



Sugar Research
Australia

REQUEST FOR EXPRESSION OF INTEREST

OPPORTUNITY ASSESSMENT AND
INVESTIGATION OF A POTENTIAL NEW OIL-CANE
PRODUCT, PART 2: MARKET, SUPPLY CHAIN
AND ECONOMIC ASSESSMENT

Closing Date: 25 March 2022

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1 Background

1.1 Sugar Research Australia Limited overview

Sugar Research Australia Limited (SRA) is an industry-owned company that was established in 2013 by Australia's sugarcane growers and millers to deliver Research, Development and Extension (RD&E) activities and services that drive productivity, profitability, and sustainability for the Australian sugarcane industry.

The Australian sugarcane industry leads the world in terms of productivity per hectare, but despite this advantage, it continues to struggle with profitability. Margins are under constant pressure and continuing to direct most future efforts to on-farm, logistics and milling productivity improvements will deliver only incremental gains to what is an already efficient production system.

Fortunately, the industry also finds itself now approaching a period of opportunity emerging through the increasing global momentum of the bio-based economy. The global shift towards renewable bio-based and locally produced fuels, has been highlighted by the recent dramatic disruptions that the coronavirus pandemic has had on global supply chains. Australia's supply chain vulnerability arising from a reliance on imported fuels, feedstocks, materials, and finished products could be partially addressed through a repurposed sugarcane industry.

In the current context, the sugarcane industry is extraordinarily well-placed to become a significant contributor in this emerging bio-based economy. New opportunities for diversification and value-adding exist throughout the supply chain, including new options for feedstock production, biomass processing and both intermediate and end-product manufacture.

In recent years, new opportunities for development of high-value biomass crops have emerged as the result of some ground-breaking research to engineer plants to produce and accumulate valuable oils (triglycerides) in vegetative tissues, e.g., CSIRO's Biomass Oil Technology. SRA and the Queensland Department of Agriculture and Fisheries (DAF) are interested in investigating the potential of these technologies to develop diversification opportunities for the Australian sugarcane industry.

2 Terms of Reference

To support SRA and DAF in a potential future collaboration with the provider of the best technology in this space, SRA is seeking EOIs from a suitably qualified organisations or individuals to collaborate with SRA in assessment of the **biofuels technologies and associated market opportunities**. The study is aimed at quantifying the micro and macro-economic value that might arise from an oil-canes industry, assessing the opportunity for SRA to develop a pathway to market for the technology, assessing the ability of the Australian sugarcane industry to respond to the market opportunity taking account of the strengths and constraints of the entire sugar industry supply chain, and providing advice to SRA on the intellectual property ownership, technical feasibility/readiness of the technologies available. The study will occur in 2 parts, comprising:

1. **Oil-canes technical and regulatory assessment;** and
2. **Oil-canes market opportunities assessment and study.**
 - a. Market Assessment
 - b. Supply Chain and Economic Assessment

Each of which will be undertaken as a separate, but interdependent assessment.

This EOI is for the development of **Part 2: Oil-canes market opportunities assessment and study**.

2.1 Activity landscape

- a) In 2020, to support the development of a new strategic direction, SRA undertook megatrends analysis to identify potential diversification opportunities for the industry.
- b) As an outcome of the megatrends analysis, SRA became aware of a potential new opportunity for the development of high-value biomass crops as the result of ground-breaking CSIRO research to engineer plants to produce and accumulate valuable oils (triglycerides) in vegetative tissues.

