Expression of Interest EOI 2017-18

Part 1- General Details

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<tr>
<th>EOI ID</th>
<th>EOI-0068</th>
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EOI Title: (max 80 char) | Integrating weed tactics to achieve best practice weed management for the cotton farming system. |

Type of Research | Applied |

Proposed Start Date: | 1/07/2017 |
Proposed Cease Date: | 30/06/2020 |

Please refer to CRDC’s Strategic R&D Plan 2013-2018 for the following.

CRDC Program | 1. Farmers |
CRDC Theme | 1.1 Successful crop protection |
CRDC Strategy | 1.1.3 Improving capacity, knowledge and adoption of techniques to successfully protect the cotton crop. |

Please identify the relevant Measure of Success as outlined in the CRDC Strategic R&D Plan.

CRDC Measure of Success: | 50% of farmers adopting improved practices that reduce the incidence of insect pests, weeds and diseases affecting cotton on their farm. |

Science and Research Priorities

| | Food(3i) enhanced food production through: novel technologies, such as sensors, robotics, real-time data systems and traceability, all integrated into the full production chain. | 25% |

| | Soil and Water(3) minimising damage to, and developing solutions for restoration and remediation of, soil, fresh and potable water, urban catchments and marine systems. | 25% | Food(3ii) enhanced food production through: protection of food sources through enhanced biosecurity. |

| | Food(2) knowledge of the social, economic and other barriers to achieving access to healthy Australian foods. | 25% |

Rural R&D Priorities

Adoption of R&D, focusing on flexible delivery of extension services that meet primary producers’ needs and recognising the growing role of private service delivery.

R&D Manager: Susan Maas | EOI Date: 26 August 2016 |

Part 2 – Expression of Interest Requirements

Issue:

Weed management and particularly the threat of herbicide resistance remains a very high priority for the Australian cotton industry. The incidence of glyphosate resistance in the Australian Farming system continues to increase with glyphosate resistance now confirmed in 12 species, 9 of which occur widely in cotton farming systems. Support to integrate tactics across the farming system and address regional issues and barriers to adoption has been identified as a key issue.

Outcomes:

Growers have capacity to manage weeds and herbicide resistance including:
- an understanding of which species are becoming more prevalent, their biology and ecology, their potential to develop herbicide resistance and management options to control them.
- an understanding of how to integrate chemical and non-chemical tactics for their region and farming system.
- tactics available to manage problem weeds across the whole farming system including non-field areas (field edges, roads, irrigation infrastructure, fence lines).

Industry has increased weed research capacity and leadership.
Project description:
The project will address the issue by:
1. Cross-commodity engagement to support farming systems approach;
2. Industry engagement through CottonInfo/CRDC Adoption pathway;
3. Annual field survey to provide regional data on weeds including dominant species, herbicide resistance status and emerging issues;
4. Quantify industry practice for weed management including adoption of best practice;
5. Supporting adoption of best practice weed management for the cotton farming system including integration of chemical and non-chemical tactics and addressing barriers to adoption;
6. Regional weed management demonstration trials established in at least seven regions that address local weed management issues in a farming systems context and support HRMS;
7. Alternative non-glyphosate non-field (field edges, roads, irrigation infrastructure, fence lines) tactics identified and where required registration/permits in place;
8. Weed ecology and IWM gaps for emerging weeds.
This project may form part of a RRND4P round 3.

Expected Project and Communication Outputs:
Best practice integrated weed management relevant at a regional and farming systems level.
Industry overview of adoption and herbicide resistance status (weed and herbicide resistance status, attitudes and adoption)
Permit/registration for chemical tactics for non-field areas

Project Investment:
Budget indicated is maximum available. Where the FRP only seeks to address some of the outcomes, the budget will need to reflect this. Overseas travel is not to be included in FRP budgets unless it directly relates to a project output and is an explicit milestone. Otherwise overseas travel must be made as a separate travel application.

<table>
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<tr>
<th>Year</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
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<tbody>
<tr>
<td>Indicative budget (up to)</td>
<td>$260,000</td>
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Part 3 – Selection Criteria
The following selection criteria will be used by the CRDC to assess the full research proposals (FRPs) received for each Expression of Interest.

1. A sound understanding of the nature and importance of the outcome to the Australian cotton industry:
The research applicant must address the Issue, Outcome and Project Description in terms of the CRDC Strategic Plan and demonstrate understanding of the impact on the Australian cotton industry.

2. Soundness and clarity of the proposed R&D methods to address project deliverable outcomes:
The research applicant must describe how the research methodology employed will enable the project outcomes to be delivered.

3. Demonstrated capacity of the nominated researcher/s to provide project coordination, management, monitoring and evaluation for the timely delivery of high quality outputs:
The research applicant must describe the research team’s project management skills and experience and may include a recent example of a completed project. They must detail the monitoring and evaluation strategy which should include any steering committees to co-ordinate collaborative research, links with CottonInfo, CGAs, Cotton Australia, etc and any additional reporting outside the 6 monthly Progress Reports.

4. Demonstrated track record, technical knowledge and experience of all key personnel in the research area:
The research applicant must describe the project research team’s technical skill and experience relevant to the project and methodologies proposed.

5. A demonstrated capacity to effectively communicate project outcomes to diverse stakeholders within the Australian cotton industry:
The research applicant must describe the communication skills and existing communication channels that the research team use to communicate project outcomes to the Australian cotton industry. The new applicants to the cotton industry should provide an example of industry communication from a recent project.
6. **Demonstrated ability of the project team to form productive networks and links to build on national and international research already undertaken in related areas:**
   The research applicant must describe existing networks that the research team use for collaboration with other researchers and an ability to develop new networks as research knowledge increases.

7. **The cost effectiveness of this project including cash and in-kind commitments from the applicants and leverage through domestic or international linkages that are useful if not essential to progress the project:**
   The research applicant should demonstrate market value and market fairness for the proposed budget and comment on the leverage achieved through collaboration and in-kind support.

8. **Project demonstrates collaboration between organisations or research groups:**
   The research applicant must describe the existing or proposed collaboration with other researchers, research groups or committees and the Australian cotton industry.