Outcome Logic Model for Whai Hua PGP Programme (January 2014)

Long term outcomes for New Zealand
2021+

| Increased exports and economic growth (eg, GDP) | NZ internationally competitive in global market | Enhanced international reputation |

Value of resources unlocked/ maximised, within environmental limits.

Additional benefits for the sector and New Zealand

Medium term outcomes for sector
2016 - 2020

Increased profitability and resilience for dairy industry

| Increased volume & value-add of dairy products . | More sustainable use of resources – dairy farmers have additional options to comply with environmental regulations, and remain economically viable. | Growth in markets & market share for dairy health food products. |

Māori and sector inspiration from/ emulation of Whai Hua's post-farmgate investment in new technologies, collaborative ventures, & a value chain mindset (eg, consistent with FOMA Māori Business Growth Strategy).

Post-PGP Commercialisation Phase for Whai Hua Products:

Whai Hua partners work with their in-market (Asia) customers to develop consumer health products using Products A and B as ingredients. → Whai Hua partners up-scale their capability and product supply in NZ. → Whai Hua & new market partners market and sell Whai Hua products A and B as ingredients in Asian and NZ health products/markets.

If PGP programme is successful …

Short term outcomes for PGP partners
2015

Whai Hua has successfully developed two new 'value-add' dairy health products ready for commercial development and marketing.

| Products A and B are developed and capable of being produced. | Evidence of product function in supporting immunity in humans is established . | PGP partners have capability and confidence to produce consistently high quality products. | Miraka & WMI have improved their competitive potential as diversified Māori agribusinesses. | Market knowledge is increased & likely in-market partners are identified. |

Potential development and commercialisation of further value-add products.

Activities & Outputs
2013 – 2015

PGP delivers an accelerated Research & Development (R&D) and market development programme:

3. Processing and production of Products A and B
AgResearch and other contractors develop production & processing specifications for A & B products, develop processing protocol and product samples for market engagement.

4. Market research
Miraka & contractors -
1. Research market channels & opportunities
2. Engage with 4 – 6 potential in-market customers
3. Produce Marketing Plans for Asia & NZ .

1. Product A
AgResearch -
1. Tests/ proves the functionality/health benefits of product A , publishes results in international peer reviewed journals
2. Optimises selection of cows with naturally high-occurring product A – produce best practice manual
3. Establishes nucleus cow herd (min 500) with desirable traits and produces product A.

2. Product B:
AgResearch -
1. Develops a multi-antigen vaccine, to boost levels of product B in cows
2. Tests functionality, health benefits and safety of vaccine
3. Gains ACVM registration, and produces product B.

Expanded supply opportunities through shared IP (eg licensing of bull semen) & genetic selection programme.

Enablers & Inputs

| Government & private co-investment in primary industry innovation activity. | Build on existing research & knowledge - WMI's 8 years' R&D, AgResearch's patented research and related Japanese R&D. | Build on success of Miraka's vertically integrated business, WMI farm suppliers, & joint venture partnership with Kanematsu for sales & marketing expertise/ networks in target markets. |

Boost confidence, potential bio tech R&D; cross-over knowledge, networks, skills growth & capability benefits.

Problems & Opportunities

| Small scale Māori agribusinesses face pressure from competition (one dominating processor) in the dairy sector, and increased environmental regulation. | Opportunity to create 'point of difference' competitive edge by developing novel, value-add dairy products and meeting increased consumer demands/ willingness to pay premium for safe, healthy foods. | Lack of: capital & capability for accelerated development, scientific efficacy to back product claims, in-market/ export connections, and Māori experience in diversified food value chains. |