- c) These oils have much greater energy density than other plant structural components and storage compounds such as sugars, starch, protein, or fibre, and accordingly have a significantly higher unit value. For example, plant oils for food and cooking are currently estimated to achieve prices around USD \$850 (AUD \$1200) per MT, while the recent indicative value of sugar equated to USD \$250 (AUD \$360) per MT.
- d) The CSIRO research has seen the emergence of a completely novel technology for producing and accumulating triglyceride oils in plant leaves and stems. Using tobacco as a model plant, initial CSIRO research achieved oil levels of around 8-10% of biomass dry weight, and these levels were subsequently raised to 33% by further technology customisation. Subsequent work has focused on demonstrating the transferability of the technology to other plant species, with early attention directed to front-running candidate high biomass species, such as sugarcane and sorghum.
- e) The work undertaken as part of this study will give an independent assessment of the opportunity to take feasible technology, identified from the previous **technical and regulatory assessment**, through to successful market adoption in Australia, with a pathway to overseas expansion.
- f) The value-add proposition for oil-cane is based on several assumptions; including but not limited to:
 - a. The existence of an attractive and sizeable market for oil produced through sugarcane.
 - b. The Australian industry's ability to produce and process oil from sugarcane with sufficient competitive advantage to secure a portion of that market.
 - c. Access to capital to support the potential opportunity.
 - d. The significantly higher market price for bio-oil compared to sugar and the sustainability of these prices over time.
 - e. The technical feasibility/ readiness of the technology.

2.2 EOI outputs - Oil-canes market opportunities assessment and study

The activities and outputs for this work will include a stage-gate process and **therefore each stage should be priced independently**. A report should be delivered after each stage and following delivery of the report SRA will review its commitment to proceeding to the next stage.

STAGE ONE: Market Assessment

- a) Using the technical feasibility output from Part 1, conduct a Market Assessment for oil-canes covering:
 - a. A broad overview of the market and market structures which exist for plant-based oils, including current trends, and driving and limiting factors which are likely to impact the market over the coming decade
 - b. A market estimate including forecasts of market demand domestically and globally, forecast export potential, and forecast prices for oil-canes over the 5 to 15 years
 - c. A detailed analysis of the potential benefit and opportunity to the Queensland community and industry, quantifying the opportunity in terms of Gross Regional Product/job creation (or other agreed metrics).

STAGE TWO: Supply Chain and Economic Assessment

- a) A high-level stakeholder map identifying active stakeholders, potential customers, potential investors, and potential project beneficiaries of the opportunity; including an analysis of stakeholder needs in terms of funding and policy incentives that may be required to stimulate interest and participation in the opportunity,
- b) Economic analysis of any deregulation costs (such as GM),

- c) Economic analysis of the infrastructure/ indicative capital needed across the industry’s supply chain activities encompassing breeding related infrastructure, and infrastructure to support farming, processing, transportation, and export to support an oil-canes industry.

SRA will ensure that the successful organisation will have access to the relevant information arising from the technology and regulatory assessment from the provider of the Part 1 Oil-canes technical and regulatory assessment.

2.3 Timeframes for EOI Submission

DATE	ACTION
7 March 2022	Expressions of Interest sought by SRA.
25 March 2022	Closing date for submission of Expressions of Interest.
15 April 2022	SRA consultancy agreement finalised and signed.
19 April 2022	Inception meeting – project planning, confirming input requirements (including access to documentation, personnel, and potential stakeholders), confirming output requirements and timeframes.
22 April 2022	Project Plan agreed and signed by the Executive Manager, Commercial Development

2.4 Resource allocation

SRA will provide administration support and assistance in accessing relevant documents and appropriate industry stakeholders, as required.

3 Submission Requirements and Information

3.1 Proposal requirements

Expressions of Interest must address the following:

1 Methodology	Provide a detailed description of the proposed approach and methodology to be undertaken in addressing each of the requirements in the Terms of Reference.
2 Experience and qualifications	<p>Provide details of the core multi-disciplinary team (names, roles, qualifications, relevant experience, and knowledge) to be allocated to the project.</p> <p>Along with strong core credentials and capabilities in undertaking market opportunities assessments, it is vitally important that consultants in this project have (and deliver with) relevant credentials and experience in the following areas:</p> <p>Ability to perform complex modelling to support micro and macro-economic analysis, working at the nexus of economics, strategy and finance.</p> <p>Through delivery of projects with a similar scope, significant recently acquired knowledge of bio-opportunities and markets, coupled with expertise in regional economic development.</p> <p>Understanding of the diversification challenges of the Australian sugarcane industry.</p> <p>Understanding of agriculture value chains, including plant breeding activities.</p> <p>Demonstrated understanding of intellectual property</p>
3 Capacity and resources	Provide project management details to demonstrate capacity to commence and manage the project within the required timeframe (maximum 10 weeks).
4 Pricing	Provide a costing and payment schedule.

