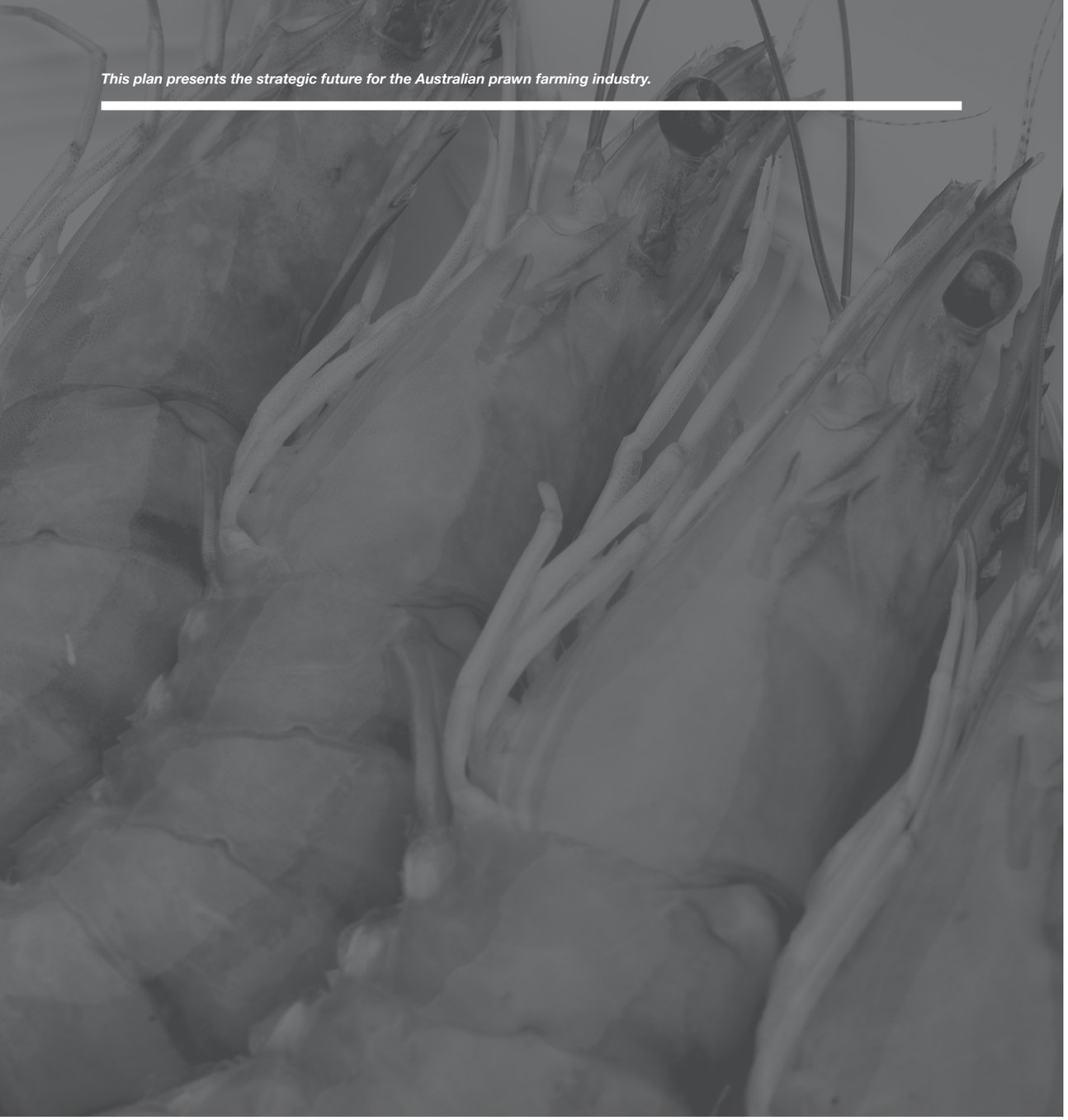
RDE Appendix

2020-2025



This plan presents the strategic future for the Australian prawn farming industry.

APFA Research, Development & Extension Priorities for 2020-25

This document presents guidelines for investment in Australian farmed prawn Research, Development and Extension (RD&E) Projects developed by the APFA and its Members in 2019/2020.

It summarises the broad scope of RD&E Priorities, potential project topics, and proposal pathways for engagement for the period 2020-25.

BALANCED INVESTMENT PORTFOLIO

The APFA will oversee effective RD&E priorities funded by industry investment. The APFA will commission and invest in RD&E projects that achieve demonstrable beneficial outcomes in five areas:

THE RD&E PRIORITIES

RD&E Priorities	Allocation of Funds (%)
1. Animal Health and Performance	27%
2. Industry Biosecurity and Border Protection	26%
3. Human Capital and Emerging Technologies	18%
4. Broodstock – Sourcing, Quality and Supply	17%
5. Environmental Sustainability and Compliance	12%

AUSTRALIAN Prawn Farmers ASSOCIATION

INVESTMENT PROJECT OUTCOMES 2020-25

The following tables lists RD&E research topics identified by APFA members against the 5 listed RD&E Priorities. They also show examples of projects within each research topic as well as the allocation of funds (%). Funding applicants are not limited to the investment concepts below.

