>Total New Zealand exports of goods</b>		<b>22603</b>

The annual total of near \$10 billion per annum includes raw materials, those that have undergone early stage processing, and consumer-ready goods.

To put these figures in perspective the much-derided wool industry returns as much as fish products, and exceeds that for the combined value of kiwifruit, apple and pears. Also, the amount earned by unglamorous by-products like sheep intestines exceeds several times that from electronics

and software. Export returns from wine are similar to those from edible offals.

In total, farm animal products paid for 43% of the imported luxuries that supported your first world lifestyle last year.

A great advantage to New Zealand of these products is the proportion of their export earnings that are retained in New Zealand. Compare it with other large industries like tourism, aluminium smelting and telecommunications that either have large imported components or their earnings are transferred overseas.

New Zealand dominates trading between nations of sheep meat, sheep pelts, and coarse wool in particular and is a major player for others like dairy products. That suggests to me that New Zealand exporters could be in a position of considerable power rather than commodity traders. Some of them are.

While New Zealand may be an important international trader in coarse wool for instance, it is only a small player in the global fibre market that includes domestic as well as international trade in synthetic, plant and other animal fibres. Wool is only 4% of that market and New Zealand wool is 0.5%. Similarly sheep meat is only 4% of the global meat market and New Zealand sheepmeat 0.3%. The same trend applies to dairy products. That is, our supplies are minor on the world scale. This relative rarity coupled with New Zealand's deserved reputation for quality products should surely give our exporters trading advantages that allow them to escape commodity traps. Some do.

### Contributions from NZSAP members

If the parochial claim that New Zealand has the most efficient pastoral farms in the world is true it is because of marvelous natural advantages coupled with continual gains in our ability to exploit them, and a well organised industry infrastructure. The gains in production have been not so much due to revolutionary inventions, rather an abundance of marginal improvements including those in animal breeding, reproduction, feeding and health. They have been based largely on information rather than products, and have been absorbed into farm systems where it is not easy to identify their impact. Just because the advances due to individual initiatives are not readily apparent does not mean they were unimportant. Each one may not have been world shaking, but together the abundant small gains are, I suggest, responsible for the continuing strength of farm animal production in New Zealand.

Members of New Zealand Society of Animal Production are associated with many of these gains. The contents of the CD-ROM containing the papers presented to the Society's 60 conferences are a testament to that. If member's contributions were worth only 1% of animal product-based exports, at present they would be worth \$100 million annually (Table 1). Compounded over the life of the Society that would amount to an impressive figure. If it happened to be 10% they would be worth \$1 billion each year. Whatever the true figure, we can be justly proud of

the contributions of members of the New Zealand Society of Animal Production to the wealth and well being of New Zealanders.

### Research directions

However past glories will not necessarily support us in the future. We can not afford to let our plans be clouded by them when the economic, political and technological climate is changing so radically.

Research and teaching staff of the universities and AgResearch form the core of this Society. I see three developments affecting those institutions having major implications for the Society. Firstly, the drop in numbers of students wanting to be educated in skills relevant to the historical orientation of this Society means not only fewer student members but also fewer lecturer members.

Secondly, the Government is redirecting its investment in research and technology development away from existing industries to new industries and new supply chains. In response, and with the support of sector boards, AgResearch and universities are significantly changing their research directions and capabilities.

Thirdly, research and development are inexorably becoming more and more commercialised all around the world. This means that an increasing proportion of new findings is not being shared at forums like this. I know of one international society that was thriving a few years ago and is now struggling, not because of less research but because commercial interests prevent findings being shared.

The combination of these trends presents a clear threat to the future of New Zealand Society of Animal Production as we now know it. Probably more than at any other time in its existence it must now look at the future need for such an organisation and, if there is one, the Society needs to re-examine its constituency, review its purpose, and provide benefits that will attract and retain members.

Similarly we need to review the Society's operations. How much longer can it operate with only one primary activity, an annual conference for researcher members dominated by sessions on production of traditional products? We have discussed joining with other societies, changing our name, focussing on extension, focussing on specialist sciences, changing conference venues, doing away with conferences, and other options. Extinction or adaptation, radical surgery or conservation, knee-jerk responses or measured moves, being reactive or proactive, the choice is to be made by members. My view is that the Society is currently healthy and we do not need to panic. But we must stay awake over the next few years. There may not be an asteroid approaching but the climate is definitely changing. Think of the changes occurring around you, look to the future and help your committee respond.

