AgResearch 2020 Science: Meat Priorities

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2020 Process

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- **Committee**
  - Jimmy Suttie (Chair)
  - Margot Buick
  - Warren McNabb
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  - Greg Lambert
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Future Meat Industry Objectives

1: Sustainable farm system performance

2: Optimised life-time meat production of the individual animal...from paddock to processor

3: Optimising the resource use efficiency and reducing the environmental footprint of Meat sector

4: Processing to Marketplace: High value meat-derived products

Sustainable farm system performance: Outputs

2a.1.1:	Optimal feed supply	NZ pastures currently provide limited feed. New plant varieties associated management packages to provide reliable robust and increased feed supply throughout the year can overcome this problem.
2a.1.2:	New technologies fitted to beef, sheep and venison farming systems	New technologies, whether directed at improvements in the soil or plant or animal production, are only effective if they perform within the wider farming system.
2a.1.3:	Sustainable pest management systems	Plant and animal pests and disease and weeds rob the farmer. Resistant and resilient breeds and novel, cost-effective control agents and therapies are only some of the ways to address this problem.

Optimised life-time meat production of the individual animal...from paddock to processor: Outputs

2a.2.1: Sheep -- Maximised reproductive performance	Consistent twinning and young survival are key components in maximising the amount of lamb produced during a ewe's lifetime.
2a.2.2: Beef -- Maximised reproductive performance	Consistent calving and young survival are key components in maximising the amount of beef produced during a cow's lifetime.
2a.2.3: Deer -- Maximised reproductive performance	Overcoming reproductive seasonality is a key component in maximising the amount of venison produced during a hind's lifetime.
2a.2.4: Improved nutrition and feed conversion efficiency	The foundation of an animal's productivity begins with an adequate and balanced diet that is efficiently converted to energy and nutrients by the rumen.
2a.2.5: Improved animal health	Metabolic diseases are key health issues for grazing animals.
2a.2.6: Improved animal welfare	Attention to animal well-being and welfare can impact productivity and is increasingly demanded by meat consumers.
2a.2.7: Market-defined animals	Genomic and epigenetic technologies can deliver animals with precise specifications relative to market requirements.

Optimising the resource use efficiency and reducing the environmental footprint of Meat sector: Outputs

2a.3.1: Optimal water quality and availability and use	Farming and processing practices impact water quality and supply and use. New technologies designed for effective and acceptable mitigation practices will overcome this problem.
2a.3.2: Net halving of non-carbon dioxide greenhouse gases	Ruminant animals naturally produce methane and nitrous oxides which are potent greenhouse gases and can also affect water quality. By reducing the production of these gases, the meat sector can reduce its environmental impacts.
2a.3.4: Adaptation to and mitigation of climate change impacts	Testing technologies and products for retention of efficacy in a changing climate should be an integral part in the design of any new technologies.
2a.3.5: Optimal soil resources	Farming literally begins from the ground. Pastoral soils and landscapes must be managed in order to maintain and enhance biodiversity, organic matter content and structure stability and avoid contaminant loading and nutrient leeching.

Processing to Marketplace:
High value meat-derived products: Outputs

2a.4.2: Efficiency gains in meat processing	Additional export earnings for NZ meat will be gained from upgrading lower value cuts and processing meat into higher value products. Benefits from processing automation – including non-invasive measurements and remote data capture -- can lead to improved decision making and production gains.
2a.4.3: Foods of the Future	Exciting future revenue opportunities will include value-add, branded and differentiated products and manufactured goods tailored to human requirements for health, wellbeing and convenience.

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Where now?

Implementation plans

Tangible targets

Further industry consultation

Internal decisions

- Capability
- Investment
- Technology outcomes
- Reporting
- Planning

Communication

Review cycles