A collaborative STIMBR-New Zealand Government venture to find and implement sustainable treatments for NZ exported forest and other primary sector products

March 2014

Long term outcomes (NZ impact) 2016 – 2030 Protect and grow the value of New Zealand 's primary produce export sector (STIMBR Vision)

NZ remains internationally competitive in global market

Enhanced 'clean green' international reputation for NZ

Reduced environmental and health related harms

Additional benefits

for the wider sector and government/NZ Inc

Medium term outcomes (Sector impact)

2013 - 2025

Maintained and expanded market access for NZ forest and other products

Reduced trade risk: methyl bromide alternatives are accepted by importing countries

Sustainable economic growth of forestry sector, including Maori/Treaty assets

Reduced

export

costs

Increased risk reduction as focused science explores promising leads

Reduced likelihood

of pest interception

Improved
environmental
management of
methyl bromide:
NZ meets UN
ozone treaty
obligations &
EPA's 2020 ban

Methyl bromide emissions (per m³ logs exported) decrease. Risk of negative impacts is reduced leading to increased public reassurance Enhanced global reputation for NZ as leading researcher in phytosanitary treatments

Enhanced reputation for sector and NZ for biosecurity best practice standards

Enhanced public awareness of issues faced by (and support for) the primary industry

Short term outcomes

2013 - 2018

New & improved technologies are developed, while improving effective risk management

Robust data proves efficacy of alternative treatment options

Greater local and global awareness of methyl bromide alternatives, & willingness to accept changes

Improved

sector

safety

Alternative treatments, best practice technologies and processes are increasingly used where appropriate

Investment in new technologies creates IP and new sector income/markets and opportunities

Alternative non/fumigants are identified that are efficient, cost-effective, and minimise environmental impacts and health concerns

Improved fumigant safety monitoring & reporting

Effective technologies and infrastructure are developed to reduce methyl bromide emissions



If the STIMBR Research programme is successful ...

Implement a co-ordinated research [& education/awareness-raising] programme to reduce methyl bromide emissions, and provide innovative treatments for NZ forest and other primary sector products

Activities & Outputs 2011 – 2014

Phosphine and alternative fumigants:

evaluate potential of phosphine (& other fumigants) as costeffective alternatives to methyl bromide Fumigation monitoring and modelling:

refine & implement fumigant monitoring strategies to ensure continuing safe use of methyl bromide Reduce methyl bromide emissions:

explore emission reduction strategies, eg, reduced treatment rates or concentrations, & new methyl bromide recapture and recycling, and destruction technologies

Non-fumigant risk management:

research ways to reduce pest presence and manage product pathway risks (from source to port), explore non-fumigant treatment options (eg, heat)

Intellectual assault:

facilitate expert forum to generate lateral ideas & solutions Flow-on uptake of technology by other primary sectors

Capability & resource building of support sectors including the research and engineering community, expanded science knowledge base eg insect colonies for research, fumigant test matrix

Expanded networks, collaboration and knowledge sharing across researchers and primary sector/related players (eg, forestry and other fumigant users /exporters, chemical importers)

Enablers & Inputs

STIMBR as collaborative venture across a wide range of organisations with a common interest in reducing methyl bromide use, and finding viable alternatives

Government and industry co-investment

Research builds on local and international knowledge, and NZ's reputation as leader in biosecurity treatments

Problems & Opportunities

NZ exports of forest and other products requiring phytosanitary treatment (fumigation to ensure they are pest-free) are at risk due to reliance on methyl bromide - at a time of growing international consumer demand for NZ products, especially China and India

Increasing local and international pressure to restrict / ban methyl bromide - it is an ozone depleting substance with environmental, worker safety and perceived public health risks, eg, NZEPA ban (2020) on methyl bromide emissions

Opportunity to create co-ordinated research into viable alternatives to methyl bromide that are cost-effective, minimise impacts, and meet or improve international export market' phytosanitary requirements