### Post-production

To return to the animal products theme, New Zealand has had modest success in using the abundance of animal products to build manufacturing and distribution industries. Several governments have tried to stimulate addition of value by further processing and there have been periods of success for some sectors. Both the textile and meat processing industries have been major employers in the past and are still locally important. However, we still export

most as raw materials or with minor improvements (Table 1). Milk is converted into powder, butter, cheese or caseinates, most wool is scoured, and much of our meat is in cut form when exported, but these are humble enhancements. Also, despite our heavy participation in international trading we own little business in the distribution chains beyond our shores.

That is not to say that New Zealand has not contributed to improvements in manufacturing and distribution sectors. The Dairy Research Institute, Meat Industry Research Institute of New Zealand and the Wool Research Organisation of New Zealand have led significant advances. Examples of MIRINZ developments are the electrical stimulation of carcasses to reduce the incidence of tough meat, and packaging systems that allow our chilled meat to compete with fresh meat in Northern Hemisphere markets. On the wool side WRONZ has developed a range of objective measurements that provide the basis for quality standards that result in New Zealand wool attracting premiums relative to other sources. Another example is the deceptively simple advances in WRONZ tufting needles that have enabled wool carpets to retain their premium position in flooring markets. In my opinion such advances have been at least as important to their sectors as advances made in farm practices.

As one adaptation to the changing research and development environment, I urge this Society to make greater efforts to expose its members to activities occurring in other links in the supply chain and to the wants of consumers, to open eyes to possibilities beyond the tissue, beyond the animal, and beyond the farm. We do make some effort, but I think it should be more. We should be actively seeking contributions to these conferences from the researchers that take the raw materials with which we work and spin them into gold.

### A balanced portfolio

I read recently that Microsoft was founded in 1975 and that Bill Gates had more personal wealth than 135 of the world's nations. The recent US Supreme Court decision has probably reduced that figure but clearly major new industries can arise quickly. While I doubt the ability of our animal production industries to make Microsoft size leaps, I question the wisdom of New Zealand starving those industries in which we have real and continuing competitive advantage of support to feed high risk new industries.

I add my voice to the reasoned arguments of Rob Davison of the Meat and Wool Board's Economic Service, Robin Johnson formerly of MAFPol, Tony Alexander chief economist of the Bank of NZ and the plea from Jacqueline Rowarth, President of the NZ Institute of Agricultural Science, among others, for facts to prevail over the continuing fashion among economists and policy makers to promote new industries at the expense of ones in which we have true competitive advantages. A week or so ago even the Governor General added his voice in support of those arguments. Wise sayings like cutting the nose off to spite the face, throwing the baby out with the bathwater, and jumping from frying pan into the fire come to mind.

I repeat that past glories can not guarantee the advances in health, wealth and well-being that New Zealanders would like. However I do not believe the future for animal products

is as dire as the dogmatists for change would have us believe. I call for a more balanced approach than they, to continue support for our competitive advantages in primary production while we explore alternatives.

Derision of supposed 'sunset industries' and simplistic assumptions that the e-commerce and electronics will be New Zealand's saviours are not helpful. Neither is the farming and processing sector's predisposition for self-mutilation. There are 60,000 farmers so inevitably there is a range of views. Many are hurting financially so it is understandable that views get expressed forcefully. Perhaps we will have to wait for a change in industry structure before we see a more constructive attitude and a better public image.

Rather than write off animal production, I believe it is in the whole nation's best interest to use our competitive advantages to supply high priced markets with the entertainment that they want in the form of novel foods and apparel. The concept of transitory fashion trends applies as much to the top end of the food market as it does to fibre and leather garments. The food industry has its catwalks. In both situations changing tastes create needs for research into product quality, in contrast to the cost reduction focus of commodity producers.

The same competitive advantages can be used to generate products outside the food and textile industries. You will have heard suggestions in relation to pharmaceuticals, nutraceuticals, cosmetics and others, not just from traditional animals but novel ones. Somebody has calculated that even the humble lamb contains \$5000 of potential products when current returns are around \$100. What about emu oil?

That is, there are interesting prospects in existing industries that should not be written off altogether in pursuit of a NASDAQ listing. I would like them targeted for inclusion in our conferences.

The environment is changing for New Zealand Society of Animal Production; there are a range of responses we members we can make. All that I have had time to suggest here is a modest rate of change to our objectives, to include in our conferences more input from marketers and manufacturers and more input on non-traditional uses and species. I urge you to have your say.