

# Address to the AgResearch MIRINZ Second Annual Industry Workshop

## Dr Andrew West, Chief Executive AgResearch

Welcome colleagues of the red meat industry to AgResearch MIRINZ on the Ruakura campus.

This is the second of what will become enduring annual workshops on advances that our scientists and technologists are making in the science of meat and related food ingredients, and in the science and technology of meat processing.

It is a day for dialogue where those in industry and those in research and development can engage in dialogue and learn from each other, to the benefit of the industry and some of the science and technology behind it.

AgResearch is New Zealand's largest single research institute and the principal research organisation dedicated to the pastoral sector. Our Mission – what we exist to do - is to create sustainable wealth in the pastoral and biotechnology sectors. Our Vision – what we want to achieve for ourselves – is to be the world's best pastoral sector research organisation.

AgResearch spans the country. On a head count we employ 1,300 staff or 950 full time equivalents. We have five main research campuses and 17 research farms. Ruakura is our largest campus with about 450 FTEs. It once had a large specialization on *Bovine* research and meat research, although that focus has since become considerably broader.

We also have a campus in Palmerston North (about 250FTEs) where we principally focus on forages and the rumen. We have another campus on the outskirts of Wellington of about 100 FTEs where we focus on animal health. We have a fourth campus at Lincoln of about 70 FTEs where we focus on farm systems and biocontrol. We have a fifth and final campus on the outskirts of Dunedin of about 140 FTEs where we focus on *Ovine* and *Cervine* research.

When AgResearch was formed in 1992 it drew the soils, forage and rumen aspects of the old DSIR and merged them with the livestock and farm systems aspects of MAF. This provided us, for the first time, the possibility of a coherent scientific view of a livestock farm. In the intervening 14 years we have successfully integrated our research and development programs to do just that.

AgResearch could not, however, look further along any of the meat, wool and dairy value chains because, sitting above us, were three industry research associations; MIRINZ here, the Wool Research Organisation of New Zealand (WRONZ) at Lincoln and the Dairy Research Institute (DRI) at Palmerston North. All that has now changed for the principal reason that final consumers are demanding product functionality, quality, integrity and assurance. This requires an integration of R&D along whole value chains

In 1992 AgResearch was pretty much stuck behind the farm gate, but the products of the meat, wool and dairy industries weren't. So in the late 1990s AgResearch was fortunate enough to acquire MIRINZ. MIRINZ, as you are almost certainly aware,

has a magnificent track record of science and technology that has, on occasion, been of immense value to the New Zealand red meat industry.

Its relationship with your industry has had its ups and its downs. The late 1980s and early 1990s were a difficult time for MIRINZ. The 2000s are starting to shape up a bit better and you'll learn more of that today. With MIRINZ and AgResearch working together in the form of AgResearch MIRINZ we are now able to integrate our R&D along the red meat value chain and I'll come back to that. Moreover, we are in close touch with the New Zealand meat industry, not the least because AgResearch owns and operates its own abattoir here on this site at Ruakura.

You may know that last month the owners of Canesis Network (formerly WRONZ, that is the wool, research association) agreed to sell the association and its land and buildings to us. Canesis has about 130 staff at Lincoln, dedicated to wool processing and woollen products research and development. We are now completing due diligence and working to secure final permission from our shareholders to pay the \$20 million to close the deal.

Once done AgResearch will be able to integrate its on-farm wool production R&D with Canesis' off-farm wool processing and woollen products R&D. We are tremendously excited about that prospect because we think that wool is a fine material and that there is realistic possibility of a good future for the New Zealand wool industry.

That leaves dairying. We are actually working off-farm already and here at Ruakura we have about 60 dairy food and ingredients scientists and technologists. However, we are not working on the processing technologies and systems for the dairy industry, and this in itself hampers some of our dairy food and ingredient R&D.

Therefore about 23 organisations and businesses in the Waikato region, led by His Worship Mayor Redman recently put a proposal to the Government to help fund and build a National Pastoral Foods Centre here at Ruakura. Our vision is that this Centre will encompass education and training, research and development, and commercialization. It will focus on meat and dairy foods and the related processing.

