ReefWise Farming

Reef Protection Package –
The policy process and industry involvement

Australian Fertiliser Industry Conference, Gold Coast
August 23-25 2010

With thanks and acknowledgement...

the contribution to date of industry and partners has been essential to successful roll-out of the Reef Protection Package.
Outline

• Structure for industry (and other) involvement
• Work scope
• Consultation and policy development and the RPP
• Products developed in consultation
  – Case study: nutrient methodology
  – Case study: sugarcane ERMP for the Wet Tropics
  – Benefits
• Collaborations and participation
  – Communicating to cane growers and industry stakeholders
  – Refining approach: research and technical development

Reef Protection Package Stakeholders

AUSTRALIAN AND QUEENSLAND GOVERNMENT
REEF PLAN Stakeholders

GREAT BARRIER REEF STAKEHOLDERS
Great Barrier Reef Marine Park Authority
World Wildlife Fund
Queensland Conservation Council
Queensland Tourism Industry Council
Local Govt Assoc Queensland
Qld Regional NRM Groups Collective

+ Industry
Reef Protection Package Stakeholders

**GRAZING**
- AgForce Queensland
- Queensland Dairyfarmers Organisation

**SUGAR CANEGROWING & HORTICULTURE**
- CANEGROWERS
  - Australian Cane Farmers Association
  - Queensland Farmers Federation
  - Growcom
- Australian Sugar Milling Council
- Mackay Sugar Ltd
- CSR (now Sucrogen)
- Proserpine Sugar Milling Association Ltd
- BSES Ltd

**RESELLERS**
- Croplife Australia Ltd
- Fertiliser Industry Federation of Australia Inc.
  - Industry advice: Incitec Pivot, Dow
  - Agricultural Chemicals, HiFert

**EXTENSION & AGRICULTURAL SUPPORT**
- Productivity Boards
- Training organisations
- NRM groups (regions)
- Accreditation organisations

Reef Protection Package Consultation Framework

**MINISTER KATE JONES**
- Minister for Climate Change and Sustainability

**MINISTER’S IMPLEMENTATION TASKFORCE**
- (industry based group - policy)
  - Technical Task Group
    - (industry & technical experts)
  - Specific working groups,
    - (e.g. cane, grazing, on a needs basis)

**STAKEHOLDERS ADVISORY COMMITTEE**
- (representative policy reference group)
Minister's Implementation Taskforce:

Scope of work

- To examine current industry practices and property management requirements.
- To ensure RPP product delivery is streamlined.
- To deliver the requirements of the legislation and reduce duplication of effort.

Minister Jones, 15 July 2009, inaugural meeting
Minister’s Implementation Taskforce (15 July 2009)

Tasks

1. Record-keeping
2. Methods for nutrient calculation and soil testing
3. Chemical regulation requirements for prescribed agricultural chemicals
4. Environment Risk Management Plans and accreditation
5. Industry extension and field support
Spectrum of involvement

**Inform**
Understand and communicate outwards

**Consult**
Obtain feedback and advice on policy and approaches

**Involve**
Work directly with stakeholders on development

**Collaborate**
Partnerships in implementation

Examples of MIT/TTG roles

- Record-keeping requirements
- Communications
- Comment on draft products
- Piloting of methods, ERMPs, etc
- Research Extension activities

**Benefits**

Good resource management means financial and environmental benefits

- Reasonable and practical approaches
- Language more understandable
- Ownership
- Common understanding
  - Legislative basis
  - Why different approaches and interpretation
  - Potential implementation barriers
- Opportunities for shared funding and research
- Adaptive policy
Product development & testing
Case Study: nutrient method
Case study: Sugar cane growing ERMP

Grower’s tools: nutrient calculation and soil testing methods
Grower's tools: record-keeping

Records form

Grower's tools: ERMPs

ReefWise Farming

Cattle Grazing Environmental Risk Management Plan (ERMP)

Guide to ReefWise Environmental Risk Management Plan (ERMP)

Sugar cane growing:

Environmental Risk Management Plan (ERMP)
Process - product development

- Specification & draft product (DERM)
- TTG review and advice
- Draft product piloting by growers
- Revised product and feedback to TTG/MIT
- Approval by DG and/or Minister
- Release through extension networks

Implementation /advice

Case-study (1) Nutrient calculation methodology (cane)

Milestones: 1 Jan 2010 commences

- Draft method reviewed by TTG/MIT and government (August – Nov 2009)
- Piloting of method (October 2009)
- Method reviewed by Minister’s committees (MIT, SAC)
- Method approved by DG (November 2010)
- Method statements issued to growers (December 2009)
- Grower training and extension workshops (December 2009 onwards)

DERM starting point

- Review of nutrient calculation tools and science
- Principles – method for nutrient calculation for N & P (BSES Ltd 6 easy steps)
  - District based calculation and baseline N application rates
  - Deductions for property characteristics: soil type, soil organic carbon, fallow management, groundwater contribution
Case-study (1)

Technical issues resolved through consultation:

