



## Expression of Interest EOI 2018-19

### Part 1- General Details

		<b>EOI ID</b>	<b>1819-EOI-0145</b>	
<b>EOI Title: (max 80 char)</b>	<b>Scoping study: Identifying opportunities for blending cotton with high tech / novel textile materials</b>			
<b>Type of Research</b>	Fundamental			
<b>Proposed Start Date:</b>	01/07/2018	<b>Proposed Cease Date:</b>	30/06/2019	
<b>Please refer to CRDC's Strategic R&amp;D Plan 2013-2018 for the following.</b>				
<b>CRDC Program</b>	3. Customers			
<b>CRDC Theme</b>	3.3 Competitive Futures			
<b>CRDC Strategy</b>	3.3.2 Facilitating the development of new technologies and systems to improve the competitiveness of Australia cotton.			
<b>Please identify the relevant Measure of Success as outlined in the CRDC Strategic R&amp;D Plan.</b>				
<b>CRDC Measure of Success:</b>	Development of alternative and high value cotton products			
<b>Science and Research Priorities</b>	Advanced Manufacturing (2) cross-cutting technologies that will de-risk, scale up, and add value to Australian manufactured products.	50 %	Advanced Manufacturing (3) specialised, high value-add areas such as high-performance materials, composites, alloys and polymers.	50 %
<b>Rural R&amp;D Priorities</b>	Advanced technology, to enhance innovation of products, processes and practices across the food and fibre supply chains through technologies such as robotics, digitisation, big data, genetics and precision agriculture;			
<b>R&amp;D Manager:</b>	Allan Williams	<b>EOI Date:</b>	18 August 2017	

### Part 2 –Expression of Interest Requirements

<p><b>Issue:</b> The range and features of synthetic materials being used to manufacture or enhance the performance of textiles continues to expand; examples include fabrics laminated with graphene; yarns embedded with electronic functionality, biometric sensors; fibres embedded with bio-resorbable compounds; chemically induced comfort treatments; energy harvesting and electrical storage etc. etc. While cotton is not able to compete with many of these new treatments and functionalities as a natural fibre, there nevertheless may be the opportunity for cotton to take advantage of its inherent comfort properties, and be a preferred 'blending partner' for these synthetic fibres and fabrics, i.e. to be the comfort-providing component of the fabric. The potential for cotton to be blended with these new fabric types and technologies will depend to a certain extent on the chemical and physical properties of cotton and the synthetic fibre / functionality in question, and how and when the functionality is applied. Given the wide range of new performance fabrics being developed, it will be useful to identify which of these new performance fabrics are more amenable to being blended with cotton, to allow cotton-rich performance fabrics to then be developed.</p>
<p><b>Outcomes:</b> An enhanced understanding of which performance fabrics are most suited for blending with cotton; opportunities for expanded use of cotton in performance fabrics identified</p>
<p><b>Project description:</b> A scoping study into the potential for cotton to be used / blended with a range of new fabric types and functionalities</p>

**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.

Year	2018-19	2019-20	2020-21	
Indicative budget (up to)	\$ 50,000	\$ 0	\$ 0	

**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.

**137. 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.

**138. 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

**139. 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.

**140. 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.

**141. 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.

**142. 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.

**143. 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.

**144. 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.