A detailed description of the basis for pricing must be included and justified. It must contain a schedule of rates and times for all team members and any external parties engaged.

The SRA consultancy agreement will be a fixed price contract, with payments made on achievement of agreed milestones as per an agreed plan.

3.2 Conflict of interest

Expressions of Interest are required to include details of any known or likely conflict of interest. Your approach to the management, assessment, and disclosure of any known or likely conflicts of interest, and any conflict of interest that may arise during the period of engagement should also be detailed in the EOI document.

3.3 Professional indemnity and public liability insurance

Details of professional indemnity and public liability insurance must be provided at commencement of services.

3.4 SRA consultancy agreement

The successful party will be required to enter into a formal consultancy agreement with SRA. A copy of the SRA consultancy agreement is provided in Attachment 1.

3.5 Criteria for selection

SRA will use an evaluation panel to assess all submissions. All proposals will be reviewed for completeness and the extent to which they address the assessment criteria (below). Clarification of issues identified may or may not be undertaken. Non-conforming proposals or those containing insufficient information to properly assess their ability to satisfy the EOI will not be considered further.

The following assessment criteria will be used to evaluate submissions:

- Organisation capability and resources of the applicant to deliver within the timeframe required.
- Qualifications and technical skills of the proposed project team.
- Degree of understanding of the project to be delivered within the proposal.
- Demonstrated experience in conducting similar projects including standard of outputs; completion on time including meeting milestones and deadlines; completion within agreed budget; achievement of quality aspects.
- Suitability of the proposed methodology to meet the requirements of the Terms of Reference; and
- Cost-effectiveness and value for money: including the total proposed fee, structure, and rates.

3.6 SRA rights

SRA reserves its rights at law or otherwise to:

- cease to proceed with or suspend the EOI process.
- alter timing of the EOI process.
- vary the EOI structure.
- vary any time or date specified in the EOI.
- require additional information or clarification from the applicant.
- enter into negotiations or discussions with more than one applicant.
- request a new EOI.
- reject any EOI received after the closing date as described in this document.
- reject any EOI that does not comply with the requirements as described in this document negotiate and enter into final contractual documentation with respect to the project with any counterparty without prior notice.
- not attribute any reasons for actions or decisions taken, including on the exercise of any or all of the above-mentioned rights; and

- take such other action as they consider appropriate in relation to this RFP process.

3.7 Conditions of lodgement

The applicant agrees, by lodging an Expression of Interest, that it is bound by these conditions:

- All Expression of Interest documents become the property of SRA upon lodgement.
- It warrants that all information in the EOI is accurate and complete.
- That it has declared any actual or potential conflict of interest.
- That it will bear all costs for preparing the EOI submission, including any meetings that may be required related to the submission prior to the contracting stage.
- That it will keep confidential any confidential information provided by SRA in connection with the EOI.
- That it will make any inquiries relating to the EOI process only through the contact details provided; and
- That pursuant to the Privacy Act 1988 (Cth) it will be bound by the Australian Privacy Principles in respect of any act done or practice engaged in by the respondent in connection with this EOI process.

Expressions of Interest are to be submitted to SRA by **5.00pm on 25 March 2022** as follows:

Electronically by email to DFerguson@sugarresearch.com.au with the subject heading “EOI: Opportunity assessment – Investigation of a potential new oil cane product and associated market opportunities

3.8 SRA contact

Requests for further information or clarification in relation to this request for Expressions of Interest should be directed to:

Duncan Ferguson

Executive Manager, Commercial Development

Email: DFerguson@sugarresearch.com.au



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