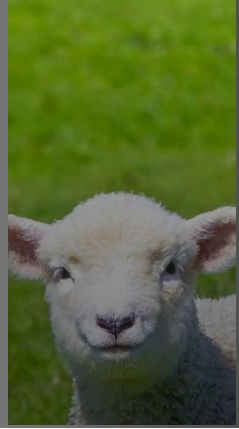


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Getting Ag Science Right for Farmers, Growers & Exporters. In Brief.



THE PROBLEM: The government proudly proclaims that farmers, growers, foresters, fishers and primary processors are breaking records with exports set to exceed \$60 billion.

Yet the Ministry of Business, Innovation and Employment's science policy prioritises research and science which favours innovation and commercialisation. This *sidelines* essential public-good science, and it has done so for a long time. Government directives to prioritise innovation over everything else have been happening since the reforms of the 1990s and 2000s, and the systems are fragmented.

Much of the research needed to sustain soil function, plant health, animal resilience, and nutrient quality cannot generate patents or proprietary technologies. As a consequence, this 'public-good' research gets pushed down the funding ladder, especially if it is long-term and complex.

Farmers and growers have been consistently painted as the polluting bad guys, but without an integrated science research that reviews the latest information and feeds back to farmers and growers, and without a science system that can flexibly respond to real-time challenges, and prioritise soil quality, nutrition (for health and disease resistance) and productivity and local contexts, the capacity to shift away from synthetic chemical and fertiliser dependence has been limited.

If the goal is enduring productivity and export resilience, the policy question is not whether innovation matters, it does, but whether MBIEs long-term policies adequately funds the maintenance of the biological systems on which innovation depends.

What is evident: MBIE can't see innovation as a factor inside a wider system. This has resulted in policies which fragment any long-term integrative system approaches and prevent long term research. This is the policy problem researchers, scientists, farmers and growers have been faced with – but which the government has chosen to ignore, even in a latest science system update.

THE SOLUTION: Refocus and reorientate agricultural science to prioritise public good, integrative research. This includes: the implementation of high level principles that guide our science system to support public-good research; dedicated, long-term ring-fenced funding away from commercial incentives; farmer and grower say in what research is desperately needed; the reintegration of extension services for sector and cross sector challenges; and an integrated pest management approach across the entire agricultural system.

New Zealand's agriculture sector requires intelligent, informed and dynamic two-way feedback loops between science and research and farmer and grower groups to support knowledge transfer, and scientists who can secure funding to address challenges in long-term multidisciplinary projects, to serve the interests of farmers and growers, local communities and export markets.

IMPROVING AG SCIENCE POLICY – MNZHA PROPOSALS:

What is the point in putting ‘innovation’ at the top of research priorities if we don’t have the research and science community that can understand the problems in the first place?! Without ring-fenced funding, foundational research streams cannot compete with projects promising innovative and commercial pathways.

Researchers and scientists require long-term resources to synthesise global evidence and to work with farmers and growers to monitor on-farm and on-site systems over time. This includes the resources to conduct multidisciplinary research and experimentation with inputs, to understand how to optimise the biological health of the system, and appreciate how systems are shifting over time, and the complex influences that are at play over longer time periods, as farmers and growers have to plan over the long-term, in order to balance budgets. Science and research information then needs to be translated and disseminated to farmers and growers, and then we can build the technologies to solve our problems.

This work has been happening piecemeal, as scientists and industry sector bodies struggle for funding, while big multidisciplinary projects that can look at complex systems over the long-term are rarely, if ever funded. The reformulated science system for the agriculture sector shake-up is limited, because the focus continues to be on innovation, tech development and patents.

1. Establish a Guiding Principle:

Kaitiakitanga: the stewardship and protection of soils, waters, ecosystems, and human wellbeing for present and future generations, through knowledge that sustains resilience, restores biological integrity, and supports enduring prosperity.

2. Ring-fence public-good systems science.

Dedicated funding is needed for soil health, pest ecology, nutrient cycling, pasture resilience, nutrient density, and climate variability adaptation — the biological infrastructure underpinning productivity.

3. Restore farmer and grower co-design with research and scientific communities.

Structured participation ensures research priorities reflect field realities and enables early detection of systemic stress signals.

4. Rebuild extension as a two-way knowledge loop.

Sustained extension capacity is essential to translate science into practice and to feed farmer observations back into research design.

5. Strengthen independent IPM and resistance research.

Public research is needed to evaluate spraying thresholds, resistance management, and the real-world impacts of chemical mixtures.

6. Recognise resilience and durability as export infrastructure.

Soil function, ecological stability, and postharvest quality retention underpin market performance and long-term sector viability.