REQUEST FOR EXPRESSION OF INTEREST
Smart Technologies for Biosecurity Surveillance

Proposals must be received by 12 December 2020

SRA Reference SRA-RFU-2020-IC015

This document has been prepared to assist preparation and submission of Expressions of Interest (EOIs) to undertake a project to develop smart technologies for biosecurity surveillance.

Summary

Sugar Research Australia (SRA) invests in and manages a portfolio of RD&A projects that drive productivity, profitability, and sustainability for the Australian sugarcane industry. As an industry-owned company, SRA is committed to setting the right targets, managing research investments to maximise the likelihood of success, and ensuring the delivery and adoption of project outcomes and impacts across the Australian sugarcane industry.

SRA has identified that enhancing the industry's ability to rapidly detect and contain pest and disease incursions and being able to maintain surveillance during times of travel restrictions is a priority for the Australian sugarcane industry.

In this context, SRA is seeking EOIs from suitably qualified and experienced individuals or groups to undertake a program of R&D that will identify and trial novel technologies that improve biosecurity surveillance capability and the sugar industry's ability to respond to incursions.

Issue

Incursions of pests and diseases can result in major economic losses to the industry. As an example, losses resulting from the Smut incursion in 2006 in just the Herbert region were $32 million in 2010 (Magarey, 2010). The ability for biosecurity experts to access sites in a timely manner is challenging (and next to impossible when travel restrictions are in place), but there are many scenarios where technology can provide a solution. For example, by using remote assistance tools such as cloud-connected augmented reality, trained specialists can view a situation (both with audio and video) and offer advice and instructions to a local provider. This will include appropriate warnings, correct rectification/treatment techniques and other advice or recommendations. Autonomous sentinel devices that trap

and analyse insects and spores and transmit data could allow constant on-shore and off-shore surveillance without requirement for travel.

This technology represents an efficient and effective incursion response tool, which will reduce future costs in travel and site inspections and speed up identification. Rapid incursion detection will remain paramount to controlling the impact and spread of new biosecurity threats, preventing establishment, and retaining elimination as a feasible option.

Expected project outputs

This investment will identify and trial a set of protocols and technologies that can be used routinely in future to detect and contain pest and disease incursions of potential harm to the Australian sugarcane industry efficiently and cost-effectively. This is likely to include developing and testing remote assistance technologies in association with locally based individuals in far northern Australian communities (e.g. in Torres Strait, Cape York) and throughout the Australian sugarcane industry.

Expected project outcomes

Outcomes of this investment will include:

- Improved likelihood of identifying and containing potentially devastating incursions of exotic pests and diseases.
- Enhanced protection of the industry from potentially devastating pest and disease costs (e.g. estimated costs of up to $175 million per annum could be prevented by identifying, mapping and more easily containing a moth borer incursion in North Qld).

Project duration and budget

Expected project duration is up to 3 years, with a budget in the 2020/21 financial year of $200,000 (excl GST) and a total budget of up to $675,000 (excl. GST).

EOI submission

EOIs must be submitted through the online application system SugarNet (https://grants.sugarresearch.com.au/OmniNet). All applicants should consult the Submission Guidelines available on the SRA website https://sugarresearch.com.au/research-investment/2020-21-research-project-investments .

EOIs must include a detailed and fully costed budget and a formal payment schedule with milestones (up to two per year) and appropriate achievement criteria that match expected project progress.

In addition, Activity and Milestone Timeline and Milestone Budget Calculator spreadsheets must be completed and uploaded as attachments through SugarNet using the templates supplied on the SRA website and through SugarNet.

An IP disclosure must also be completed and submitted through the online IP Record Portal; access to the portal and instructions including an instructional video can be found at https://sugarresearch.com.au/research-investment/intellectual-property/. The completed IP Register, generated as a pdf file from the IP Portal, should be uploaded as an attachment to the SugarNet application.

More detail on each of these is provided in the Submission Guidelines.

Selection criteria and process

Selection of the successful proposal(s) will be based on the following criteria:

- The applicant or project team having:
    - Proposed potential solutions that address the issues and are technically feasible
    - A logical research plan
    - Relevant research experience and a demonstrated ability to conduct the necessary research activities
    - Outlined a path to market for the concept including total costs, timelines, and potential barriers/challenges
    - If relevant, a plan for collaboration with appropriate commercial providers.
- The proposed project budget and in-kind or other contributions from the research organisation and any other participants in the research.
- The applicant being a legal entity with which SRA can contract. The EOI submission must describe and provide evidence of the legal status of the applicant, including an Australian Business Number (ABN) if appropriate.

Applicants must declare to SRA any matter or issue which may be perceived to be, or may lead to, a conflict of interest regarding their proposal or participation in supply of the services described. Applicants must outline a strategy so that any actual conflict of interest will be avoided.

Project agreement and reporting requirements

The successful applicant(s) will be required to enter in to SRA's standard project agreement.

Milestone and final reports will be prepared in line with SRA report guidelines (see https://sugarresearch.com.au/research-investment/forms/).

The successful applicant(s) may also be required to prepare and/or contribute to short articles for dissemination in SRA and industry publications.

Negotiation

After short-listing, SRA may engage in detailed discussions and negotiations with one or more applicants to maximise the benefits of the proposals submitted.

Further information

For further information, please contact Dr Stephen Mudge (Research Funding Unit Program Manager).

Phone   0436 924252

Email   smudge@sugarresearch.com.au

Submissions

Proposals must be lodged in SugarNet **by 12 December 2020.**