- Contribution of N from fallow crops
- How to calculate in ratoons versus plant crop stage
- Mill mud contribution → delayed until June 2011
  (18 months for more work by industry, DERM, BSES etc e.g. April 2010 workshop)

Growers’ pilots

- Complexity of paper method → Layout review
- Need for nutrient calculator on-line (BSES Ltd/Sucrogen)

Method approved: December 2009

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Case-study (1)

Implementation since 2010 – advice from growers/TTG

- Improved process to calculate P in alkaline soils
- An updated approach to calculating groundwater contributions to nitrates
- Nitrogen deduction per hectare post successful legume fallow crop
- How to calculate N amount where abnormal organic carbon results
- Definition of fallow

Newsletter & Technical Advisory Notes issued June 2010
Growers concerned that nutrient losses related to particular soil types or management systems

**Process being established:**
- Interim advice to growers
- Technical panel: is it local or widespread?
- Localised issue – growers to prepare a Nutrient ERMP
- Widespread – growers to participate in trial program
  - Representative 24 sites e.g. Burdekin delta and the Burdekin River Irrigation Area
  - Growers participation

**Case-study (1)**

**Trials outcome:**

*Can we can better apply the regulated method for calculating optimum fertiliser – 2010 – 2011?*

*How do management systems affect the outcomes for reef water quality?*

**Involved:**
Growers, BSES, DEEDI, DERM (Science) and extension staff

Funded by Reef Protection Package (DERM)
Case-study (2)
Sugar cane ERMP
Wet Tropics

Environmental Risk Management Plan

System and plan to manage risk of run-off leaving the property containing:
- Nutrients
- Herbicides
- Sediment

Milestones Commences 1 July 2010
- Consultancy (SKM) Sept – Dec 2009
  - Benchmark industry systems
  - Consult industry
  - Draft ERMP for TTG review
- Cane group established to review ERMP principles Dec 2009
- Draft ERMP review by TTG Jan – May 2010
- Two rounds Grower pilots Easter 2010, May 2010
- Reviewed by Minister’s Committees MIT/ SAC May 2010
- Approved by DG June 2010
- Issued to growers June 2010
- Workshops – extension and DERM June/July 2010
- Grower workshops July onwards
- Property maps being issued July onwards
- ERMP due 30 September 2010
Case-study (2)

Dec 2009 & Jan 2010 TTG discussion

**Big Questions**
- ERMP & life cycle of farm (Plant cane, ratoons)
- What is the management unit?
- How to focus the risk assessment process
- Herbicides: which products
- In-crop management vs water run-off
- Legislative requirements

**Cane ERMP concept**

- A. Details of ERMP applicant
- B. Property identification and description of Management Units (MU)
- C. Identification of property hazards to water quality, with a focus on drainage pattern (risk assessment and action plan)
- D. Nutrient Management Module (risk assessment and action plan)
- E. Chemical Management Module (risk assessment and action plan)
- F. Annual Reporting

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**Design principles (agreed by MIT and Minister)**

*For example:*
- ERMP cover the whole of cane production area
- Build on nutrient calculator and plan forward for changes
- Transition throughout period of ERMP: better information across property – soil tests, full nutrient calculation method, etc
- Identify action plan in terms of management units/regimes
- Where actions do **not** require investment, consideration to immediate implementation
- Where investment is required, timing of introduction with plant cane
- Tick and flick where possible
Piloting with growers:
• Refined tick and flick and not relevant questions
• Shaped language
• How do we handle multiple farms?
• What is a cane production area?
• How to present booklet?
• Importance of a worked example

Management options review (industry, growers, DEEDI, DERM)
• Remove poor practice (not promoted by industry or government)
• Provide management options
• Relevance across Wet Tropics
• Consideration of where should be applied
Benefits

- Adaptive policy
- Reasonable and practical approaches
- Language more understandable
- Ownership
- Common understanding
  - Legislative basis
  - Why different approaches and interpretation
  - Potential implementation barriers
  - How to respond
- Opportunities for shared funding and research

Where next?

“We look forward to continuing the dialogue.”
Encourage management practice change through:

- Industry products and services.
- Build technical advice capacity

Examples:
- Optimal fertiliser - six easy steps
- Understanding contributing sources of fertilisers (e.g. mill mud)
- Integrated weed management (prevention of herbicide resistance)
- Improved systems for delivery

Joint and collaborative research

- Burdekin – causes of nitrogen losses
- Understanding groundwater contributions (nutrients)
- Effective treatment of chemicals through grass treatment areas (e.g. Babinda trial)
- Mill mud application and effectiveness
- Management practice effectiveness (with Reef Plan)
- SafeGuage for herbicides and nutrients
Understanding regional issues and approaches:

- Practices and systems
  e.g. Irrigation, tillage

- Soils

- Contribution to pollutants entering the reef

Understanding the benefits and costs: growers - industry - community

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In summary, success factors

- Mandate for responsive policy making
- Open communication and discussion
- Structured work program
- Understanding roles

Ongoing participation is essential

- Product and extension tools
- Advice to industry
- Improve technical knowledge and science
  - Refinement of methods
  - Regional differences and requirements
- Understanding and reporting on management practice change