1. ANIMAL HEALTH AND PERFORMANCE

Research Topic	Examples	Allocation of Funds (%)
1. Prawn health management	• Treatment & prevention of disease (MUP's, antivirals, probiotics etc) • Disease screening vs animal performance • Track health and performance of broodstock to PL's to 150-day old prawns.	48%
2. Water management in ponds and hatcheries	• Harmful algal blooms • Pond bloom development, treatment (pre, mid crop - probiotics, chemicals) • Modelling water quality to manage inputs and disease	27%
3. Functional feed and additives to improve health and performance	• Enhance growth • Reduce disease/stress • Improve growth and stress tolerance at high salinities	25%

2. INDUSTRY BIOSECURITY AND BORDER PROTECTION

Research Topic	Examples	Allocation of Funds (%)
1. Industry Biosecurity	• Understanding and managing disease threats, including endemic and exotic pathogens, through the entire production cycle. • Quantifying how much disease costs farms • Support expanded MUPs • Improve on-farm biosecurity protocols	53%
2. Border Protection	• Surveying imported prawns at retail level, monitor disease threats in the commodity chain • Surveying wild and cultured prawns	47%

3. HUMAN CAPITAL AND EMERGING TECHNOLOGIES

Research Topic	Examples	Allocation of Funds (%)
1. Emerging technologies	• Novel disease management • Novel feed additives • Drones • Smart farm technology / digitised farming • Water management	41%
2. Develop an industry wide workforce development plan	• Work with training providers • Attract workers • Upskill workers • Keep workers	27%
3. Autofeeders	• Design and develop automatic feeders for ponds	19%
4. Aeration technologies	• Optimise farm pond aeration management • Maintain DO higher	12%

4. BROODSTOCK – SOURCING, QUALITY AND SUPPLY

Research Topic	Examples	Allocation of Funds (%)
1. Sourcing Broodstock	• Survey new fishing grounds • Better understand catch fisheries and limits • Investigate access to domesticated stocks	43%
2. Domestication & selective breeding	• Research to support the development of breeding programs • Access to domesticated broodstock • Cooperative industry breeding program	30%
3. Surveying broodstock health	• Create database of wild broodstock pathogen load spatially and temporally • Track health and performance of broodstock to PL's to 150-day old prawns. • Reduce stress for maximum maturation performance	27%

5. ENVIRONMENTAL SUSTAINABILITY AND COMPLIANCE

Research Topic	Examples	Allocation of Funds (%)
1. Investigate ways to improve water quality and reduce nutrient effluent	• Investigate technologies for nitrogen / nutrient removal in farm effluent systems • Recirculating water • 'Shrimp toilets' • Techniques for increasing efficiency of nutrient delivery in feed (less waste nutrient production)	84%
2. Compliance	• Discharge licensing • APVMA registrations • Load-based licensing approach	16%

INVESTMENT PROJECT GUIDANCE

The APFA welcomes RD&E investment proposals from industry members, government agencies, universities and institutions, supply chain parties, and other research organisations. To this end the APFA maintains an RD&E sub-committee and employs dedicated executive staff to support its RD&E portfolio. Proponents are requested to discuss RD&E investment concepts, proposals and projects that will potentially lead to funded projects and successful outcomes for the industry.

The APFA will consider each project concept and proposal in terms of its attractiveness to the prawn farm industry, subject to three criteria:

1. Its alignment with the strategies and priorities set out in the APFA Strategic Plan 2020-25,

2. Its alignment with annual advice on priority issues updated by the APFA Management Committee and staff, and

3. Its demonstrated ability to achieve investment benefits.

The following diagram presents a guideline for the APFA's preferred RD&E investment pathway to achieve attractive and funded investment projects

1 Priorities

The APFA has developed and published on its website a Strategic Plan 2020-25.

This Plan identifies the strategic and RD&E priorities for the Australian Farmed Prawn Industry for the 5 year horizon to 2025.

2 Pitch

The APFA welcomes RD&E investment proposals from experienced professional researchers/coinvestors in response to its Strategic Plan 2020-25.

The APFA will through the RD&E coordinator engage and collaborate closely with researchers, coinvestors and advisers who contribute to prawn farm industry strategic priorities and outcomes.

Researchers/coinvestors seeking funding support must engage early with the RD&E coordinator to discuss and pitch their RD&E concept.

Researchers/coinvestors seeking APFA support for investment projects must contact the RD&E coordinator and request for a pre-proposal questionnaire. The completed pre-proposal questionaire must address these priorities directly.

The aim is for the APFA RD&E sub-committee to assess, and refine the concept and its outcomes, or reject it without further cost to the researcher/ coinvestor

3 Performance

APFA Members seek to achieve a commercial rate of return on their investment in all RD&E activities.

Subject to projected outcomes, each RD&E investment must be able to demonstrate how it will achieve industry benefits.

4 Proposal

Researchers wishing to engage with APFA must first complete APFA's pre-proposal questionairre.

APFA's RD&E sub-committee will review all pre-proposals. If the pre- proposal is deemed to have merit and aligns with the RD&E priorities, it may be accepted by the RD&E sub-committee. The investigators will then be invited to draft a full proposal to the relevant funding body (e.g FRDC).

Prior to submission the APFA RD&E sub-committee must be engaged to review and/or refine the full proposal. Once the APFA RD&E sub-committee have accepted the proposal, the APFA management committee must also approve it. If successful, the proposal can be submitted for funding.

All proposals seeking investment from the APFA must clearly demonstrate:

- how the proposal will directly contribute to the priorities and achieve outcomes described in the APFA Strategic Plan 2020-25.
- how the proposed investment will achieve a commercial benefit acceptable to the APFA.

Projects must incorporate clear strategies and plans to enable and commit extension of RD&E project outputs and outcomes back to the industry.

5 Project

Approved projects will be managed and oversighted by APFA, and the APFA RD&E sub-committee.

The researchers will be expected to provide updates and / or progress reports to the APFA RD&E coordinator.

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This Plan has been developed for industry by the APFA and the FRDC.