If so funded we would upgrade our Dairy Number One Farm at Ruakura to be world's best in milking technologies and we would establish some dairy herds that begin to differentiate milk and milk products *behind* the farm gate rather than, as at now, just beyond it. We would upgrade our research abattoir so that we could do much more value-add work for the meat industry. We would build a spray drier and a continuous flow freeze drier, and also build a large fermentor. This would allow us to work on high value foods and food ingredients.

If we can get a head of steam up around meat and dairy foods and food ingredients, and related processing equipment, then AgResearch will also look to rebuild the existing facilities around you here at Ruakura; these are now looking a bit tired. I hope this doesn't sound like hot air. Let me give you some idea of what we are spending in upgrades elsewhere:

We are closing most of our Wallaceville Animal Health Campus and relocating its staff and equipment to Palmerston North and Dunedin because we are creating three, brand new, National Centres in the livestock sciences. At Palmerston North AgResearch and Massey University are together spending close to \$40 million on new animal health laboratories and animal handling facilities; these are state of the art. At Invermay, Dunedin AgResearch and The University of Otago will spend close

to \$20 million on new Animal Reproduction and Genomics labs. At Lincoln we are spending \$30 million on the acquisition and upgrade of wool sciences and technologies. At Wallaceville itself, MAF and the ESR CRI will spend roughly \$10 million on a National centre for Mammalian Biosecurity and Infectious Diseases.

That's \$100 million committed to date on massively upgrading R&D in livestock health, livestock biosecurity, livestock reproductive efficiency and wool processing and products.

So, along with our partner R&D organisations we are serious about trying to upgrade our commitment in the meat and dairy foods and food ingredients areas, only we'll need central government's help to do it.

Behind the scenes we are also investing heavily in animal production R&D such as in genomics and you'll hear a little about this today. AgResearch's genomics research underpins Catapult Ltd, the 75% Meat and Wool New Zealand – 25% AgResearch owned sheep genetics and diagnostics company. Catapult is currently commercialising two genetic markers that measurably improve sheep meat yield – Myomax and Loinmax, and 13% of rams sold in New Zealand now have Catapult-identified genetics in them. We also have a significant genomics research programme in meat yield and meat quality currently in train.

We can breed sheep and cattle for many things, but the meat industry has to tell us what its requirements are. Right now most of the focus for sheep breeding is around on-farm production. Yes, there are terminal sires, but most of the things that final consumers will most pay for in meat are not directly bred for because they are not directly measured in your factories.

A huge breakthrough would be objective, reliable measurements in your processing factories of those characteristics that consumers will pay for most for and you will hear about that today. AgResearch can then work to see if those characteristics that you measure in your processing factories – the ones that consumers most value – can be genetically affected on farm. If they can be then we'll breed sheep with better characteristics in those areas.

We have just sequenced the *Bovine* genome with partners in the USA, Canada, Australia and the UK. This is an Aladdin's cave of valuable knowledge if we can link it to smart measurement systems in your factories. We now want to do the same for the *Ovine* genome.

That is the power of AgResearch. Few if any other research institutes can do this.

This workshop is entitled "*Fresh Ideas for Fresh Meat*". We need fresh ideas. Other nations such as Brazil are catching up and will actually pass us in production efficiencies, and yet others such as Denmark are way ahead of us in food science and technology. The quality of the relationship between scientists, technologists and industry is essential if we are to even stay in the frame globally.

Thus I am delighted to announce today the launch of a new AgResearch MIRINZ website through which you can stay in constant touch with developments at AgResearch, and by which you can provide us regular feedback. I would like to especially acknowledge Robert Kemp for the development of this website. It was his unstinting enthusiasm for communication and passion for this country's red meat industry that led to this website.

I should stop now and allow the main speakers of the day a chance to get on with the business of the day. I apologise for not being able to stay with you all day, but aspects of the wool industry call me with some urgency. However, I look forward to the barbeque tonight.